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QUALITY OF RIVERS OF THE UNITED STATES, 1975 WATER YEAR--BASED ON THE NATIONAL STREAM QUALITY ACCOUNTING NETWORK (NASQAN)

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QUALITY OF RIVERS OF THE UNITED STATES, 1975 WATER YEAR--BASED ON THE NATIONAL STREAM QUALITY ACCOUNTING NETWORK (NASQAN)

by John C. Briggs and John F. Ficke

Open-File Report 78-200

289867

Reston, Virginia

May 1977

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

CONTENTS

	Page
Metric conversion table	vii
Abstract	1
Introduction	3
Purpose and scope of this report	5
Acknowledgments	5
A description of NASQAN	6
Descriptions of river quality	17
Stream temperature	17
Major inorganic chemicals	21
Specific conductance	32
Major nutrients, nitrogen and phosphorus	33
Suspended sediment	38
Bacteria	40
Phytoplankton	45
Periphyton	47
Minor elements	49
Total organic carbon	58
Pesticides	59
Radioactive substances	60
Variations within the Mississippi River basin above Memphis, Tennessee	65
Dissolved solids	65
Nitrogen, phosphorus, and phytoplankton	68
Zinc	74
Regional summaries	78

Page

References 81

Tables 13 and 14 83

ILLUSTRATIONS

Figure 1. Map showing locations of NASQAN stations 6

2. Map outlining Water Resources Regions 18

3. Maps showing stream tempertures, means, and amplitudes. . 20

4-13. Map and histogram showing mean concentrations:

4. Dissolved solids 23

5. Hardness 25

6. Dissolved chloride 26

7. Dissolved sulfate 28

8. Alkalinity 30

9. Dissolved fluoride 31

10. Total nitrite plus nitrate 35

11. Total kjeldahl nitrogen 37

12. Total phosphorus 39

13. Suspended sediment 41

14. Map and histogram showing maximum concentrations of suspended sediment 42

15-16. Map and histogram showing mean numbers:

15. Fecal coliform bacteria 44

16. Phytoplankton 46

17-18. Map and histogram showing mean concentrations:

17. Dissolved arsenic 54

18. Dissolved zinc 57

ILLUSTRATIONS--Continued

Page

Figure 19-25. Diagram showing mean values for Mississippi River above Memphis, Tennessee:

19. Concentration of dissolved solids 67

20. Tons per day of dissolved solids 69

21. Concentration of total nitrite plus nitrate . . . 70

22. Concentration of total phosphorus 72

23. Concentration of phytoplankton 73

24. Concentration of total zinc 76

25. Concentration of dissolved zinc 77

TABLES

		Page
Table 1.	National Stream Quality Accounting Network stations operated during 1975 water year (sorted by state)	8
2.	Characteristics measured at NASQAN stations	16
3.	Ranges of periphyton biomass and chlorophyll measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions	48
4.	Standards and criteria for maximum concentration of minor elements in water	50
5.	Ranges of total concentrations of minor elements measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions	52
6.	Ranges of concentrations of dissolved minor elements measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions	53
7.	Ranges of concentrations of total organic carbon measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions	58
8	Maximum concentrations of pesticides residues in a water-sediment sample at which pesticide was detected at NASQAN stations during the 1975 water year, summarized by Water Resources Regions	61
9	Maximum concentrations of pesticides in bottom materials at which pesticide was detected at NASQAN stations during the 1975 water year, summarized by Water Resources Regions	62
10	Ranges of concentrations of radioactive substances measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions	64
11	NASQAN stations shown in figures 19-25	66
12	Comparison of abundance of phytoplankton with the presence of total phosphorus and total nitrite plus nitrate . . .	74
13	National Stream Quality Accounting Network stations operated during 1975 water year (sorted by station no.)	84
14	Summary of measurements at each station	91

METRIC CONVERSION TABLE

Multiply U.S. Customary units	BY	To obtain metric unit
inch (in)	25.4	millimeter (mm)
square mile (mi^2)	2.590	square kilometer (km^2)
ton (short)	.9072	metric ton (t)

QUALITY OF RIVERS OF THE UNITED STATES, 1975 WATER YEAR--

BASED ON THE NATIONAL STREAM QUALITY ACCOUNTING NETWORK (NASQAN)

by

John C. Briggs and John F. Ficke

ABSTRACT

The National Stream Quality Accounting Network (NASQAN) was established by the U.S. Geological Survey to provide a nationally uniform basis for continuously assessing the quality of U.S. rivers. Stations generally are at the downstream end of hydrologic accounting units in order to measure the quantity and quality of water flowing from the units. The 1975 water year was the first year of operation of the network that represents essentially all of the accounting units and thereby describes the water-quality of the entire country. Data are available on a large number of water-quality constituents measured at 345 stations during the 1975 water year.

Temperature data (usually continuous or daily measurements) from NASQAN stations were fitted to a first order harmonic equation and the parameters for the harmonic function are reported for each station. Mean temperatures generally range from 5°-10°C in the North to more than 20°C along the southern border of the continental United States and in Hawaii and Puerto Rico; means were less than 10°C at 63 stations and greater than 25°C at only 7 stations. Amplitudes of the temperature curves are greatest (greater than 12°C) for the streams at midlatitudes and in the Great and Central Plains, and they are smallest for the subtropical and cold-climate streams.

Considering chemical and biological characteristics of U.S. streams as described by NASQAN data, water quality is best (by many standards) in the Northeast, Southeast, and Northwest. Waters there generally are low in dissolved solids and major and minor chemical constituents, generally are soft (except in Florida), and carry relatively small amounts of sediment. These conditions mainly reflect the geology of the regions and the relatively large amounts of precipitation. However, many of these waters show the effects of pollution and carry moderate or high levels of major nutrients and have correspondingly high populations of attached and floating plants. High counts of indicator bacteria also show signs of local pollution, particularly in regions of the country with large human and animal populations. In the Northeast, some heavy metals are at moderate levels, but not above most water-quality criteria.

Rivers of most of the Mid-Continent and Southwest reflect the arid or semi-arid climate, erodible soils, and agricultural activities. They are characterized by moderate to high levels of dissolved major and minor constituents, sediment, major nutrients, and biota (floating and attached aquatic plants and indicator bacteria). In addition, the most incidences of pesticides in stream and bottom sediments were found in these regions.

A special analysis was made to study the patterns of dissolved solids, major nutrients, phytoplankton, and zinc in the Mississippi River above Memphis, Tennessee. It was found that flow volume is an important factor in influencing river quality, and that stations with low concentration of major nutrients generally had low phytoplankton populations as well.

INTRODUCTION

Water quality has been a topic of concern for nearly as many years as people have been using water. Tales in ancient and recent history recall instances where waters were defiled and unfit for human use, and schemes for separating fresh, clean water for human use from polluted waste waters date back several millennia.

Early means of judging water quality were imprecise. People could see or taste obvious pollution, and they knew that using some waters would make them sick, even though the actions of chemical toxins or pathogens were not yet understood.

As analytical chemistry, pathology, toxicology, and related sciences advanced, it became possible to describe criteria for water quality in quantitative terms. It also became obvious that waters suitable for some specific uses were not fit for other uses. During the twentieth century these developments evolved into complex sets of standards of water quality. Today we have water-quality standards and criteria, most of which pertain to particular uses, such as drinking, recreational bathing, propagation of fish and shellfish, and industrial processing. There also are many programs to monitor water quality in order to measure whether or not it is suitable for different uses.

Most programs for monitoring the quality of waters have been developed at local levels. They have considered the local needs for judging suitability for specific uses and for enforcing standards for controlling pollution.

There have, on the other hand, been demands for information on water quality that have not been satisfied by the data collected in connection with many local programs. During the 1960's and 1970's, there have been many Federal programs to regulate and improve water quality. In order to evaluate the effectiveness of these programs, it is necessary to be able to uniformly appraise the characteristics of the Nation's waters and assess whether they are getting better or worse. Work by Wolman (1971), Enviro Control (1972), and the National Commission on Water Quality (NCWQ) (1975) found that so far, available data are inadequate for such an assessment. The NCWQ Staff Report summarized:

> "We also find that there is still a major lack of adequate information. We simply do not know enough. There are not sufficient data to tell us how bad the water was and how much better it is getting. The measuring and analytical techniques are not good enough in many instances to tell us the value of incremental water quality improvements. If billions of dollars are to be invested wisely, we must have more and better data."

NASQAN.--To aid in remedying the shortage of information on national water quality, the U.S. Geological Survey developed the National Stream Quality Accounting Network (NASQAN). NASQAN provides a uniform, continuing measure of the characteristics of the rivers of the United States on national and regional bases. The design of the network is described in Geological Survey Circular 719 (Ficke and Hawkinson, 1975) and other papers such as the one by Pickering and Ficke (1976), and is summarized in a later section of this report (pages 6-16).

Purpose and Scope of this Report

This report summarizes the quality of the rivers of the United States during the 1975 water year (October 1974 through September 1975) as represented by the data from the 345 stations of the National Stream Quality Accounting Network (NASQAN). Data are presented in a manner to (1) show areal patterns of stream quality, and (2) account for the quality and quantity of water flowing from the accounting units represented by the NASQAN stations.

It is important to realize that NASQAN is a fixed-station accounting network. Data from the network stations represent the quality of water leaving the respective accounting units; but in fact water quality within an accounting unit may vary greatly from that measured at the unit's downstream NASQAN station. If some of the upstream tributaries of a river are polluted but others are not, the NASQAN values for that accounting unit depend very much upon the relative flow in the tributaries and the distance of the sampling point from the upstream sources of pollution.

This is the second annual report on national stream quality as represented by NASQAN, and the first report that includes data representing all accounting units. A report showing data from 100 NASQAN stations for the 1974 water year was published as Geological Survey Open-File Report 77-151 (Hawkinson and others, 1977).

Comments from readers of this report and from potential users of NASQAN data are welcome.

Acknowledgments

NASQAN is a large program, with stations operated by Geological Survey employees in over 100 field offices, samples analyzed in three central laboratories, and data processed and reviewed in 46 district offices and USGS National Headquarters. We thank all of the involved personnel for the role they played in providing the data that are the basis for this report. In addition, special thanks is given to Karen Judy and Cecile Fumagali who prepared several of the illustrations and to Janis Printz who prepared all of the final illustrations. The data-processing programs used in preparing tables and histograms were developed by Jurate Maciunas Landwehr and Kay Rahrer of CACI, Inc. Automated mapping programs used to prepare colored U.S. maps were developed under a contract supported by the President's Council on Environmental Quality.

Although NASQAN is a U.S. Geological Survey water-quality data network, some of the data used to fulfill network data requirements are provided by or obtained from programs operated by numerous state and local organizations, and other Federal agencies such as the Tennessee Valley Authority, U.S. Army Corps of Engineers, Environmental Protection Agency, and International Boundary and Water Commission. The cooperation of these agencies is acknowledged for helping the U.S. Geological Survey achieve the goals of NASQAN.

A DESCRIPTION OF NASQAN

Objectives of the National Stream Quality Accounting Network (NASQAN) are (1) to account for the quantity and quality of water moving within and from the United States, (2) to depict areal variability, (3) to detect changes in stream quality, and (4) to lay the groundwork for future assessments of changes in stream quality. It is an "accounting network"; that is, it measures the quantity and quality of water flowing from one hydrologic accounting unit to the other or to the oceans. The basis for the design of the network is the system of hydrologic regions, subregions, and accounting units developed by the U.S. Water Resources Council and the Geological Survey (Water Resources Council, 1970) and modified in 1974 by the Geological Survey. Outlines of accounting units are shown in this report on the several maps (fig. 4-18) describing various components of water quality.

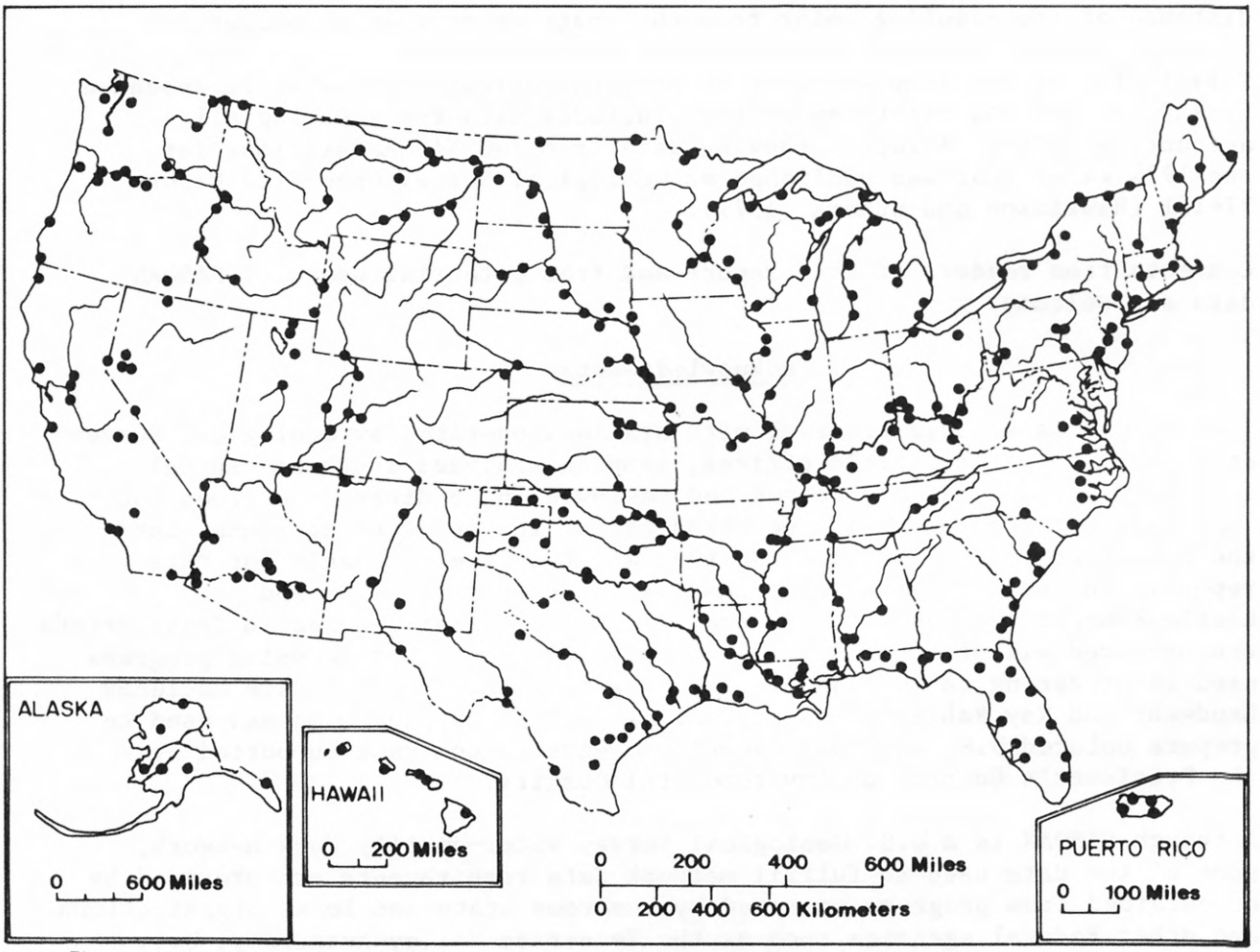

Figure 1.--Locations of stations in the National Stream Quality Accounting Network in operation as of January 1, 1975.

A hydrologic accounting unit with a regular, integrated stream pattern can be represented by a single station near the downstream end of the unit. Coastal accounting units and others with patterns of parallel or interrupted drainage, however, may need more than one NASQAN station in order to adequately describe the amount and quality of flow from the unit. In order to define national and regional water quality, NASQAN was designed to ultimately include 525 measuring and sampling stations.

NASQAN was started with 50 stations in January 1973, and 295 more stations were added during 1974 (Ficke and Hawkinson, 1975, fig. 4). During the 1975 water year (October 1974 through September 1975), 345 stations were operational in the network. Locations of these stations are shown on figure 1 and are listed, by state, in table 1.

NASQAN is considered to be a uniform national network because an identical suite of water-quality characteristics is measured at each station using the same set of rules concerning collecting techniques, frequency of sampling, and analytical methods. Table 2 is a list of constituents measured at each station and the frequency of measurement. As indicated by the footnotes of table 2, frequency of measurements of some constituents vary from station to station depending upon the availability of long-term records.

NASQAN stations are sampled at relatively uniform time intevals, without concern for the hydrologic patterns of high or low flow. Most of the samples, consequently, are collected during periods of relatively low flow. The samples provide a fairly good representation of what one would expect to find in the stream on any given day. They do not, however, necessarily provide good information on the total load of sediment or chemical constituents carried during a year, or on the complete range of concentrations because the samples usually are not collected during the periods of highest flows or extremes in concentrations.

TABLE 1: NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATIONS OPERATED DURING 1975 WATER YEAR (SORTED BY STATE)

USGS STAT.NO.	STATION NAME	ST	LATITUDE DEG/MIN	LONGITUDE DEG/MIN
02420000	ALABAMA RIVER NEAR MONTGOMERY	AL	3225	08624
02429500	ALABAMA RIVER AT CLAIBORNE	AL	3133	08731
02449000	TOMBIGBEE RIVER AT GAINESVILLE	AL	3249	08809
02469762	TOMBIGBEE R. AT COFFEEVILLE L&D NR. CFVL	AL	3146	08808
15024800	STIKINE RIVER NEAR WRANGELL	AK	5642	13208
15294350	SUSITNA RIVER AT SUSITNA STATION	AK	6133	15031
15304000	KUSKOKWIM RIVER AT CROOKED CREEK	AK	6152	15807
15565447	YUKON RIVER AT PILOT STATION	AK	6156	16253
15744500	KOBUK RIVER NEAR KIANA	AK	6659	16007
15896000	KUPARUK RIVER NEAR DEADHORSE	AK	7017	14858
09380000	COLORADO RIVER AT LEES FERRY	AZ	3652	11135
09401200	LITTLE COLORADO RIVER AT CAMERON	AZ	3553	11125
09421500	COLORADO RIVER BELOW HOOVER DAM	AZ	3601	11444
09426600	BILL WILLIAMS R NEAR PLANET	AZ	3416	11402
09429490	COLORADO RIVER ABOVE IMPERIAL DAM	AZ	3253	11428
09466500	GILA RIVER AT CALVA	AZ	3311	11013
09473500	SAN PEDRO RIVER AT WINKELMAN	AZ	3259	11046
09474000	GILA RIVER AT KELVIN	AZ	3306	11059
09489000	SANTA CRUZ RIVER NEAR LAVEEN	AZ	3314	11210
09502000	SALT RIVER BELOW STEWART MT DAM	AZ	3334	11132
09510000	VERDE RIVER BELOW BARTLETT DAM	AZ	3349	11138
09518000	GILA RIVER ABOVE DIV AT GILLESPIE DAM	AZ	3314	11246
09520700	GILA RIVER NEAR MOUTH NEAR YUMA	AZ	3243	11433
09522000	COLORADO R AT N INT BDRY AB MORELOS DAM	AZ	3243	11443
07032000	MISSISSIPPI RIVER AT MEMPHIS (TN)	AR	3508	09004
07047800	ST FRANCIS RIVER AT PARKIN	AR	3516	09034
07047900	ST FRANCIS BAY AT RIVERFRONT	AR	3516	09041
07077800	WHITE RIVER AT CLARENDON	AR	3441	09119
07250550	ARKANSAS RIVER AT DAM 13 NEAR VAN BUREN	AR	3521	09418
07263620	ARKANSAS RIVER AT L AND D 6 LIT ROCK	AR	3440	09209
07265450	MISSISSIPPI RIVER NEAR ARKANSAS CITY	AR	3334	09115
07362000	OUACHITA RIVER AT CAMDEN	AR	3336	09249
09424190	COLORADO RIVER AQUED. NR SAN JACINTO	CA	3349	11658
10254970	NEW RIVER AT INT. BDRY. NR. CALEXICO	CA	3240	11530
10261500	MOJAVE R. AT LOW NARROWS NR VICTORVILLE	CA	3434	11719
10277400	OWENS RIVER BLW TINEMAHA D. NR BIG PINE	CA	3703	11813
11074000	SANTA ANA RIVER BELOW PRADO DAM	CA	3353	11739
11103010	LOS ANGELES R.AT WIL.ST.BRDG.AT LONG BCH	CA	3348	11812
11152500	SALINAS RIVER NEAR SPRECKELS	CA	3638	12140
11250000	FRIANT-KERN CANAL AT FRIANT	CA	3700	11942
11303500	SAN JOAQUIN RIVER NEAR VERNALIS	CA	3741	12116
11325500	MOKELUMNE RIVER AT WOODBRIDGE	CA	3810	12118
11447650	SACRAMENTO RIVER AT FREEPORT	CA	3827	12130
11467000	RUSSIAN RIVER NEAR GUERNEVILLE	CA	3830	12256
11530500	KLAMATH RIVER NEAR KLAMATH	CA	4131	12358

06764000	SOUTH PLATTE RIVER AT JULESBURG		CO	4059	10215
08251500	RIO GRANDE NEAR LOBATOS		CO	3705	10545
09152500	GUNNISON RIVER NEAR GRAND JUNCTION		CO	3859	10827
09163530	COLORADO RIVER BLW. COLO-UTAH STATE LINE		CO	3905	10906
09251000	YAMPA RIVER NEAR MAYBELL		CO	4030	10802
09260000	LITTLE SNAKE RIVER NEAR LILY		CO	4033	10825
01184000	CONNECTICUT RIVER AT THOMPSONVILLE		CT	4159	07236
01205500	HOUSATONIC RIVER AT STEVENSON		CT	4123	07310
02231000	ST MARYS RIVER NEAR MACCLENNY		FL	3022	08205
02244450	ST JOHNS RIVER AT PALATKA		FL	2939	08138
02248000	SPRUCE CREEK NEAR SAMSULA		FL	2903	08103
02253000	MAIN CANAL AT VERO BEACH		FL	2739	08024
02273000	KISSIMMEE RIVER AT S65E NEAR OKEECHOBEE		FL	2714	08058
02279000	WEST PALM BEACH CANAL AT WEST PALM BEACH		FL	2639	08004
02288600	MIAMI CANAL AT NW 36TH STREET, MIAMI		FL	2548	08016
02292480	CALOOSAHATCHEE CNL AT ORTONA L.NR LABELLE		FL	2647	08118
02296750	PEACE RIVER AT ARCADIA		FL	2713	08153
02303000	HILLSBOROUGH RIVER NEAR ZEPHYRHILLS		FL	2809	08214
02313000	WITHLACOOCHEE RIVER NEAR HOLDER		FL	2859	08221
02320500	SUWANNEE RIVER AT BRANFORD		FL	2957	08256
02329000	OCHLOCKONEE RIVER NEAR HAVANA		FL	3033	08423
02358000	APALACHICOLA RIVER AT CHATTAHOOCHEE		FL	3042	08452
02359000	CHIPOLA RIVER NEAR ALTHA		FL	3032	08510
02366500	CHOCTAWHATCHEE RIVER NEAR BRUCE		FL	3027	08554
02368000	YELLOW RIVER AT MILLIGAN		FL	3045	08638
02375500	ESCAMBIA RIVER NEAR CENTURY		FL	3057	08714
02202500	OGEECHEE RIVER NEAR EDEN		GA	3211	08125
02226000	ALTAMAHA RIVER AT DOCTORTOWN		GA	3139	08150
02228000	SATILLA RIVER AT ATKINSON		GA	3113	08152
16031000	WAIMEA RIVER AT WAIMEA		HI	2159	15940
16213000	WAIKELE STREAM AT WAIPAHU		HI	2123	15801
16229300	KALIHI STREAM AT KALIHI		HI	2120	15753
16400000	HALAWA STREAM NEAR HALAWA		HI	2110	15646
16618000	KAHAKULOA STREAM NEAR HONOKOHAU		HI	2059	15633
16704000	WAILUKU RIVER AT PIIHONUA		HI	1943	15509
12318500	KOOTENAI RIVER NEAR COPELAND		ID	4855	11625
13154500	SNAKE RIVER AT KING HILL		ID	4300	11512
13213000	BOISE RIVER NEAR PARMA		ID	4347	11658
13213100	SNAKE RIVER AT NYSSA	(OR)	ID	4353	11659
13290450	SNAKE RIVER AT HELLS CANYON DAM	(OR)	ID	4515	11642
13317000	SALMON RIVER AT WHITE BIRD		ID	4545	11619
05446500	ROCK RIVER NEAR JOSLIN		IL	4134	09011
05543500	ILLINOIS RIVER AT MARSEILLES		IL	4120	08843
05586100	ILLINOIS RIVER AT VALLEY CITY		IL	3942	09039
05594100	KASKASKIA RIVER NEAR VENEDY STATION		IL	3827	08938
05599500	BIG MUDDY RIVER AT MURPHYSBORO		IL	3745	08921
03276500	WHITEWATER RIVER AT BROOKVILLE		IN	3924	08501
03374100	WHITE RIVER AT HAZELTON		IN	3829	08733
03378500	WABASH RIVER AT NEW HARMONY		IN	3808	08756

05420500	MISSISSIPPI RIVER AT CLINTON		IA 4147	09015
05474500	MISSISSIPPI RIVER AT KEOKUK		IA 4024	09122
06486000	MISSOURI RIVER AT SIOUX CITY		IA 4229	09625
06807000	MISSOURI RIVER AT NEBRASKA CITY	(NB)	IA 4041	09551
06856600	REPUBLICAN RIVER AT CLAY CENTER		KS 3921	09708
06877600	SMOKY HILL RIVER AT ENTERPRISE		KS 3854	09707
06887000	BIG BLUE RIVER NEAR MANHATTAN		KS 3914	09634
06892350	KANSAS RIVER AT DESOTO		KS 3859	09458
07137500	ARKANSAS RIVER NR COOLIDGE		KS 3802	10201
07139500	ARKANSAS RIVER AT DODGE CITY		KS 3745	10001
07146500	ARKANSAS RIVER AT ARKANSAS CITY		KS 3703	09704
03215000	BIG SANDY RIVER AT LOUISA		KY 3810	08238
03216600	OHIO RIVER AT GREENUP DAM		KY 3839	08252
03254000	LICKING RIVER AT BUTLER		KY 3847	08421
03277200	OHIO R. AT MARKLAND DAM NEAR WARSAW		KY 3846	08458
03290500	KENTUCKY RIVER AT LOCK 2 AT LOCKPORT		KY 3826	08458
03301630	ROLLING FORK NEAR LEBANON JUNCTION		KY 3749	08545
03303280	OHIO RIVER AT CANNELTON DAM		KY 3754	08642
03321230	GREEN RIVER NEAR BEECH GROVE		KY 3735	08724
03438220	CUMBERLAND RIVER NEAR GRAND RIVERS		KY 3701	08813
03609750	TENNESSEE RIVER AT HWY 60 NEAR PADUCAH		KY 3702	08832
03612500	OHIO RIVER AT L&D 53 NEAR GRAND CHAIN(IL)		KY 3712	08902
02489500	PEARL RIVER NEAR BOGALUSA		LA 3048	08949
02492000	BOGUE CHITTO NEAR BUSH		LA 3038	08954
07344410	RED RIVER ABOVE SHREVEPORT		LA 3233	09346
07355500	RED RIVER AT ALEXANDRIA		LA 3119	09227
07367640	OUACHITA RIVER AT COLUMBIA		LA 3206	09204
07369500	TENSAS RIVER AT TENDAL		LA 3226	09122
07373420	MISSISSIPPI RIVER NEAR ST FRANCISVILLE		LA 3046	09124
07374508	MISSISSIPPI RIVER AT NEW ORLEANS		LA 2957	09008
07378510	AMITE RIVER AT 4-H CAMP NR DENHAM SPGS		LA 3026	09058
07381490	ATCHAFALAYA RIVER AT SIMMESPORT		LA 3059	09148
07385700	BAYOU TECHE AT KEYST L NR ST MARTINSVL		LA 3004	09150
08015900	CALCASIEU RIVER NEAR LAKE CHARLES		LA 3018	09311
01017100	AROOSTOOK RIVER AT CARIBOU		ME 4651	06800
01021050	ST. CROIX RIVER AT MILLTOWN		ME 4510	06718
01034500	PENOBSCOT RIVER AT WEST ENFIELD		ME 4514	06839
01046500	KENNEBEC RIVER AT BINGHAM		ME 4503	06953
01059000	ANDROSCOGGIN RIVER NEAR AUBURN		ME 4404	07013
01066000	SACO RIVER AT CORNISH		ME 4348	07047
01491000	CHOPTANK RIVER NEAR GREENSBORO		MD 3900	07547
01645500	POTOMAC RIVER AT GREAT FALLS		MD 3900	07715
01096550	MERRIMACK RIVER ABOVE LOWELL		MA 4238	07122
01103500	CHARLES RIVER AT CHARLES RIVER VILLAGE		MA 4215	07116
04040000	ONTONAGON RIVER NEAR ROCKLAND		MI 4643	08912
04045500	TAHQUAMENON R. NR TAHQUAMENON PARADISE		MI 4634	08516
04045580	ST MARYS RIVER ABOVE SAULT STE MARIE		MI 4629	08425
04057005	MANISTIQUE RIVER AT MANISTIQUE		MI 4557	08615

04059000	ESCANABA RIVER AT CORNELL		MI 4555	08713
04059500	FORD RIVER NEAR HYDE		MI 4545	08712
04108690	KALAMAZOO RIVER AT SAUGATUCK		MI 4239	08612
04122030	MUSKEGON RIVER NEAR BRIDGETON		MI 4319	08602
04126520	MANISTEE RIVER AT MANISTEE		MI 4415	08619
04132052	CHEBOYGAN RIVER AT CHEBOYGAN		MI 4539	08428
04142000	RIFLE RIVER NEAR STERLING		MI 4404	08401
04157000	SAGINAW RIVER AT SAGINAW		MI 4325	08358
04165500	CLINTON RIVER AT MT. CLEMENS		MI 4236	08255
04165700	DETROIT RIVER AT DETROIT		MI 4221	08258
04014500	BAPTISM RIVER NEAR BEAVER BAY		MN 4720	09112
04024000	ST LOUIS RIVER AT SCANLON		MN 4642	09225
05112000	ROSEAU RIVER NEAR CARIBOU		MN 4859	09628
05131500	LITTLE FORK RIVER AT LITTLEFORK		MN 4824	09334
05132000	BIG FORK RIVER AT BIG FALLS		MN 4812	09348
05267000	MISSISSIPPI RIVER NEAR ROYALTON		MN 4552	09422
05330000	MINNESOTA RIVER NEAR JORDAN		MN 4442	09338
05331000	MISSISSIPPI RIVER AT ST PAUL		MN 4457	09305
05378500	MISSISSIPPI RIVER AT WINONA		MN 4403	09138
02479020	PASCAGOULA RIVER NEAR BENNDALE		MS 3053	08846
07287120	YAZOO R AT SHELL BLUFF NR MORGAN CITY		MS 3324	09018
07289000	MISSISSIPPI RIVER AT VICKSBURG		MS 3219	09054
07290000	BIG BLACK RIVER NEAR BOVINA		MS 3221	09042
07292500	HOMOCHITTO RIVER AT ROSETTA		MS 3119	09106
05490600	DES MOINES RIVER AT ST FRANCISVILLE		MO 4028	09134
05587550	MISSISSIPPI RIVER BELOW ALTON	(IL)	MO 3852	09008
06818000	MISSOURI RIVER AT ST JOSEPH		MO 3948	09453
06902000	GRAND RIVER NEAR SUMNER		MO 3938	09316
06926510	OSAGE RIVER BELOW ST. THOMAS		MO 3820	09214
06934500	MISSOURI RIVER AT HERMANN		MO 3843	09126
07022000	MISSISSIPPI RIVER AT THEBES	(IL)	MO 3713	08928
06054500	MISSOURI RIVER AT TOSTON		MT 4609	11125
06109500	MISSOURI RIVER AT VIRGELLE		MT 4800	11015
06130500	MUSSELSHELL RIVER AT MOSBY		MT 4700	10753
06132000	MISSOURI RIVER BELOW FT PECK DAM		MT 4803	10621
06174500	MILK RIVER AT NASHUA		MT 4808	10622
06185500	MISSOURI RIVER NEAR CULBERTSON		MT 4807	10428
06214500	YELLOWSTONE RIVER AT BILLINGS		MT 4548	10828
06294700	BIGHORN RIVER AT BIGHORN		MT 4609	10728
06308500	TONGUE RIVER AT MILES CITY		MT 4622	10548
06326500	POWDER RIVER NEAR LOCATE		MT 4627	10519
06329500	YELLOWSTONE RIVER NEAR SIDNEY		MT 4741	10409
12355000	FLATHEAD RIVER AT FLATHEAD, B.C.		MT 4900	11428
06465500	NIOBRARA RIVER NEAR VERDEL		NB 4244	09813
06686000	NORTH PLATTE RIVER AT LISCO		NB 4130	10238
06792499	LOUP R POWER CANAL AT DIV NR GENOA		NB 4124	09749
06796000	PLATTE RIVER AT NORTH BEND		NB 4127	09646
06805500	PLATTE RIVER NEAR LOUISVILLE		NB 4101	09609

10249900	CHIATOVICH CREEK NEAR DYER		NV	3750	11812
10301500	WALKER RIVER NEAR WABUSKA		NV	3909	11906
10312000	CARSON RIVER NEAR FORT CHURCHILL		NV	3918	11919
10335000	HUMBOLDT RIVER NEAR RYE PATCH		NV	4028	11818
10346000	TRUCKEE RIVER AT FARAD	(CA)	NV	3926	12002
10351700	TRUCKEE RIVER NEAR NIXON		NV	3947	11920
10352500	MC DERMITT CREEK NEAR MC DERMITT		NV	4158	11750
01155050	CONNECTICUT RIVER AT WALPOLE		NH	4305	07226
01404100	RARITAN RIVER NEAR SOUTH BOUND BROOK		NJ	4031	07432
01408500	TOMS RIVER NEAR TOMS RIVER		NJ	3959	07413
01463500	DELAWARE RIVER AT TRENTON		NJ	4013	07447
07227140	CANADIAN RIVER ABOVE NM-TEX STATE LINE		NM	3523	10303
08313000	RIO GRANDE AT OTOWI BRDG NR S.ILDEFONSO		NM	3552	10608
08358300	RIO GRANDE CNV CH AT SAN MARCIAL		NM	3341	10700
08407500	PECOS RIVER AT RED BLUFF		NM	3204	10402
08481500	RIO TULAROSA NEAR BENT		NM	3309	10554
09368000	SAN JUAN RIVER AT SHIPROCK		NM	3648	10844
01304500	PECONIC RIVER AT RIVERHEAD		NY	4100	07241
01358000	HUDSON RIVER AT GREEN ISLAND		NY	4243	07341
04219640	NIAGARA RIVER AT FORT NIAGARA		NY	4316	07904
04232006	GENESEE R AT CHARLOTTE DOCKS AT ROCHESTER		NY	4313	07737
04249000	OSWEGO RIVER AT LOCK 7, OSWEGO		NY	4327	07630
04260500	BLACK RIVER AT WATERTOWN		NY	4359	07556
04264331	ST LAWRENCE R AT CORNWALL ONT NR MASSENA		NY	4500	07448
04269000	ST REGIS RIVER AT BRASHER CENTER		NY	4452	07447
04295000	RICHELIEU RIVER AT ROUSES POINT		NY	4500	07322
02081000	ROANOKE RIVER NEAR SCOTLAND NECK		NC	3612	07723
02083500	TAR RIVER AT TARBORO		NC	3554	07732
02089500	NEUSE RIVER AT KINSTON		NC	3515	07735
02105769	CAPE FEAR RIVER AT LOCK 1 NEAR KELLY		NC	3424	07818
02129000	PEE DEE RIVER NEAR ROCKINGHAM		NC	3457	07952
05054020	RED RIVER OF THE NORTH BELOW FARGO		ND	4656	09647
05083500	RED RIVER OF THE NORTH AT OSLO	(MN)	ND	4812	09708
05124000	SOURIS (MOUSE) RIVER NEAR WESTHOPE		ND	4900	10057
06337000	LITTLE MISSOURI RIVER NEAR WATFORD CITY		ND	4735	10315
06338490	MISSOURI RIVER AT GARRISON DAM		ND	4730	10126
06340500	KNIFE RIVER AT HAZEN		ND	4717	10137
06354000	CANNONBALL RIVER AT BREIEN		ND	4623	10056
03150000	MUSKINGUM RIVER AT MCCONNELSVILLE		OH	3939	08151
03234500	SCIOTO RIVER AT HIGBY		OH	3913	08252
03245500	LITTLE MIAMI RIVER AT MILFORD		OH	3910	08418
03274600	GREAT MIAMI RIVER AT NEW BALTIMORE		OH	3916	08440
04193500	MAUMEE RIVER AT WATERVILLE		OH	4130	08343
04208000	CUYAHOGA RIVER AT INDEPENDENCE		OH	4124	08138
07157950	CIMARRON RIVER NEAR BUFFALO		OK	3655	09924
07161000	CIMARRON RIVER AT PERKINS		OK	3558	09702
07164400	ARKANSAS RIVER AT SAND SPRINGS NR TULSA		OK	3607	09607
07178620	NEWT GRAHAM L&D (VERDIGRIS R) NEAR INOLA		OK	3603	09532
07193500	NEOSHO R BL FT GIBSON LAKE NR FT GIBSON		OK	3551	09514

07231500	CANADIAN RIVER AT CALVIN	OK	3459	09614
07232500	BEAVER RIVER NEAR GUYMON	OK	3643	10130
07234000	BEAVER RIVER AT BEAVER	OK	3649	10031
07237500	NORTH CANADIAN RIVER AT WOODWARD	OK	3626	09917
07245000	CANADIAN RIVER NEAR WHITEFIELD	OK	3516	09514
07305000	NF RED RIVER NEAR HEADRICK	OK	3438	09906
07331000	WASHITA RIVER NEAR DURWOOD	OK	3414	09659
10396000	DONNER UND BLITZEN R. NEAR FRENCHGLEN	OR	4247	11852
14048000	JOHN DAY RIVER AT MCDONALD FERRY	OR	4535	12024
14103000	DESCHUTES RIVER AT MOODY NEAR BIGGS	OR	4537	12054
14128910	COLUMBIA RIVER AT WARRENDALE	OR	4537	12202
14207500	TUALATIN RIVER AT WEST LINN	OR	4521	12240
14211720	WILLAMETTE RIVER AT PORTLAND	OR	4531	12240
14301000	NEHALEM RIVER NEAR FOSS	OR	4542	12345
14321000	UMPQUA RIVER NEAR ELKTON	OR	4335	12333
14372300	ROGUE RIVER NEAR AGNESS	OR	4235	12404
01474500	SCHUYLKILL RIVER AT PHILADELPHIA	PA	4000	07512
01540500	SUSQUEHANNA RIVER AT DANVILLE	PA	4057	07637
01553500	W.BR. SUSQUEHANNA RIVER AT LEWISBURG	PA	4058	07653
01570500	SUSQUEHANNA RIVER AT HARRISBURG	PA	4015	07653
03049625	ALLEGHENY RIVER AT NEW KENSINGTON	PA	4034	07946
03085000	MONONGAHELA RIVER AT BRADDOCK	PA	4024	07953
50038100	RIO GRANDE DE MANATI AT HWY 2 NR MANATI	PR	1826	06632
50046000	RIO DE LA PLATA AT TOA ALTA	PR	1824	06615
50092000	RIO GRANDE DE PATILLAS NEAR PATILLAS	PR	1802	06602
50144000	RIO GRANDE DE ANASCO NEAR SAN SEBASTIAN	PR	1817	06703
02132000	LYNCHES RIVER AT EFFINGHAM	SC	3403	07945
02136000	BLACK RIVER AT KINGSTREE	SC	3340	07950
02170500	LAKE MARION MOULTRIE CANAL NR PINEVILLE	SC	3323	08008
02171500	SANTEE RIVER NEAR PINEVILLE	SC	3327	08009
02175000	EDISTO RIVER NEAR GIVHANS	SC	3302	08024
02176500	COOSAWHATCHIE RIVER NEAR HAMPTON	SC	3250	08108
02198500	SAVANNAH RIVER NEAR CLYO (GA)	SC	3232	08116
06357800	GRAND RIVER AT LITTLE EAGLE	SD	4530	10049
06438000	BELLE FOURCHE RIVER NEAR ELM SPRINGS	SD	4422	10234
06439300	CHEYENNE RIVER AT CHERRY CREEK	SD	4436	10129
06440000	MISSOURI RIVER AT PIERRE	SD	4422	10022
06452000	WHITE RIVER NEAR OACOMA	SD	4345	09933
06453000	MISSOURI RIVER BELOW FT RANDALL DAM	SD	4304	09833
06478500	JAMES RIVER NEAR SCOTLAND	SD	4311	09738
06485500	BIG SIOUX RIVER AT AKRON (IA)	SD	4250	09634
03425000	CUMBERLAND RIVER AT CARTHAGE	TN	3615	08557
03470500	FRENCH BROAD RIVER NEAR KNOXVILLE	TN	3558	08346
03543005	TENNESSEE R. AT WATTS BAR DAM (TAILWATER)	TN	3537	08447
03571850	TENNESSEE RIVER AT SOUTH PITTSBURG	TN	3501	08542
03593005	TENNESSEE R. AT PICKWICK LAND. D.(L.LOCK)	TN	3504	08815
07026000	OBION RIVER AT OBION	TN	3615	08912

07228000	CANADIAN RIVER NEAR CANADIAN	TX	3556	10022
07297910	PDTF RED RIVER NEAR WAYSIDE TEXAS	TX	3450	10125
07300000	SALT FORK RED RIVER NEAR WELLINGTON	TX	3457	10013
07308500	RED RIVER NEAR BURKBURNETT	TX	3406	09832
07331600	RED RIVER AT DENISON DAM NEAR DENISON	TX	3349	09634
08030500	SABINE RIVER NEAR RULIFF	TX	3018	09345
08041000	NECHES RIVER AT EVADALE	TX	3021	09406
08065350	TRINITY RIVER NEAR CROCKETT	TX	3120	09539
08066500	TRINITY RIVER AT ROMAYOR	TX	3026	09451
08068000	WEST FORK SAN JACINTO RIVER NEAR CONROE	TX	3015	09527
08082000	SALT FORK BRAZOS RIVER NEAR ASPERMONT	TX	3320	10014
08082500	BRAZOS RIVER AT SEYMOUR	TX	3335	09916
08098290	BRAZOS RIVER NEAR HIGHBANK	TX	3108	09649
08116650	BRAZOS RIVER AT ROSHARON	TX	2921	09535
08123800	BEALS CREEK NEAR WESTBROOK	TX	3212	10101
08136700	COLORADO RIVER NEAR STACY	TX	3130	09934
08158000	COLORADO RIVER AT AUSTIN	TX	3015	09742
08162000	COLORADO RIVER AT WHARTON	TX	2919	09606
08164500	NAVIDAD RIVER NEAR GANADO	TX	2902	09633
08176500	GUADALUPE RIVER AT VICTORIA	TX	2848	09701
08188500	SAN ANTONIO RIVER AT GOLIAD	TX	2839	09723
08210000	NUECES RIVER NEAR THREE RIVERS	TX	2826	09811
08212400	LOS OLMOS CREEK NEAR FALFURRIAS	TX	2716	09808
08370500	RIO GRANDE AT FT QUITMAN	TX	3105	10536
08377200	RIO GRANDE AT FOSTER RANCH NR LANGTRY	TX	2947	10145
08447410	PECOS RIVER NEAR LANGTRY	TX	2948	10127
08459000	RIO GRANDE AT LAREDO	TX	2730	09930
08475000	RIO GRANDE NEAR BROWNSVILLE	TX	2553	09727
09180500	COLORADO RIVER NEAR CISCO	UT	3849	10918
09234500	GREEN RIVER NEAR GREENDALE	UT	4054	10925
09315000	GREEN RIVER AT GREEN RIVER	UT	3859	11009
09379500	SAN JUAN RIVER NEAR BLUFF	UT	3709	10952
10059500	BEAR LAKE OUTLET CANAL NEAR PARIS (ID)	UT	4213	11121
10126000	BEAR RIVER NEAR CORINNE	UT	4135	11206
10141000	WEBER RIVER NEAR PLAIN CITY	UT	4117	11205
10171000	JORDAN RIVER AT SALT LAKE CITY	UT	4044	11155
10224000	SEVIER RIVER NEAR LYNNDYL	UT	3929	11224
10237000	BEAVER RIVER AT ADAMSVILLE	UT	3815	11246
04296500	CLYDE RIVER AT NEWPORT	VT	4456	07211
01673000	PAMUNKEY RIVER NEAR HANOVER	VA	3746	07720
02035000	JAMES RIVER AT CARTERSVILLE	VA	3740	07805
02049500	BLACKWATER RIVER NEAR FRANKLIN	VA	3646	07654
12031000	CHEHALIS RIVER AT PORTER	WA	4656	12319
12045500	ELWHA R AT MCDONALD BRIDGE NR PT ANGELES	WA	4803	12335
12200500	SKAGIT RIVER NEAR MT VERNON	WA	4831	12220
12398600	PEND OREILLE R AT INTERNATIONAL BOUNDARY	WA	4900	11721
12400520	COLUMBIA RIVER AT NORTHPORT	WA	4855	11747
12433000	SPOKANE RIVER AT LONG LAKE	WA	4750	11751
12510500	YAKIMA RIVER AT KIONA	WA	4615	11929
13353200	SNAKE RIVER AT BURBANK	WA	4613	11901
14113000	KLICKITAT RIVER NEAR PITT	WA	4545	12113

03201300	KANAWHA RIVER AT WINFIELD	WV 3832	08155
03204500	MUD RIVER NEAR MILTON	WV 3823	08207
04027000	BAD RIVER NEAR ODANAH	WI 4629	09042
04085000	FOX RIVER AT WRIGHTSTOWN	WI 4420	08810
04087000	MILWAUKEE RIVER AT MILWAUKEE	WI 4306	08755
05340500	ST. CROIX RIVER AT ST. CROIX FALLS	WI 4524	09239
05369500	CHIPPEWA RIVER AT DURAND	WI 4438	09158
05407000	WISCONSIN RIVER AT MUSCODA	WI 4312	09026
13022500	SNAKE RIVER ABOVE RESERVOIR NEAR ALPINE	WY 4318	11047

Table 2.--Characteristics measured at NASQAN stations

(Frequencies: C, continuous; D, daily; M, monthly; Q, quarterly)

	Frequency
Field determination:	
Water temperature	[1]C,D, or M
Specific conductance	[1]C,D, or M
pH	M
Discharge	C
Coliform, fecal	M
Streptococci, fecal	M
Common constituents:[2]	[3]M or Q
(Dissolved calcium, magnesium, fluoride, sodium, potassium, dissolved solids, silica, chloride, sulfate, hardness, and noncarbonate hardness; total[4] bicarbonate and carbonate; and turbidity).	
Major nutrients:	
Phosphorus, total as P	M
Nitrite plus nitrate, total as N	M
Nitrogen, total Kjeldahl as N	M
Trace elements (total and dissolved):	Q
(Arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, selenium, and zinc).	
Organics and biological:	
Organic carbon, total	Q
Phytoplankton, total, cells/mL	M
Phytoplankton, identification of 3 co-dominants	M
Phytoplankton, 3 co-dominants, percent of total	M
Periphyton, biomass, dry weight g/m^2	Q
Periphyton, biomass, ash weight g/m^2	Q
Periphyton, chlorophyll *a*	Q
Periphyton, chlorophyll *b*	Q
Suspended sediment:	
Suspended sediment concentration	M
Percent finer than 0.062-mm sieve diameter	M

[1]Continuous or daily depending upon whether the station is equipped with a monitor or whether daily observations are made. Monthly measurements made at stations where a long-term record is made.

[2]Dissolved constituents in water are those remaining after filtering samples through 0.45-micrometer membrane filters.

[3]Quarterly or monthly, depending upon whether relationships have been established between conductance and concentrations of various common constituents.

[4]Total concentrations are those determined by analyses of unfiltered samples. They include both dissolved and suspended materials.

DESCRIPTIONS OF RIVER QUALITY

There is no clear, simple, quantitative way to describe the term "water quality." In practice, the quality of water in rivers is represented by measurements of a large suite of physical, chemical, and biological characteristics. Results of the many different measurements usually are compared with water-quality standards or criteria in order to judge the suitability of the water. There are several different sets of criteria, depending upon the intended use of the water; water that meets the criteria for one particular use will not necessarily meet the criteria for other uses.

Discussions in the subsections that follow deal with the results of measurements of selected water-quality characteristics, and relate the results to some of the criteria for selected water uses. Among the commonly cited standards and criteria are Water Quality Criteria 1972 of the National Academy of Sciences and National Academy of Engineering (1972), Quality Criteria for Water of the U.S. Environmental Protection Agency (1976a), National Interim Primary and Secondary Drinking Water Regulations (U.S. Environmental Protection Agency, 1975, 1976b, 1977), standards and criteria set by individual states, and recommended criteria proposed in miscellaneous articles and reports.

The Water Resources Regions, as shown in figure 2, are referred to in the discussion of areal variability of the various water-quality constituents in order to provide consistency throughout the text.

Stream Temperature

Measurement of stream temperature at NASQAN stations varies in frequency (continuous, once daily, or once a month) depending on several factors. The design of the network specifies that a period (generally about three years) of either continuous or daily temperature measurements be available for analysis.

The statistical technique of Steele (1974) was used for analysis of the temperature data to fit a harmonic (sinusoidal) equation to daily stream temperature records. Steele's procedure is similar to that previously used by Ward (1963) and Collings (1969). The harmonic expression used to represent annual temperature has the form:

$$T_d' = M + A \sin [(b) \times (d) + C]$$

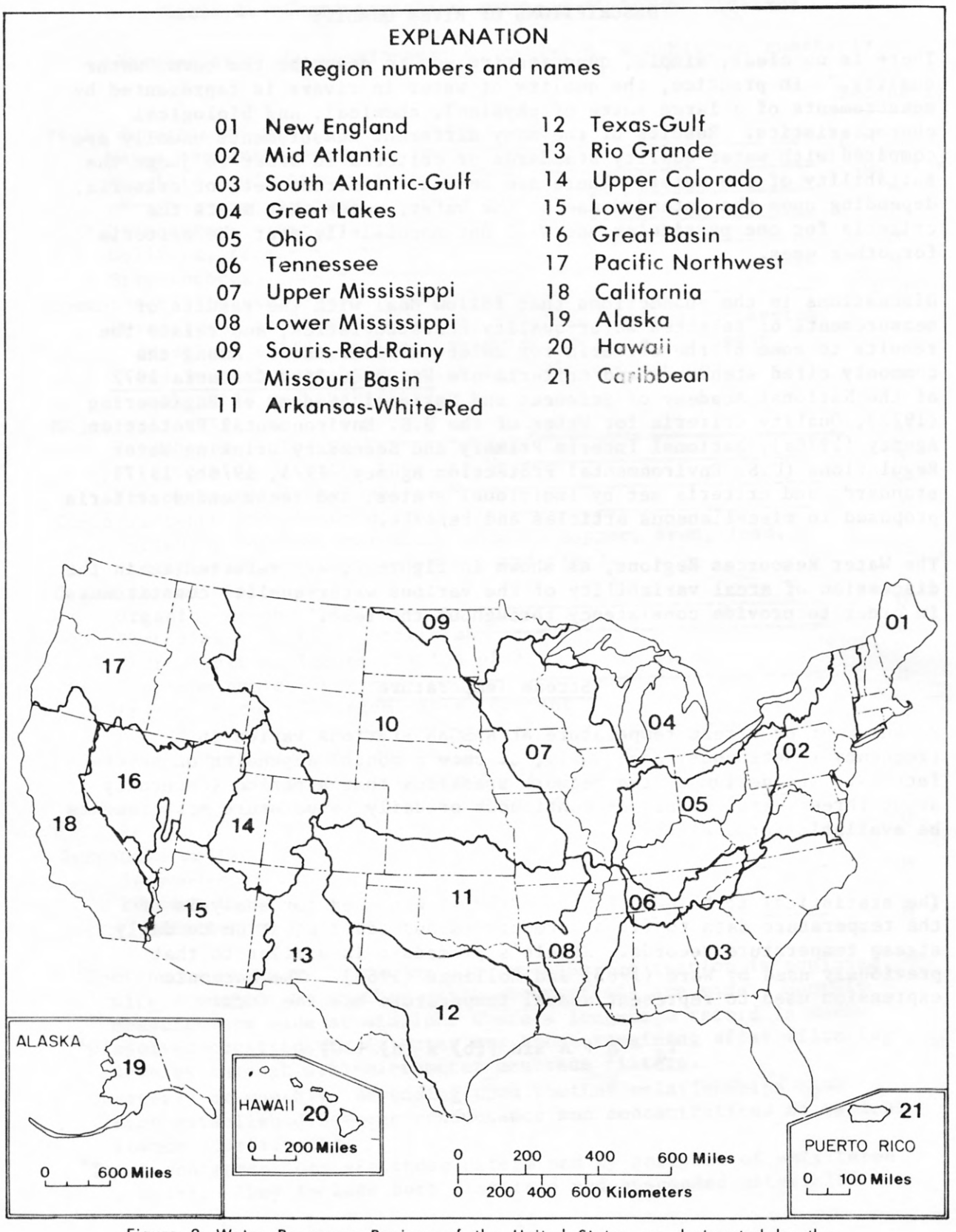

Figure 2.--Water Resources Regions of the United States, as designated by the U.S. Water Resouces Council.

where

T'_d represents estimated temperature on the dth day, in °C,

d represents a day of year (in this case October 1, the beginning of the water year, is represented by integer 1),

b a constant equal to 0.0172, i.e. $2\pi \div 365$ or 366,

A represents the harmonic amplitude of the stream temperature curve, in °C,

M represents the mean annual water temperature, in °C, and

C represents the phase angle, in radians.

The annual harmonic analyses of 1975 stream temperature records for each station, where available, are summarized near the middle of each page of table 14. Each summary in table 14 shows the harmonic coefficients (M, A, and C), the standard error of estimate of a daily temperature value in °C, and the percentage of the variation in daily temperature values that is accounted for by the harmonic function. These latter two values, standard error of estimate and percentage variation explained by the harmonic function, will be used in the future to decide whether or not the sampling frequency can be reduced to monthly.

A summary of mean temperatures measured at NASQAN stations is presented on the map at the top of figure 3. As would be expected, mean temperatures were lowest in the North and highest in the subtropical regions along the southern border of the continental United States and in Hawaii and Puerto Rico. Of the 345 stations for which stream temperture data are shown on table 3, mean temperatures of less than 10°C were found at 63 (18 percent). All but five of these were at latitudes greater than 43° N. Some, such as the Colorado River at Lees Ferry, Arizona (at lat 36°51" N.) were influenced by outflow from large, stratified reservoirs. Mean temperatures were in the range of 20°-25°C at 42 stations, all located south of latitude 35° N. Seven of the means exceeded 25°C, and three of those were for stations in Puerto Rico.

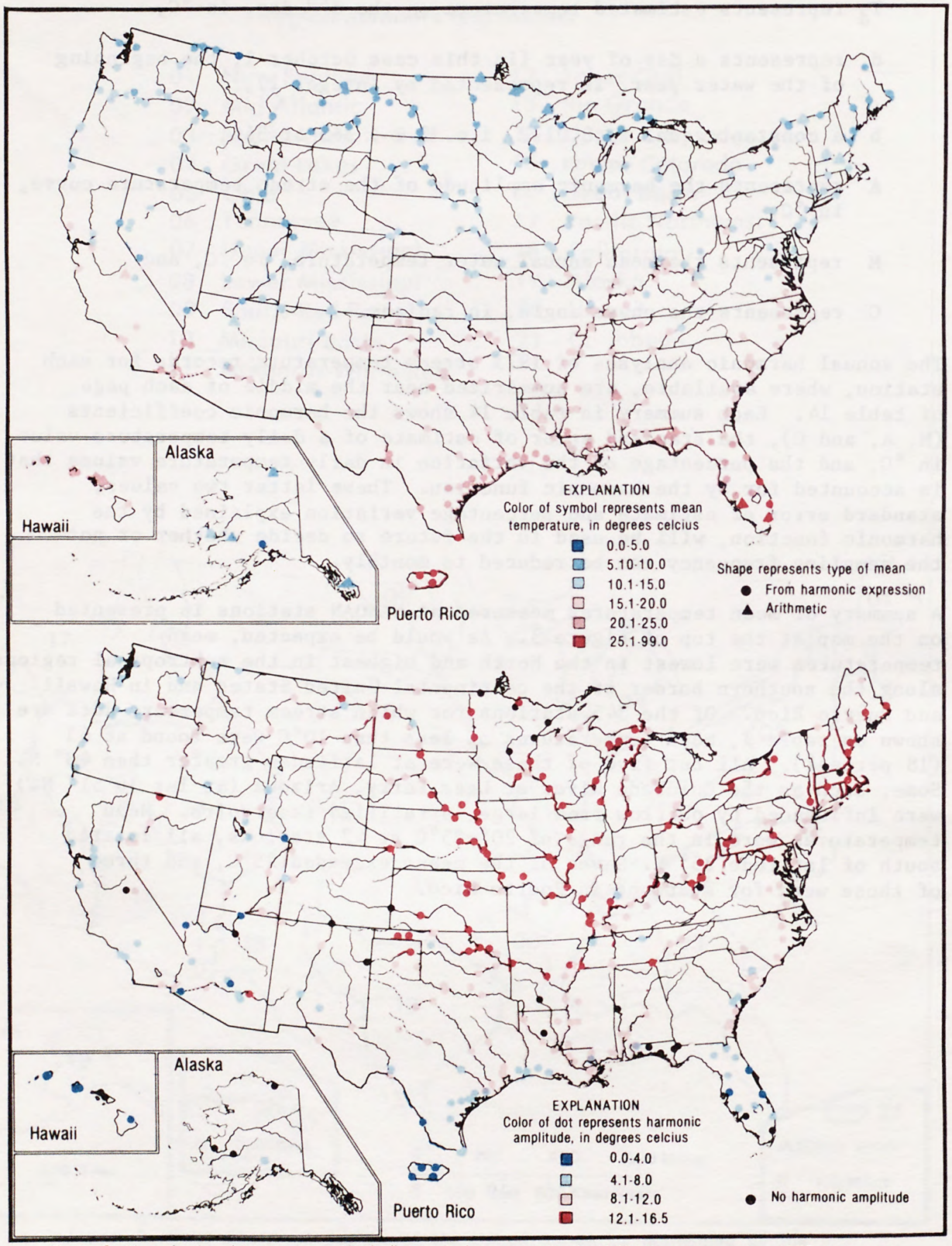

Figure 3.--Mean (top) and harmonic amplitude (bottom) of temperature at NASQAN stations during 1975 water year.

The map at the bottom of figure 3 shows the values of harmonic amplitude of the stream temperature curves. Amplitudes were greatest, (above 12°C) for the streams at midlatitudes (36° N. to 45° N.) and in the Great Plains. Streams in these regions generally range from freezing in the winter to relatively high temperatures in the summer. Amplitudes were smallest for the subtropical streams, which are consistently warm, and for the cold-climate streams, which even in the summer do not get more than a few degrees above freezing. The temperature-damping influences of reservoirs were observed at some northern stations. Amplitudes in the range of 1 to 2°C were found at four stations, and an amplitude of less than 1°C was found for Waikele Stream at Waipahu, Oahu, Hawaii.

Standard errors of estimate of stream temperature provided by the harmonic equation were 2°C or less at about 60 percent of the stations and were 3°C or less at about 80 percent of the stations.

Major Inorganic Chemicals

The major inorganic chemicals often are called "common constituents" as indicated in table 2 of this report. These substances generally dominate the total mass of dissolved material in water and have been the subject of most chemical analyses performed by the Geological Survey in the past. Earlier reports describing national patterns of water quality in terms of major inorganic chemicals include the maps by Rainwater (1962), an analysis of data from 88 NASQAN stations by Steele and others (1974), and the 1974 water year NASQAN report by Hawkinson and others (1977).

A summary of data on major inorganic chemicals measured at each NASQAN station during the 1975 water year is given in the top portions of each page of table 14 of this report. The second through sixth columns in the table for each station list the number of measurements, mean concentration (arithmetic average), standard deviation of measurements, and range of values for each constituent during the 1975 water year.

In this subsection, histograms and maps are used to show frequencies, ranges, and distribution of common constituents in the streams of the United States during the 1975 water year. Histograms for the common constituents were constructed using the mean concentration from each of the 345 NASQAN stations that operated during the water year. Areal patterns showing concentrations of common constituents, based on NASQAN data, are displayed on U.S. maps. Outlines of the accounting units are depicted on the maps, and the units are colored to show the mean concentrations of constituents measured at the NASQAN station(s) monitoring drainage from the respective accounting units. The use of a particular color does not imply that all streams within the accounting unit have the same or even similar mean concentrations for a constituent.

Dissolved solids.--The amount of dissolved minerals in water is represented by the concentration of dissolved solids and data on dissolved solids are widely used as general indicators of inorganic water quality. Waters with dissolved-solids concentrations of less than 500 milligrams per liter (mg/L) usually are considered by most standards and criteria to be suitable for drinking, assuming that other factors also are acceptable. Waters with higher concentrations of dissolved solids, however, can be and are used for domestic purposes, provided that certain critical substances are within suitable concentration ranges. Irrigation water usually is expected to contain less than 2,000 mg/L of dissolved solids (National Academy of Sciences and National Academy of Engineering, 1972, p. 335), but again, higher concentrations can be tolerated in some soil situations, depending upon the concentrations of certain ions. The Geological Survey (Krieger and others, 1957, p. 5) classifies water with 1,000 to 3,000 mg/L of dissolved solids as slightly saline, water with 3,000 to 10,000 mg/L as moderately saline, and water with 10,000 to 35,000 mg/L as very saline.

Frequency distributions of mean concentration of dissolved solids at 341 stations are shown on the histogram at the top of figure 4. Mean concentrations were less than 300 mg/L at about 60 percent of the stations, and were less than 500 mg/L at 76 percent of the stations. Mean concentrations were greater than 4,000 mg/L at eight stations; five were in the range of 4,000-8,000 mg/L, and two were in the range of 8,000-10,000 mg/L. The highest mean value was 26,000 mg/L. The eight highest values are lumped in the last bar of the histogram in order to maintain the expanded scale shown.

Areal patterns in dissolved-solids concentrations are shown by the U.S. map at the bottom of figure 4. The outlines of accounting units are shown on the map. Units are colored to show the mean concentrations of dissolved solids at the NASQAN station(s) monitoring drainage from the respective accounting units.

Lowest concentrations of dissolved solids were found in the New England, Mid Atlantic, Tennessee, Alaska, Hawaii, and Caribbean Water Resources Regions (fig. 2), and in sizeable parts of the South Atlantic-Gulf, Lower Mississippi, Pacific Northwest, and California Regions. Most of these are areas with relatively large amounts of precipitation.

Highest concentrations occurred in the Missouri, Arkansas-White-Red, Rio Grande, and in the southernmost part of the California Region. Most of these are regions with annual precipitation rates considerably below the national average and with significant amounts of irrigated agriculture. The highest mean concentration of dissolved solids, 26,000 mg/L, was at the station on the Salt Fork of the Brazos River near Aspermont, Texas. Mean concentrations greater than 4,000 mg/L were found at eight NASQAN stations--five in Texas, and one each in Oklahoma, New Mexico, and California.

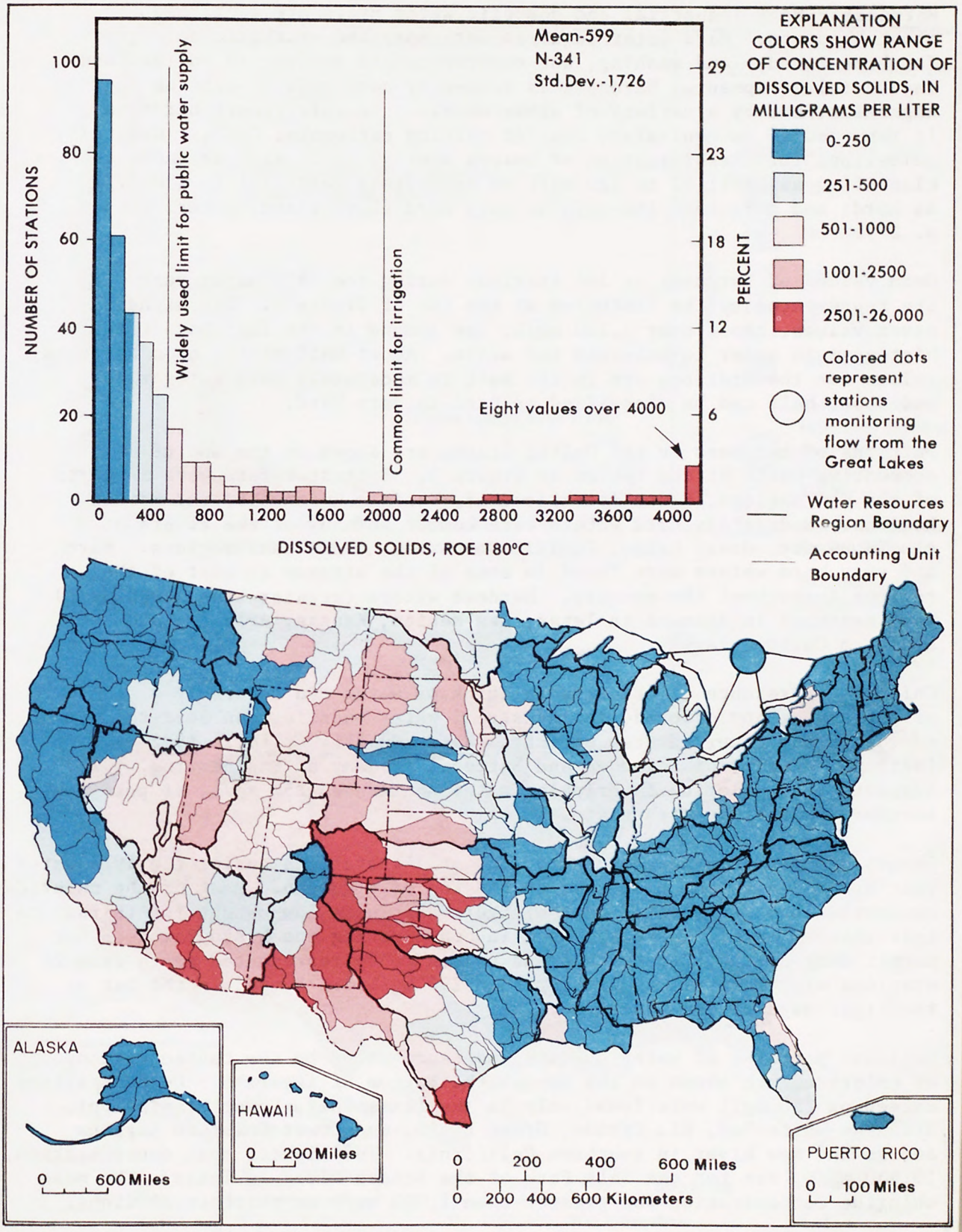

Figure 4.--Mean concentration of dissolved solids measured as residue on evaporation (ROE) at 180°C at NASQAN stations during 1975 water year. Map at the bottom is colored to show station data representing flow from the accounting unit.

Hardness.--Many industrial and domestic water users are concerned about hardness. Hard water requires more soap and synthetic detergents for home laundry and washing, and contributes to scaling in boilers and industrial equipment. Hardness is caused by compounds of calcium and magnesium, and by a variety of other metals. In this report hardness is reported as an equivalent mass of calcium carbonate, $CaCO_3$. General guidelines for classification of waters are: 0 to 60 mg/L as $CaCO_3$ is classified as soft; 61 to 120 mg/L as moderately hard; 121 to 180 mg/L as hard; and more than 180 mg/L as very hard (Durfor and Becker, 1964, p. 27).

Mean values of hardness at 344 stations during the 1975 water year are represented by the histogram at the top of figure 5. The highest seven values, those over 1,120 mg/L, are lumped in the last bar of the histogram in order to maintain the scale. About half of the mean hardness values for the stations are in the soft to moderately hard categories, and about half can be classified as hard to very hard.

Patterns of hardness in the United States are shown on the map of accounting units at the bottom of figure 5. Softest waters were in parts of the New England, South Atlantic-Gulf, Pacific Northwest, and Hawaii Regions. Moderately hard waters were common in many of the rivers of the Tennessee, Great Lakes, Pacific Northwest, and Alaska regions. Hard and very hard waters were found in some of the streams in most of the regions throughout the country. Hardest waters (greater than 1,000 mg/L) were measured in streams in Texas, New Mexico, Kansas, Arizona, and southern California.

Chloride.--Presence of chloride in drinking water can adversely affect taste, and chloride in industrial water supplies can lead to corrosion and other adverse effects. Water Quality Criteria 1972 (National Academy of Sciences and National Academy of Engineering, 1972) suggests that chloride in drinking water not exceed 250 mg/L, if possible, because of problems with taste.

Ranges of mean chloride concentrations at 344 stations during the 1975 water year are shown in the histogram at the top of figure 6. Most of the chloride concentrations represented in the figure are quite low--about two-thirds are less than 30 mg/L. The scale used in constructing the histogram does not permit many of the highest chloride values to be represented--data from 26 stations with mean values greater than 290 mg/L are lumped in the bar at the right edge of the histogram.

National patterns of water quality, as represented by the concentration of chloride, are shown on the map at the bottom of figure 6. Concentrations exceeding 250 mg/L were found only in the Texas-Gulf, Lower Mississippi, Arkansas-White-Red, Rio Grande, Great Basin, and Lower Colorado Regions and in the New River in southern California. The highest mean concentration, 12,900 mg/L, was for the Salt Fork of the Brazos River in Texas. The mean chloride concentration was greater than 1,000 mg/L at thirteen stations.

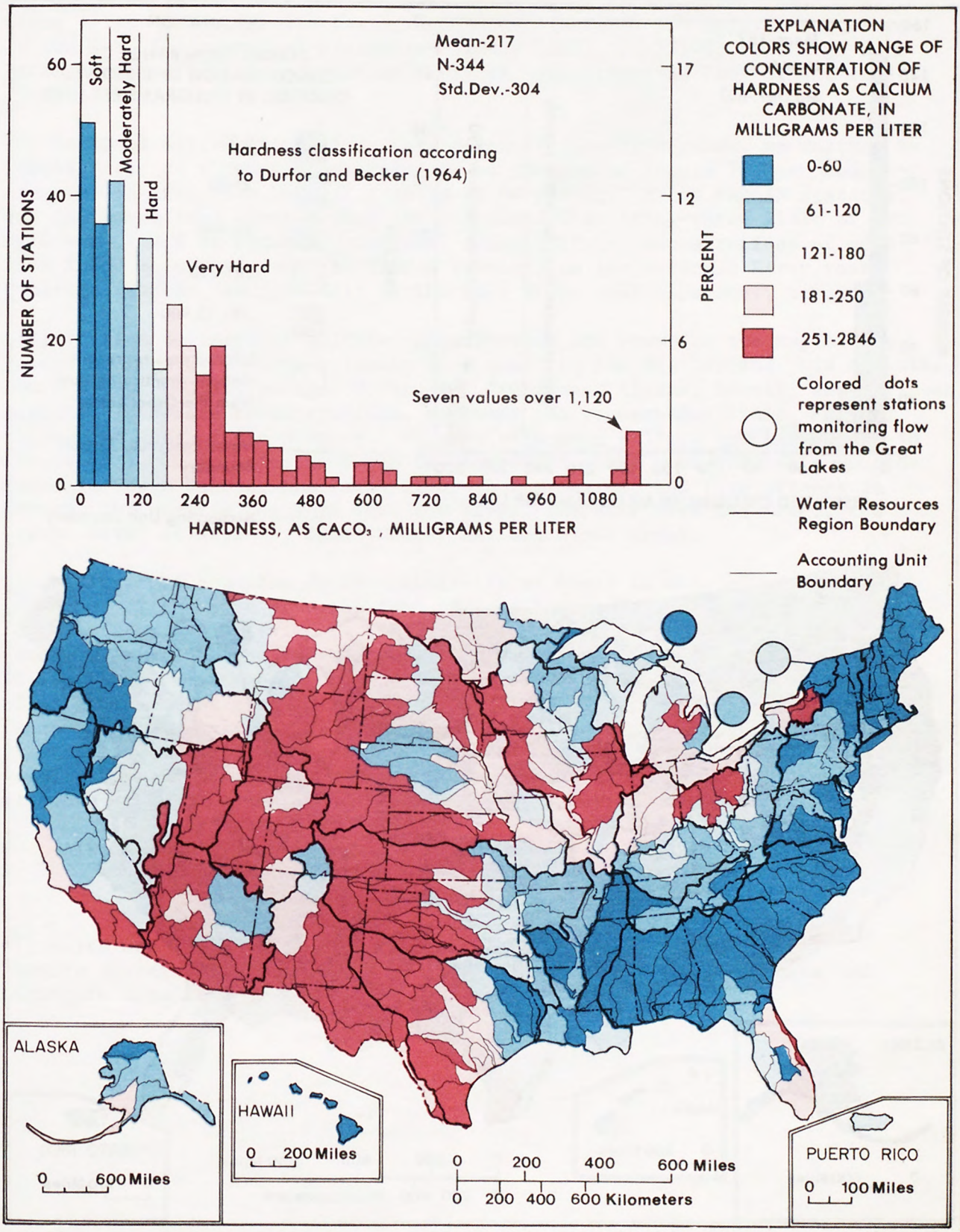

Figure 5.--Mean hardness as calcium carbonate at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

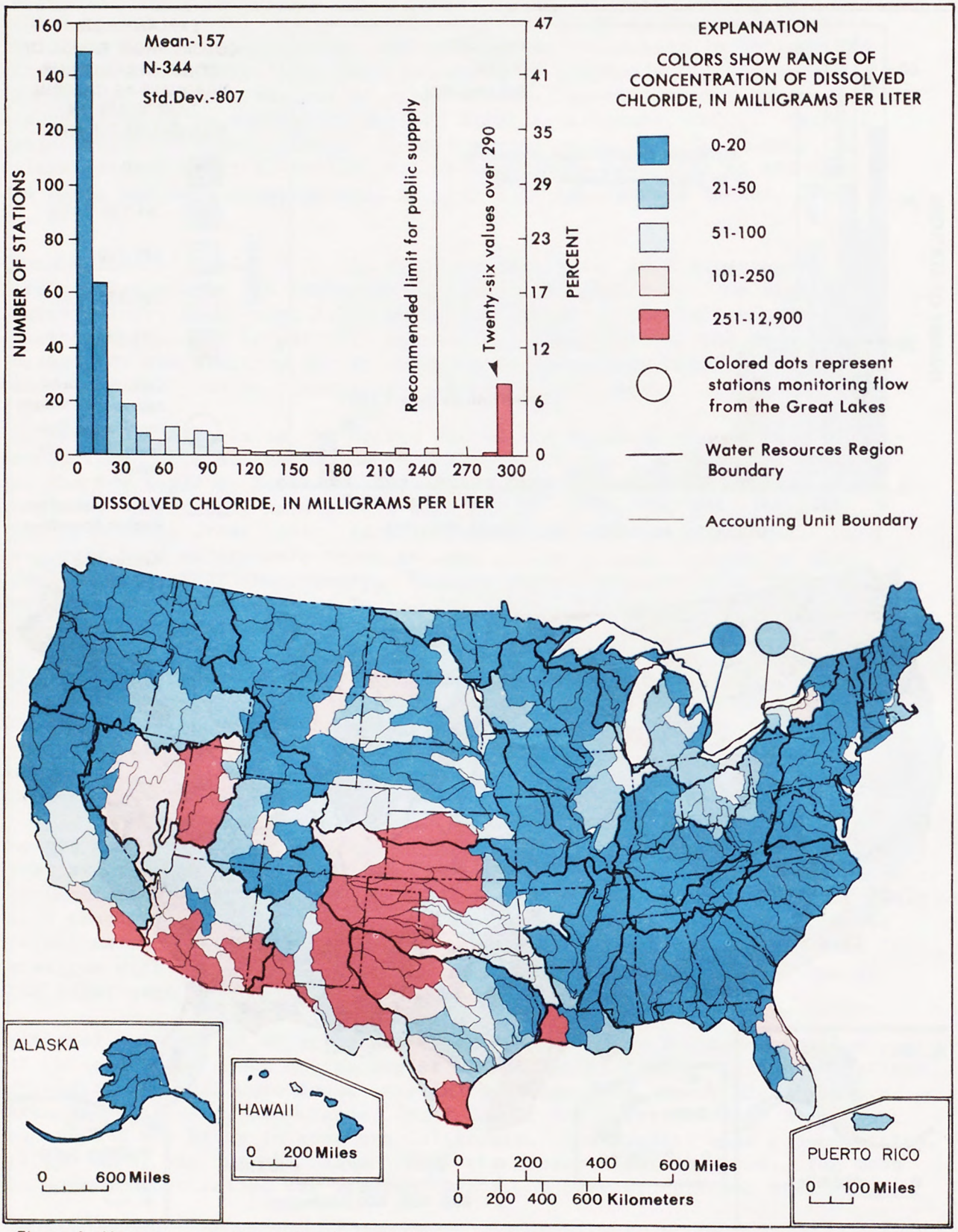

Figure 6.--Mean concentration of dissolved chloride at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

Sulfate.--Large amounts of sulfate in drinking water are undesirable because of the laxative effects. A recommended limit of 250 mg/L is suggested by the U.S. Environmental Protection Agency (1977, p. 17146), although some water supplies contain considerably higher concentrations (Durfor and Becker, 1964, p. 78).

The national distribution of sulfate concentration in streams, as defined by NASQAN data, is shown in the histogram at the top of figure 7. Mean concentrations of less than 50 mg/L existed at 60 percent of the NASQAN stations, and concentrations greater than the recommended drinking-water limit of 250 mg/L were found at about 50 stations. Mean sulfate concentrations of more than 2,100 mg/L were found at NASQAN stations on the Arkansas River near Coolidge, Kansas, and the Salt Fork Brazos River near Aspermont, Texas.

Distribution patterns of sulfate concentration are shown on the map at the bottom of figure 7. Lowest levels were found in the New England, Mid Atlantic, South Atlantic-Gulf, Pacific Northwest, Tennessee, Alaska, Hawaii, and Caribbean Regions. Moderate concentrations, not over the recommended limit, existed throughout most of the Midwest. Streams with mean sulfate concentrations in excess of 1,000 mg/L included the two mentioned above plus the Belle Fourche River in South Dakota, the Pecos River in New Mexico, and five streams in Texas: the Prairie Dog Town Fork Red River, the Salt Fork Red River, the Brazos River at Seymour, Beals Creek, and Los Olmos Creek.

Alkalinity.--Information on the alkalinity of water is more of an indicator of the type of water than it is a means of judging suitability for most uses. Alkalinity is the sum total of components in the water that tend to elevate the pH of the water above a value of about 4.5; therefore, it is a measure of the buffering capacity of water--that is, the ability of water to resist change in pH due to addition of acids. Alkalinity is influenced mainly by the amount of bicarbonate and carbonate, but also by phosphate, hydroxides, and other substances to a lesser degree. It usually is measured directly, but it also can be estimated from concentrations of bicarbonate and carbonate by the relation:

$$\text{Alkalinity as } CaCO_3 = 50.04 \times [(\text{bicarbonate} \times .01639) + (\text{carbonate} \times .03323)]$$

All units are in milligrams per liter. This equation can be used to compute average alkalinity for NASQAN stations using the bicarbonate and carbonate data given in table 14.

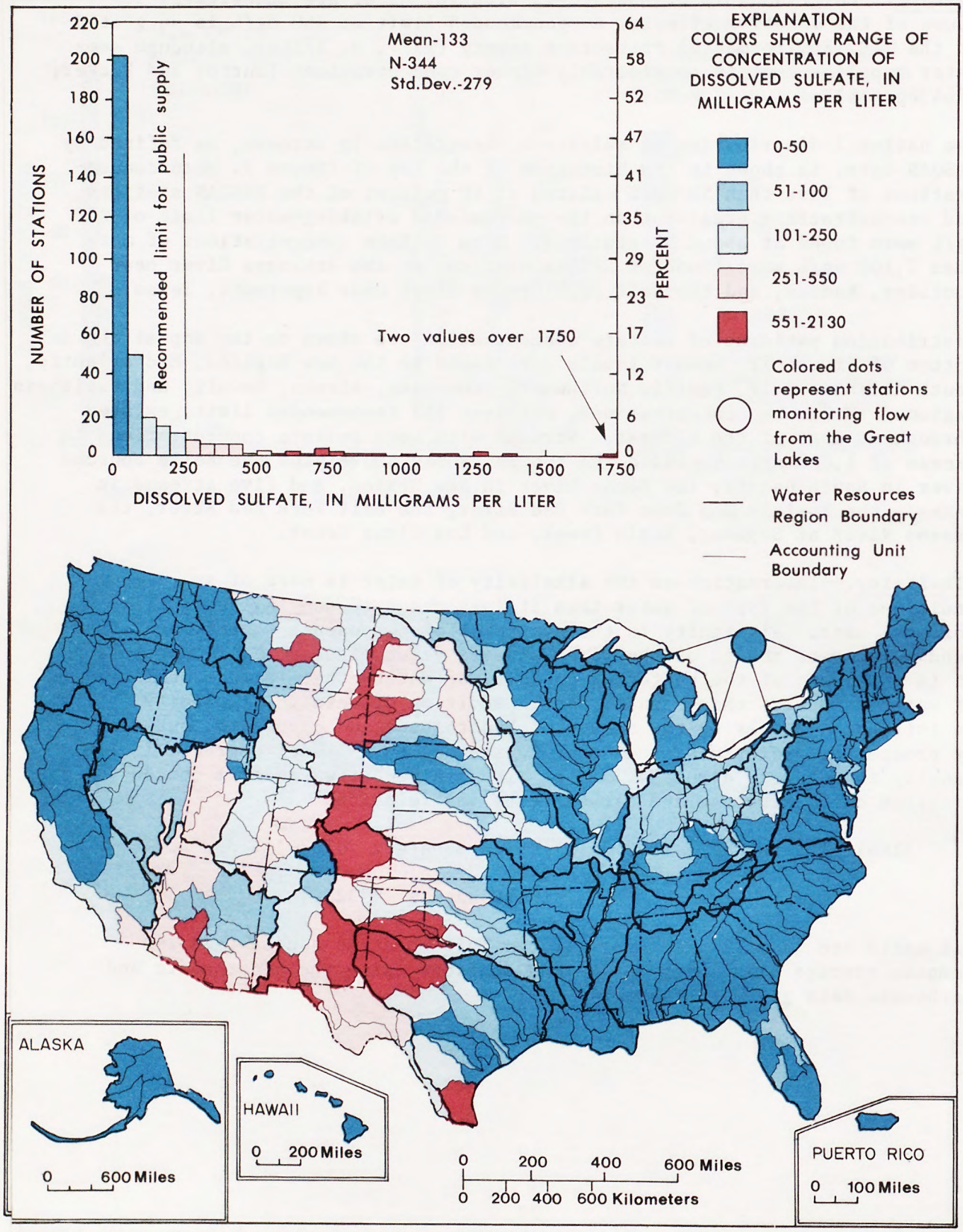

Figure 7.--Mean concentration of dissolved sulfate at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

A moderate amount of alkalinity is desirable in streams to prevent fluctuation of pH from biological processes. Also, water with high alkalinity will more effectively resist alteration by addition of acid mine drainage or acid pollution than will waters with low alkalinity. Bicarbonate, which usually is the principal component in stream alkalinity, can limit a water's utility for irrigation through induction of iron chlorosis in some plants at concentrations of 610 mg/L (National Academy of Sciences and National Academy of Engineering, 1972). Large amounts of carbonate and bicarbonate also can harm boilers and water heaters, and can be detrimental to a number of industrial processes. For example, Quality Criteria for Water (U.S. Environmental Protection Agency, 1976a) lists alkalinity maxima ranging from 50 to 500 mg/L for several industrial uses. It also lists a minimum alkalinity of 20 mg/L for protection of freshwater aquatic life.

Variations in alkalinity at NASQAN stations are shown by the histogram at the top of figure 8. The histogram is quite uniform, with about 97 percent of the NASQAN stations having concentrations less than 300 mg/L. The seven highest values are lumped in the bar at the right edge of the histogram. The greatest mean alkalinity was slightly more than 500 mg/L and the median was about 120 mg/L.

National patterns in alkalinity are shown on the map at the bottom of figure 8. Lowest alkalinities (poor buffering capacity) were found in some of the rivers in the New England, Mid Atlantic, South Atlantic-Gulf, Pacific Northwest, and Hawaii regions; the same waters that contained small concentrations of dissolved solids. Moderate or high alkalinities are found in rivers of all the other Water Resource Regions.

Fluoride.--Small amounts of fluoride in drinking water, at concentrations up to about 1 mg/L, are considered to have a beneficial health effect through the reduction in the incidence of tooth decay. However, large amounts of fluoride in the diet produce dental fluorosis--mottling and chipping of tooth enamel. Amounts of fluoride ingested through drinking water vary with the amount of water consumed, and the amounts consumed generally vary with the climate--people drink more where it is hot. Therefore, standards for the recommended maximum amount of fluoride in drinking water consider the annual average of maximum daily air temperature (National Academy of Sciences and National Academy of Engineering, 1972, p. 66).

The histogram at the top of figure 9 summarizes the mean concentration of fluoride measured at NASQAN stations, and also summarizes the recommended maximum concentrations for drinking water as a function of air temperature. A recommended maximum level for livestock of 2.0 mg/L also is noted on the illustration. Data plotted on the histogram demonstrate the general low level of fluoride in rivers, with three-fourths of the streams having mean fluoride concentrations of less than 0.5 mg/L, and with only six streams having concentrations greater than 1.4 mg/L.

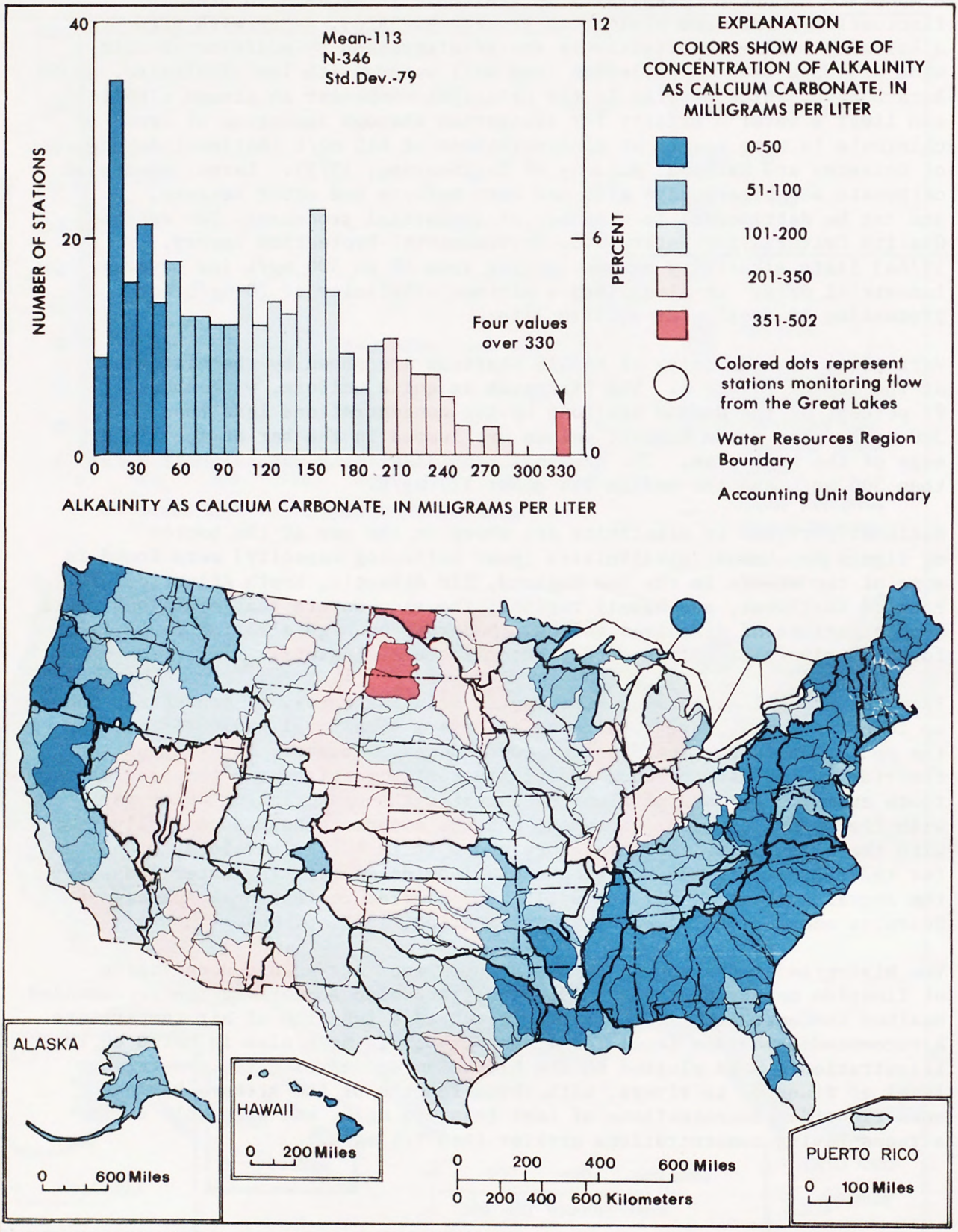

Figure 8.--Mean alkalinity as calcium carbonate at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

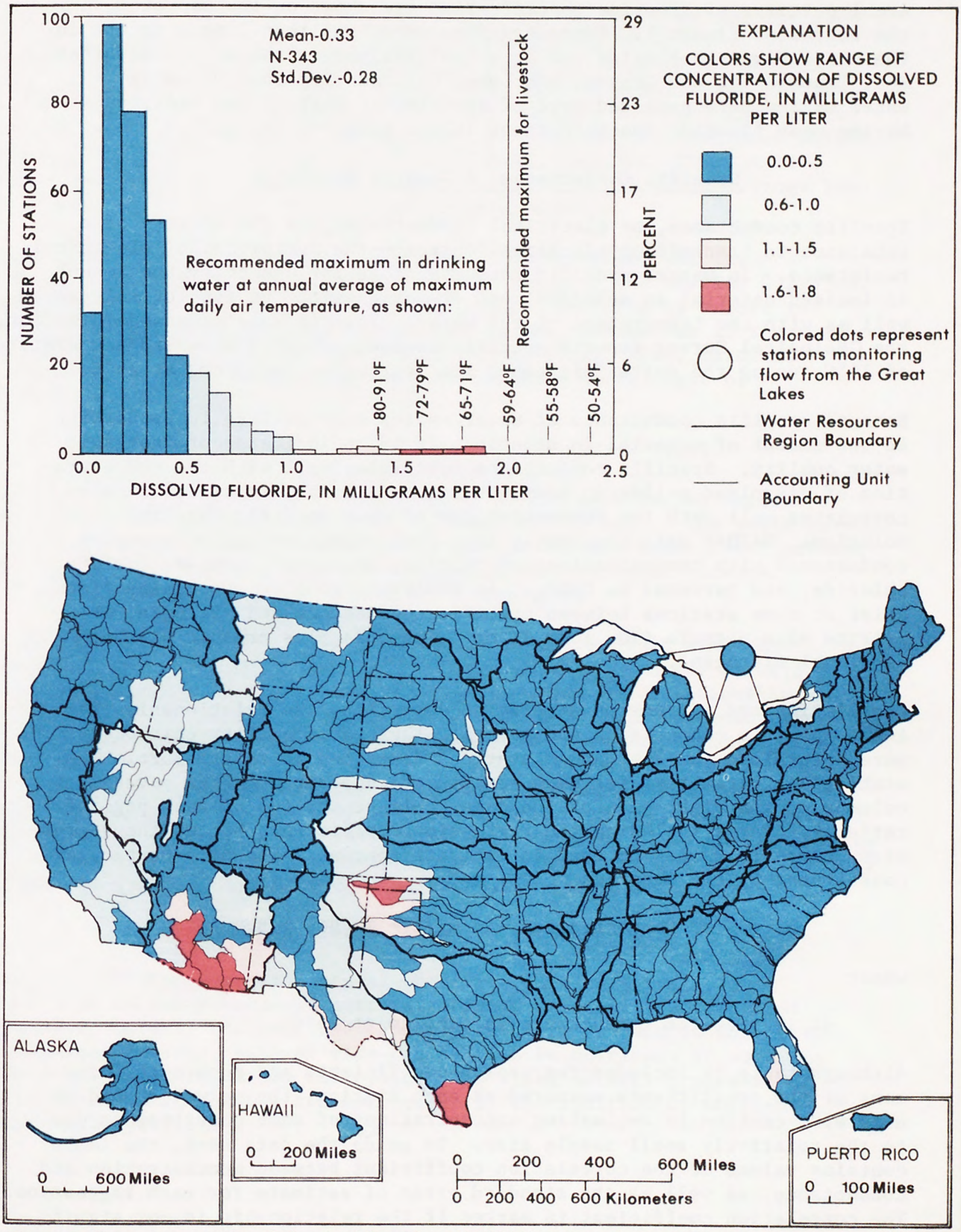

Figure 9.--Mean concentration of dissolved fluoride at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit. Recommended maxima shown on the histogram are from the National Academy of Sciences (1972).

Areal patterns of fluoride concentration are shown on the map at the bottom of figure 9. Concentrations were less than 1 mg/L except in the Peace River in Florida and at a few stations in the Arkansas-White-Red, Texas-Gulf, Rio Grande, and Lower Colorado Regions. Drinking water maxima were exceeded part of the time at most of the stations having mean fluoride concentrations in the range of 1-2 mg/L.

Specific Conductance, A General Indicator

Specific conductance, or electrical conductivity, is the ability of a substance to transmit an electrical current--the reciprocal of electrical resistance. In water, specific conductance is influenced by the amount of ionized material in solution, and it varies with the type of solutes as well as with the temperature of the water. For the sake of standardization, the Geological Survey reports specific conductance at a standard temperature of 25°C, using the units "micromhos per centimeter (µmho/cm) at 25°C."

Because specific conductance of water varies more or less in proportion to the amount of material in solution, it is an indicator of inorganic water quality. Specific conductance correlates well with the concentration of dissolved solids in many waters, and in many instances it also correlates well with the concentrations of many specific ions in solution. NASQAN data frequently show good relationships of specific conductance with concentrations of calcium, magnesium, sodium, sulfate, chloride, and hardness as $CaCO_3$. In addition, good relationships also exist at some stations between specific conductance and nitrogen, as nitrite plus nitrate ($NO_2 + NO_3$), or as ammonia plus organic nitrogen (kjeldahl nitrogen).

Correlation and regression statistics describing the relationships between specific conductance and several other water-quality characteristics were determined for the NASQAN stations described in this report. The statistical parameters for each station are described in the several columns on the right side of the data table at the top of each page of table 14. Terms including the regression coefficient, R, and the regression constant, B, can be used to estimate concentration of a particular constituent by the equation

$$\text{Concentration, in mg/L} = R\ (SC) + B,$$

where

SC is specific conductance in µmho/cm at 25°C.

Although table 14 includes regression coefficients and constants for many of the constituents measured at each station, the values should be used with caution in estimating concentrations of some constituents due to the relatively small sample size. To guide the data user, the table contains values of the correlation coefficient between concentration and conductance, as well as the standard error of estimate for each regression. The correlation coefficient is marked if the relationship is not significant at the 95 percent confidence level (Weatherburn, 1952, p. 193).

Duration tables of continuous or daily specific conductance are included in table 14 for most NASQAN stations. These tables show the values of conductance that were exceeded during specific percentages of the year. They describe the annual variation as determined from daily observations or from continuous records of conductance. Data in the duration tables provide more detail than is provided by the summary of conductance values measured at the time of the periodic chemical sampling. They provide more information on the extremes, and generally have a greater range than is shown by the twelve or so periodic measurements.

As an example of the application of the duration tables and the regression equations, consider the data in table 14 for station 03290500, the Kentucky River at Lock 2 at Lockport, Ky. As shown by values in the duration table, specific conductance at the station was in the range of 185 to 309 micromhos for 80 percent of the year. Also, hardness correlates with conductance having a correlation coefficient of 0.974, and the regression equation is

$$\text{Hardness, in mg/L as } CaCO_3 = 0.379\ (SC) + 19.35.$$

Therefore, hardness values ranged from 89 to 136 mg/L for 80 percent of the time, with a standard error of estimate of 4.5 mg/L. The table further shows that specific conductance exceeded 395 micromhos for 1 percent of the time, from which it can be estimated that hardness exceeded 169 mg/L as $CaCO_3$ for about 1 percent of the time.

As mentioned previously, users of table 14 should keep in mind that limited data can create false impressions regarding both the first and second statistical moments (mean and variance) and the relationships between concentrations of dissolved materials and specific conductance. There may be situations where generally good relationships should exist, but where it is not evident from the 8 to 12 samples collectd; and vice versa, 8 to 12 samples over a limited range may indicate a good relationship which has no physical meaning and which could be discredited with the collection of additional data. It always is risky to extrapolate any of the functional relationships between conductance and concentrations beyond the range of the data used to establish the relationships.

Major Nutrients, Nitrogen and Phosphorus

Nitrogen and phosphorus in natural water are nutrients that play a major role in the process of eutrophication. Generally, eutrophication is a slow, natural process, and commonly the term is used in connection with lakes; however, streams also can be rich in nutrients in much the same manner that lakes are eutrophic. The slow, natural processes of eutrophication frequently are speeded up by the addition of nutrients from human activities.

Nitrogen.--Several forms of nitrogen are found in natural waters. Most common are the nitrate (NO_3), nitrite (NO_2), and ammonia (NH_4) ions and several forms of organic nitrogen. Samples of unfiltered water from NASQAN stations are analyzed for the sum of nitrite plus nitrate ($NO_2 + NO_3$), and for the sum of ammonia plus organic nitrogen, frequently called kjeldahl nitrogen (KN).

There frequently is confusion in the reporting of concentrations of the various forms of nitrogen because some investigators report the concentrations of the ions (NO_3 or NO_2) in mass per unit volume, and other investigators report only the mass of nitrogen (N). Results can be considerably different. For example, 1.0 mg/L of "nitrate nitrogen as N" (NO_3--N) is equivalent to 4.4 mg/L of nitrate (NO_3); and 1.0 mg/L of "nitrite nitrogen as N" (NO_2--N) is equivalent to 3.3 mg/L of nitrite (NO_2).

There are many sets of standards and criteria for the concentrations of the various forms of nitrogen in natural waters. The U.S. Environmental Protection Agency (EPA) (1975) specifies a maximum allowable concentration of NO_3--N of 10 mg/L for public water supplies. On the other hand, in the 1975 Annual Report of the U.S. Council on Environmental Quality (CEQ) (1975, p. 353), CEQ used a maximum NO_3--N concentation of 0.6 mg/L as a "benchmark" level for "aquatic life protection," suggesting that higher levels are indicative of undesirable eutrophication.

Many state water-quality standards specify a maximum of 45 mg/L NO_3 (equivalent to 10 mg/L NO_3--N), but several states have adopted more rigid standards or criteria. In most cases, the rigid standards represent an interest in controlling rates of eutrophication. According to a summary by the U.S. Environmental Protection Agency (EPA) (1971b), general criteria for California list maximum values of total N ranging from 1.0 to 3.0 mg/L, depending on the region within the State. Criteria for Lake Tahoe are more rigid, giving a maximum for the average value of total N of 24 µg/L (equal to 0.024 mg/L). Several classes of waters in Hawaii have criteria for maximum levels of total N in the ranges of 0.10 to 0.20 mg/L. Criteria for Lake Michigan set by Illinois and Indiana state that total N should not exceed 0.4 mg/L. Established criteria for total NO_3 concentrations in various waters within Nevada range from 0.5 mg/L to 2 or 3 mg/L of NO_3.

Data representing annual mean concentrations of nitrite plus nitrate, as nitrogen ($NO_2 + NO_3$--N) at 100 NASQAN stations during the 1975 water year are shown on the histogram at the top of figure 10. Mean concentrations were less than 0.5 mg/L at 65 percent of the stations, and were less than 1.0 mg/L at about 85 percent of the stations. The widely used standard for drinking water, 10 mg/L NO_3--N, possibly was exeeded at the station on the Gila River above the diversion at Gillespie Dam, Arizona, where the average $NO_2 + NO_3$--N was 9.5 mg/L and where a maximum concentration of 13 mg/L was measured during the year. Assuming that the amount of nitrite was small, as it frequently is in large streams, it is estimated that the CEQ criterion of 0.6 mg/L maximum NO_3--N for aquatic life protection was exceeded by the annual mean concentration at about one-fourth of the rivers represented.

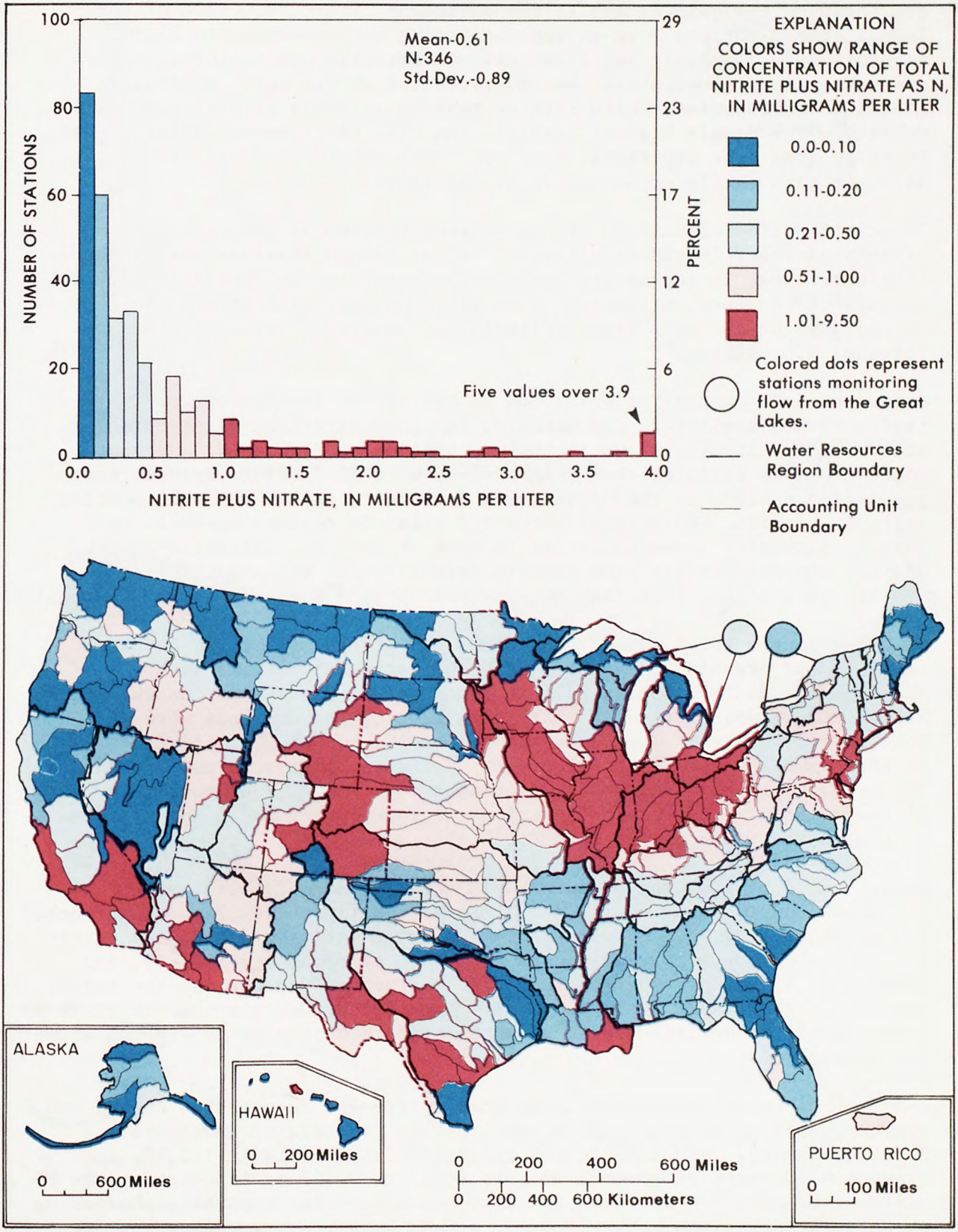

Figure 10.--Mean concentration of total nitrite plus nitrate as N at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

Patterns of national distribution of nitrite plus nitrate nitrogen are shown on the colored map at the bottom of figure 10. Some of the lowest concentrations were in regions having both moderate to high rainfall and relatively small amounts of intensive agriculture. Higher concentrations, those above the CEQ criterion of 0.6 mg/L, generally seemed to be associated with farming regions or areas of high population density. The single highest station, the Gila River above Gillespie Dam, is in an area that apparently received local runoff that was high in nitrogen with little opportunity for dilution.

The distribution of data on the mean concentration of ammonia plus organic nitrogen (kjeldahl nitrogen, KN) at NASQAN stations during the 1975 water year is represented on the histogram at the top of figure 11. Amounts of KN alone, without nitrite plus nitrate, were enough to exceed some of the more rigid criteria for levels of total nitrogen set for some U.S. waters.

Patterns of KN concentrations shown on the map at the bottom of figure 11 are similar to the patterns for concentrations of nitrite plus nitrate nitrogen shown in the map portion of figure 10. Highest concentrations (greater than 1 mg/L as N) were in farming regions, near population centers in the Midwest and Southwest, and in three accounting units in Florida. KN values in the Mid Atlantic region, however, were more in line with lower KN values in most of the South Atlantic-Gulf Region, whereas nitrite plus nitrate values in the Mid Atlantic region usually were higher than they were in most of the South Atlantic-Gulf region.

Considering the total of all four forms of nitrogen (nitrite, nitrate, ammonia, and organic N) measured at NASQAN stations, rivers in the New England, South Atlantic-Gulf, Lower Mississippi, Alaska, and Hawaii Regions had concentrations of less than 1 mg/L, and probably were within most of the more stringent criteria for limitation of eutrophication. On the other hand, most of the rivers in the Upper Mississippi region had mean values of total nitrogen greater than 2 mg/L, and more than half of the rivers in the remaining regions of the country had total nitrogen levels in the range of 1-2 mg/L, or higher.

Phosphorus.--Most of the phosphorus in streams is contributed by (1) breakdown and erosion of mineral forms (mostly phosphate-bearing rocks) in the soils, (2) animal wastes, (3) synthetic detergents, and (4) fertilizers. Phosphorus usually occurs as a form of phosphate (PO_4^{-3}), and frequently is associated with suspended sediments. Concern for the levels of phosphorus in streams or lakes usually stems from the role that it plays as a nutrient that contributes to eutrophication and problem growths of algae and rooted plants.

Concentrations of phosphorus in natural waters are reported in one of two ways, phosphorus as P (the form used in this report), or phosphorus as PO_4 (phosphate). The two are not equivalent--the ratio is 1:3.07, for example 0.100 mg/L phosphorus as P is equal to 0.307 mg/L phosphorus as PO_4. Differences also may be found in the schemes used for reporting phosphorus as soluble, dissolved, suspended, or total. Data in this report represent "total" phosphorus and therefore include the portions that are in solution (dissolved) plus phosphorus that is associated with suspended sediments.

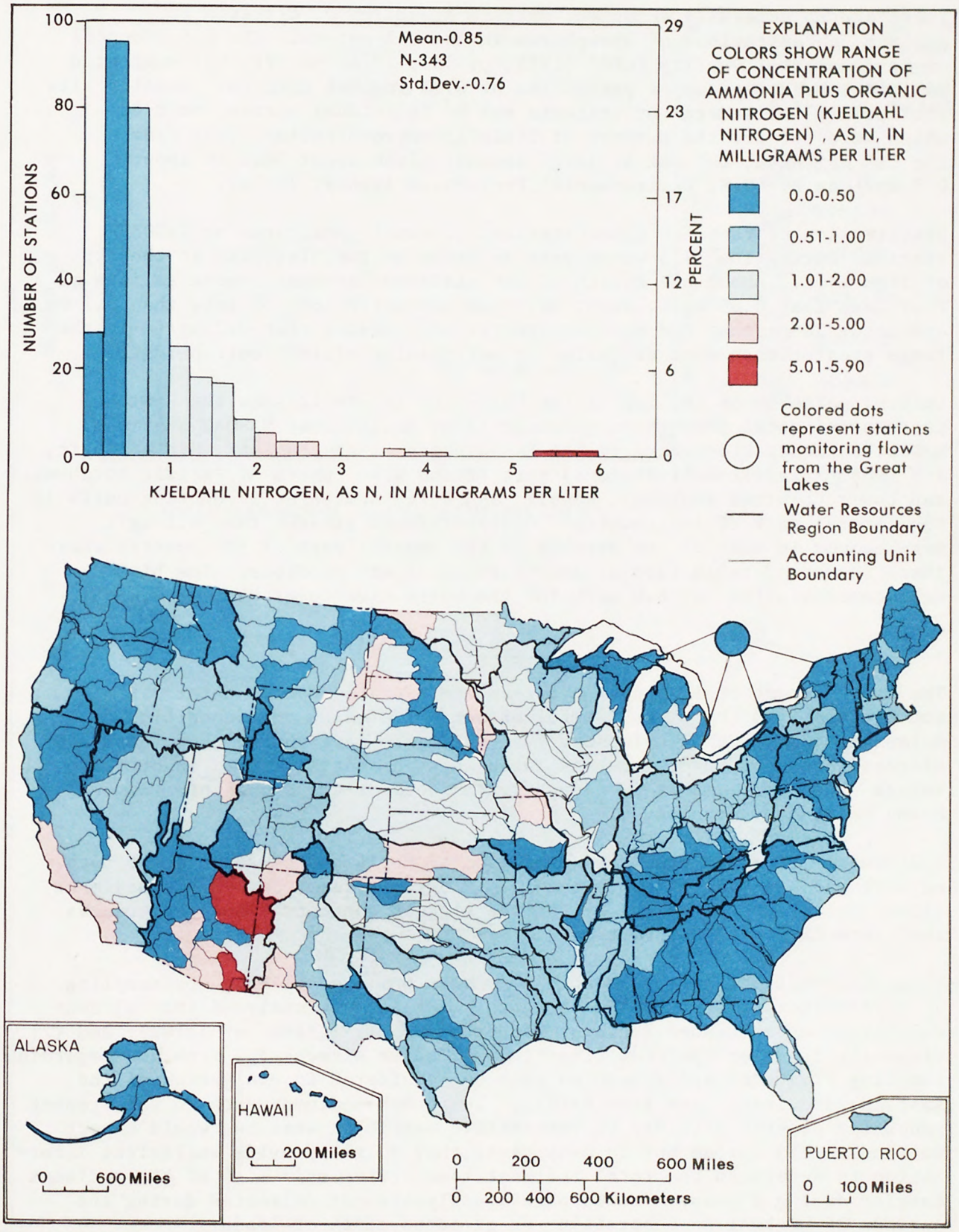

Figure 11.--Mean concentration of ammonia plus organic nitrogen (Kjeldahl nitrogen), as N, at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

There are no generally accepted, uniform standards or criteria for maximum concentrations of phosphorus in natural waters. The U.S. Council on Environmental Quality (CEQ) (1975, p. 353; 1976, p. 271) has suggested maximum concentrations of phosphorus of 0.03 and 0.1 mg/L for "aquatic life protection." Standards or criteria set by individual states, most of which were set for the purpose of limiting eutrophication, vary from the CEQ criteria, but not by large amounts (from about 0.01 to about 0.3 mg/L as P) (U.S. Environmental Protection Agency, 1971a).

Distribution of the mean concentrations of total phosphorus at NASQAN stations during the 1975 water year is shown on the histogram at the top of figure 12. About one fourth of the stations had mean concentrations of P of less than 0.05 mg/L, about half had concentrations of less than 0.1 mg/L, and about 30 percent had mean concentrations greater than 0.2 mg/L--in the range greater than most criteria for maintaining minimal eutrophication.

Colored patterns on the map at the bottom of figure 12 show the national patterns of total phosphorus concentrations measured at NASQAN stations. Lowest concentrations were in the East (parts of New England, Mid Atlantic, and South Atlantic-Gulf Regions) part of the West (parts of Pacific Northwest and Lower Colorado Regions), Hawaii, and a few scattered accounting units in the central part of the country. Concentrations greater than 0.1 mg/L were common in most of the streams of the central part of the country where there is considerable farming and where soils are erodible. The highest mean concentration was 6.0 mg/L for the White River near Oacoma, S. Dak.

Suspended Sediment

The great amount of interest in stream sedimentation stems mainly from concerns for (1) the often harmful effects of erosion and deposition of material, and (2) the influences that sediments have on the usefulness and attractiveness of water, such as influences on aquatic life. In order to assess these problems it is necessary to document the amount of sediment being carried by streams.

Sediment in streams results from erosion of soils and by scouring of both natural and man-made stream channels. Flowing streams carry some sediment almost all of the time, but by far the highest concentrations and greatest loads are carried by storm runoff.

Suspended-sediment data at most NASQAN stations are collected by sampling at a frequency of about once per month. Samples are analyzed for (1) concentration of suspended sediment (reported in milligrams per liter), and (2) clay-silt fraction (percent finer than 0.062 mm diameter). Problems regarding sampling frequency and schedules must be considered in evaluation of the suspended-sediment data from NASQAN. Suspended-sediment data in this report generally provide a fairly representative sample of what one would expect to find in the stream but in many cases they do not provide sufficient information to determine the total sediment load or the mean size of the sediment carried during a year. The samples usually are not collected during the periods of highest concentrations or greatest sediment loads.

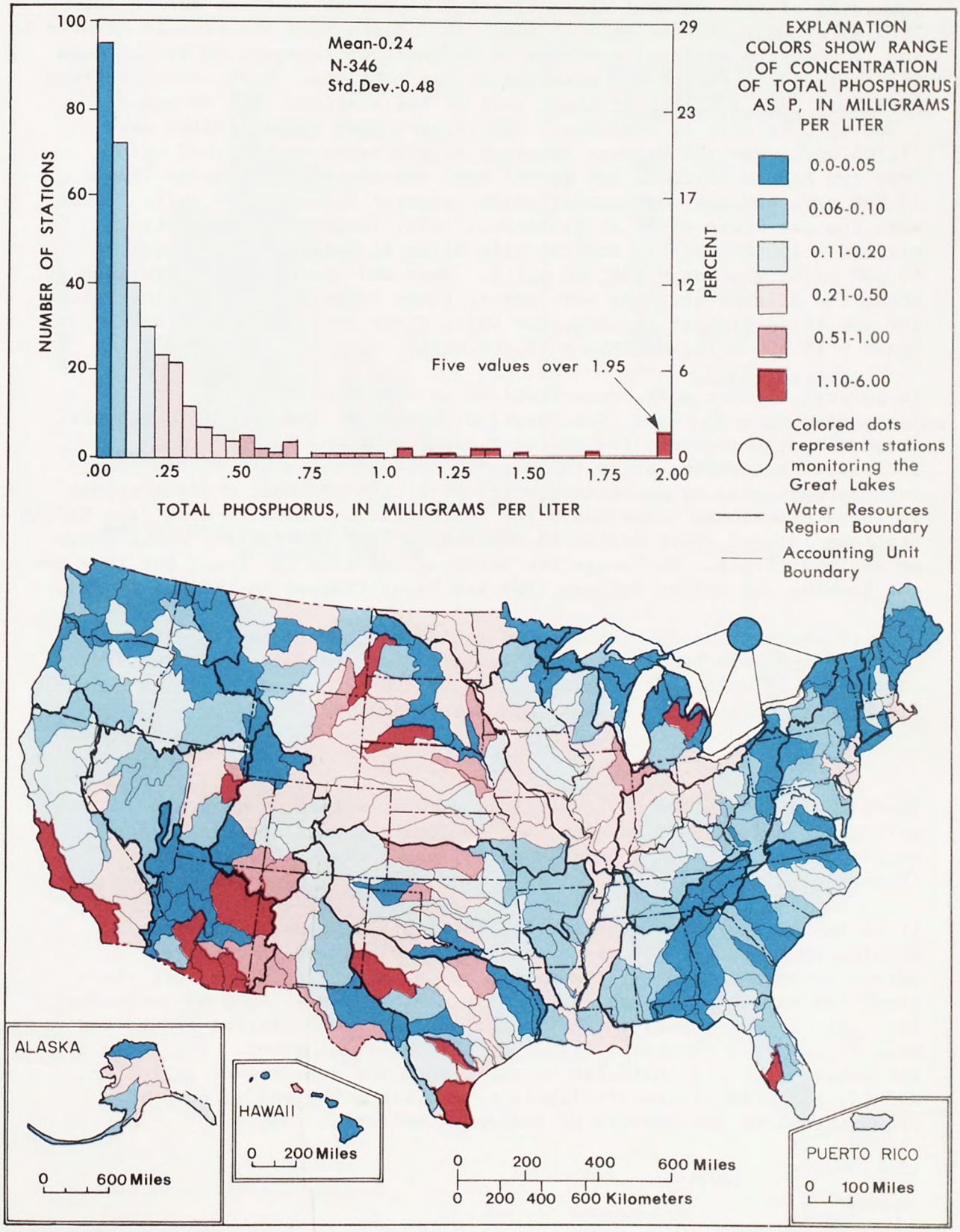

Figure 12.--Mean concentrations of total phosphorus as P at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

Summaries of the sediment data collected at NASQAN stations during the 1975 water year are included in table 14. Histograms and maps in figures 13 and 14 show the national patterns of sediment as represented by the mean and maximum concentrations measured at the stations. Mean concentrations were less than 100 mg/L at about half of the stations, and exceeded 1,000 mg/L at only 19 stations. The largest mean concentration was 77,100 mg/L, and the highest reported single value was 150,000 mg/L. Only two NASQAN stations had annual mean concentrations greater than 50,000 mg/L and maximum concentrations greater than 100,000 mg/L. These were the San Pedro River at Winkelman, Ariz. (mean = 77,100 mg/L; maximum = 150,000 mg/L), and the Gila River at Kelvin, Ariz. (mean = 50,600 mg/L; maximum = 136,000 mg/L). Mean and maximum concentrations at these two Arizona stations were nearly three times as great as the values for the third-highest station, the White River near Oacoma, S. Dak. (mean = 18,300 mg/L; maximum = 55,100 mg/L).

In general, lowest mean concentrations of suspended sediment were associated with the East, Southeast, Great Lakes, and Pacific Northwest. In addition, there were low sediment concentrations for several individual accounting units that are located in the midst of hydrologic regions dominated by accounting units with high sediment concentrations. In these cases, the anomalously low concentrations usually were from NASQAN stations located short distances downstream from reservoirs, which serve as sediment traps. Sediments are being eroded from the land, but they are not leaving the basins because they are being trapped in the reservoirs.

Highest concentrations of suspended sediment occurred in the streams draining the more heavily farmed, semiarid, or sparsely vegetated areas of the Mid Atlantic, Mississippi, Missouri, Ohio, Colorado, Texas-Gulf, Rio Grande, California, Alaska, and Hawaii Regions.

Bacteria

There are many species of bacteria in natural waters; some are pathogenic, or disease causing, but fortunately most are harmless. People, of course, are concerned mainly about those that present threats of disease.

It is impossible to monitor for all forms of pathogens. Instead, knowing that certain disease-producing organisms move from person to person through the water, the waters are examined for signs that these organisms may be present. Classically, this has been done by monitoring for indicator organisms in the so-called coliform bacterial group, and more recently in the fecal streptococcai bacterial group. The logic of the scheme is: (1) indicator bacteria show the presence of pollution, and (2) polluted waters are likely to contain pathogens in numbers proportional to the numbers of indicator bacteria.

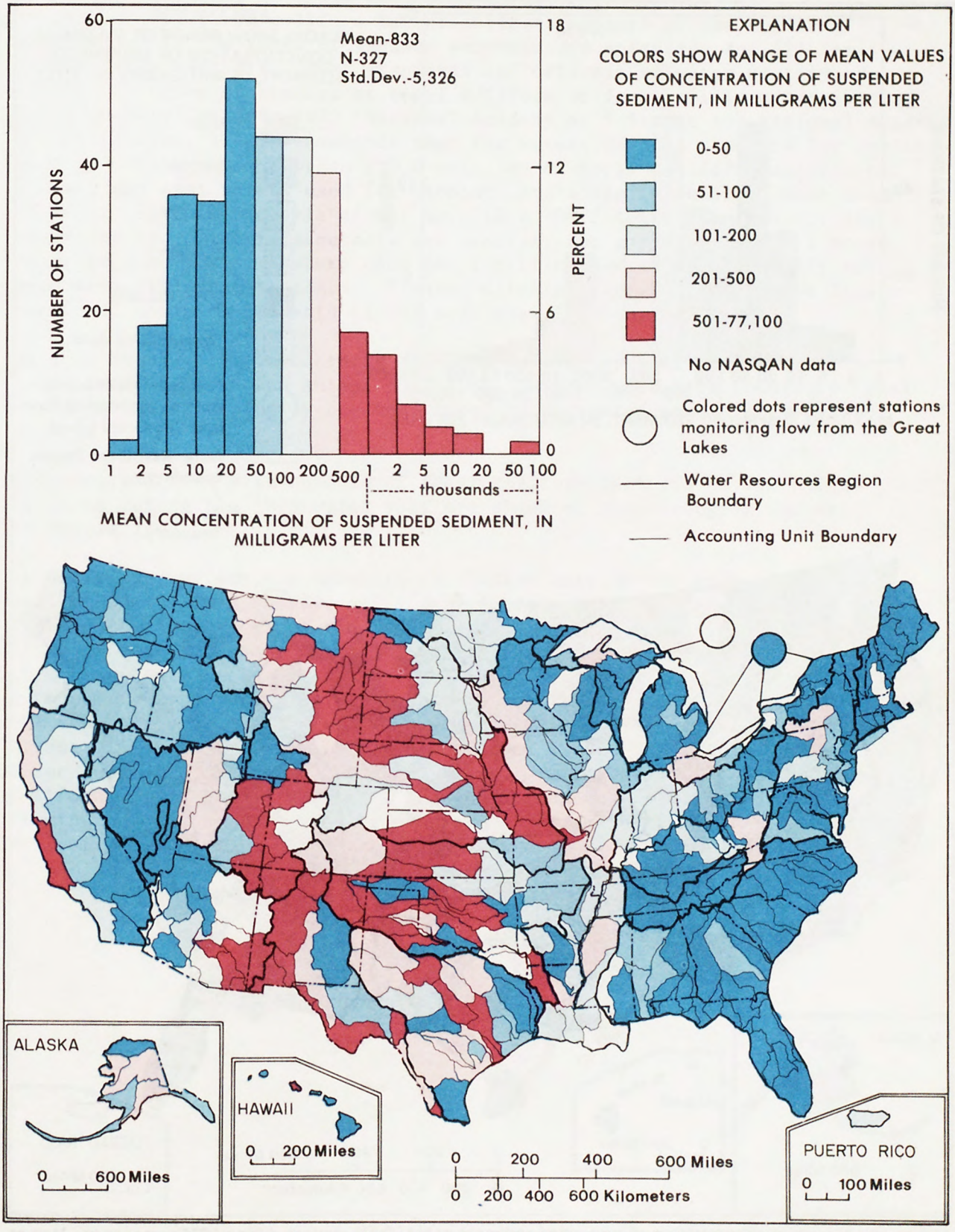

Figure 13.--Mean concentration of suspended sediment at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

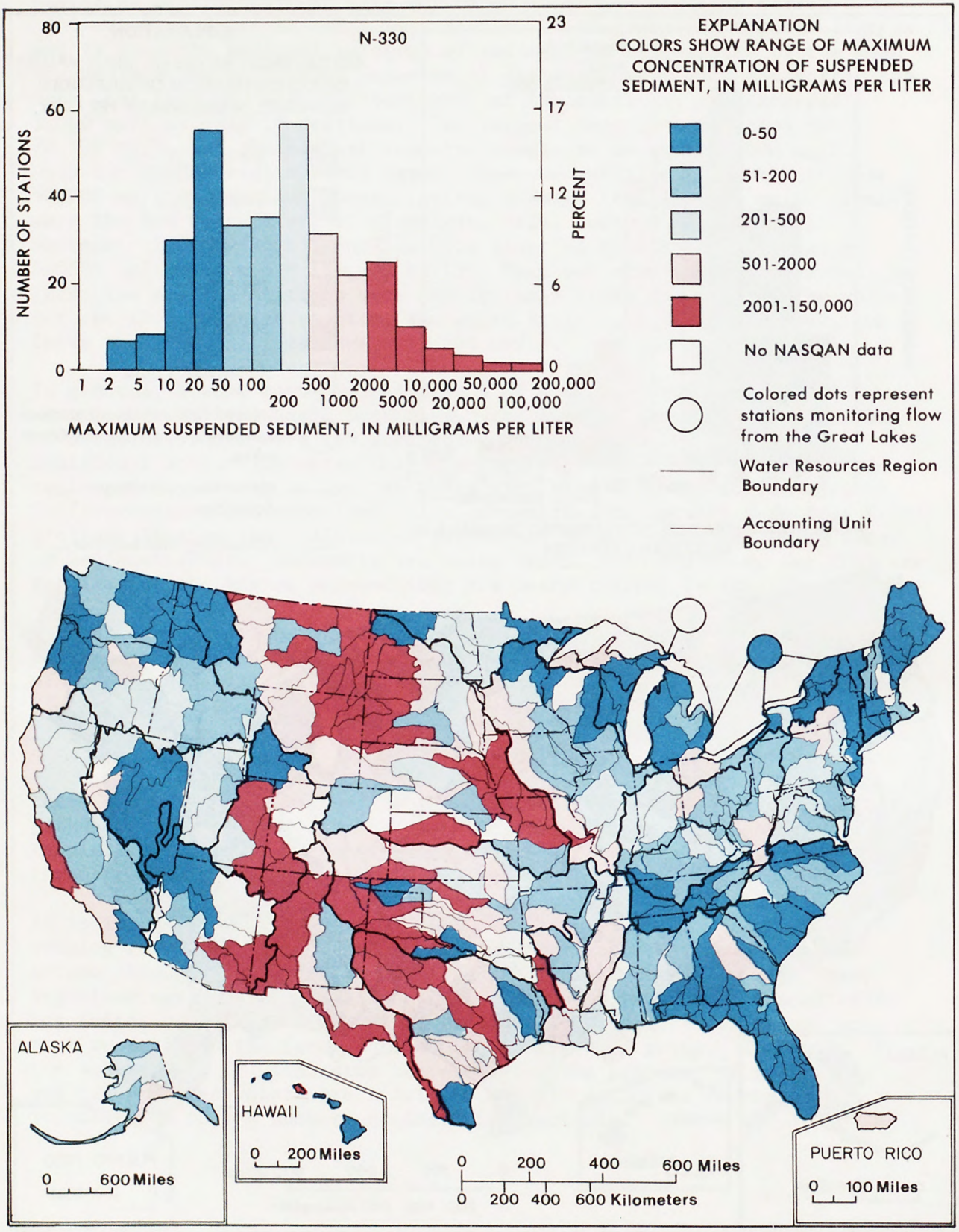

Figure 14.--Maximum concentration of suspended sediment at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

At NASQAN stations, data are collected at monthly intervals on numbers of (1) fecal coliform bacteria (those members of the coliform group found in the feces of various warm-blooded animals), and (2) fecal streptococci bacteria. Most standards and criteria of water quality are written in terms of numbers of total coliform or fecal coliform bacteria. Water Quality Criteria 1972 (National Academy of Sciences and National Academy of Engineering, 1972) recommends that raw waters used as a source for public supply contain not more than 2,000 colonies of fecal coliform bacteria per 100 mL, and that waters used for bathing have a log (geometric) mean count of fecal coliform bacteria of not more than 200 colonies per 100 mL. State standards and criteria generally are similar, but may differ over a broad range in some cases. Waters used for shellfish harvesting generally have much more stringent standards. Treated drinking waters usually have limits for total coliform bacteria of not more than 1 colony per 100 mL.

Data on fecal coliform bacteria are used in hydrological studies as indicators of human and animal pollution. Rivers with high counts of fecal coliform bacteria usually are influenced by untreated sewage or by animal wastes.

Data representing mean numbers of fecal coliform bacteria at 342 NASQAN stations during the 1975 water year are shown on the histogram and map on figure 15.

The life span of enteric bacteria is limited outside the body of a warm-blooded animal, so bacterial data from water monitoring stations may reflect the influences of the reach immediately upstream from the sampling site. For this reason, maps with entire accounting units colored according to measurements at stations near the downstream end of the units are not so effective a form of presentation as were maps of chemical data. Nevertheless, the map of figure 15 does show regions affected by animal or human wastes. Lowest mean colony counts generally occurred in the South Atlantic-Gulf, Tennessee, Upper Missouri, Upper Colorado, Great Basin, Pacific Northwest, California, and Alaska Regions. Highest colony counts are in streams flowing through heavily populated areas in several parts of the country or from areas with large populations of livestock.

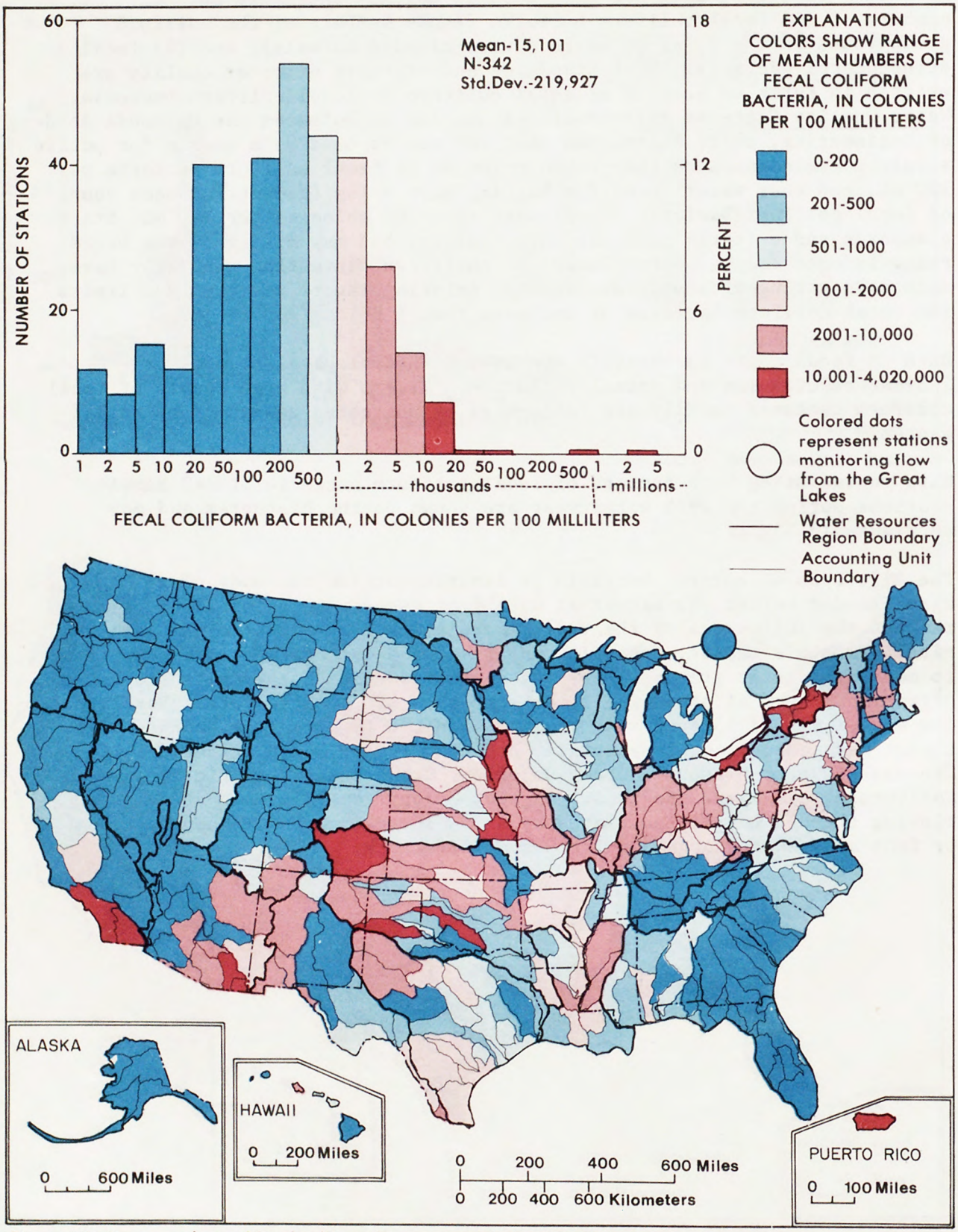

Figure 15.--Mean numbers of fecal coliform bacteria sampled at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

Information on fecal streptococci bacteria often is collected as part of hydrologic studies to provide information about the probable sources of bacterial pollution. While fecal streptococci bacteria are found in the gut of all warm-blooded animals, there are many more fecal streptococci bacteria then fecal coliform bacteria in animals. Humans have more fecal coliform bacteria than fecal streptococci bacteria. Commonly used guidelines in interperating bacteria data are: (1) a ratio of fecal coliform/fecal streptococci bacteria of greater than 4 indicates predominantly human sources, and (2) a ratio of fecal coliform/fecal streptococci bacteria of less than 1 indicates predominantly animal sources. Ratios in the range of 1 to 4 are common and indicate a combination of human and animal sources. Data interpretation generally must be on a sample-by-sample basis and cannot be made from the data summaries and ranges given in table 14 of this report. Readers are directed to the USGS individual state reports of Water Resources Data for the specific information needed for interpretation. Also, the ratio can not be used if the bacteria entered the stream more than 24 hours prior to the sampling.

Phytoplankton

Phytoplankton are suspended or free-floating plants that drift with water currents. A majority of the phytoplankton populations are made up of microscopic single-celled, colonial, or multi-celled algae. They serve as food for higher forms of aquatic life, and in large numbers they form nuisance "blooms" and can cause filter clogging, objectionably tastes and odors, and other problems in water-treatment plants.

Data on the sizes and types of phytoplankton populations are widely used in water-quality studies as indicators of pollution and nutrient enrichment. In general, large populations indicate nutrient enrichment, and small populations indicate oligotrophic conditions (low nutrients and low productivity).

Samples for phytoplankton analyses are collected at NASQAN stations at approximately monthly intervals. They are analyzed for numbers of cells, and the predominant forms are identified. Summaries of the numbers of phytoplankton at NASQAN stations are given on the data sheets of table 14, and national summaries are represented on the map and histogram of figure 16. These data allow the interpretation of a national pattern, but it is not possible to cite any references of what really represents "good" or "bad" water as related to phytoplankton populations. There is, however, a similarity between the color patterns on figure 16 and the patterns for the principal nutrients, nitrogen and phosphorus, on figures 10, 11, and 12. Smallest populations were associated with regions of low human and livestock populations and low nutrient concentrations. Highest populations occurred in the nutrient rich waters in the areas of large human and livestock population, intensive agriculture, and erodible soils.

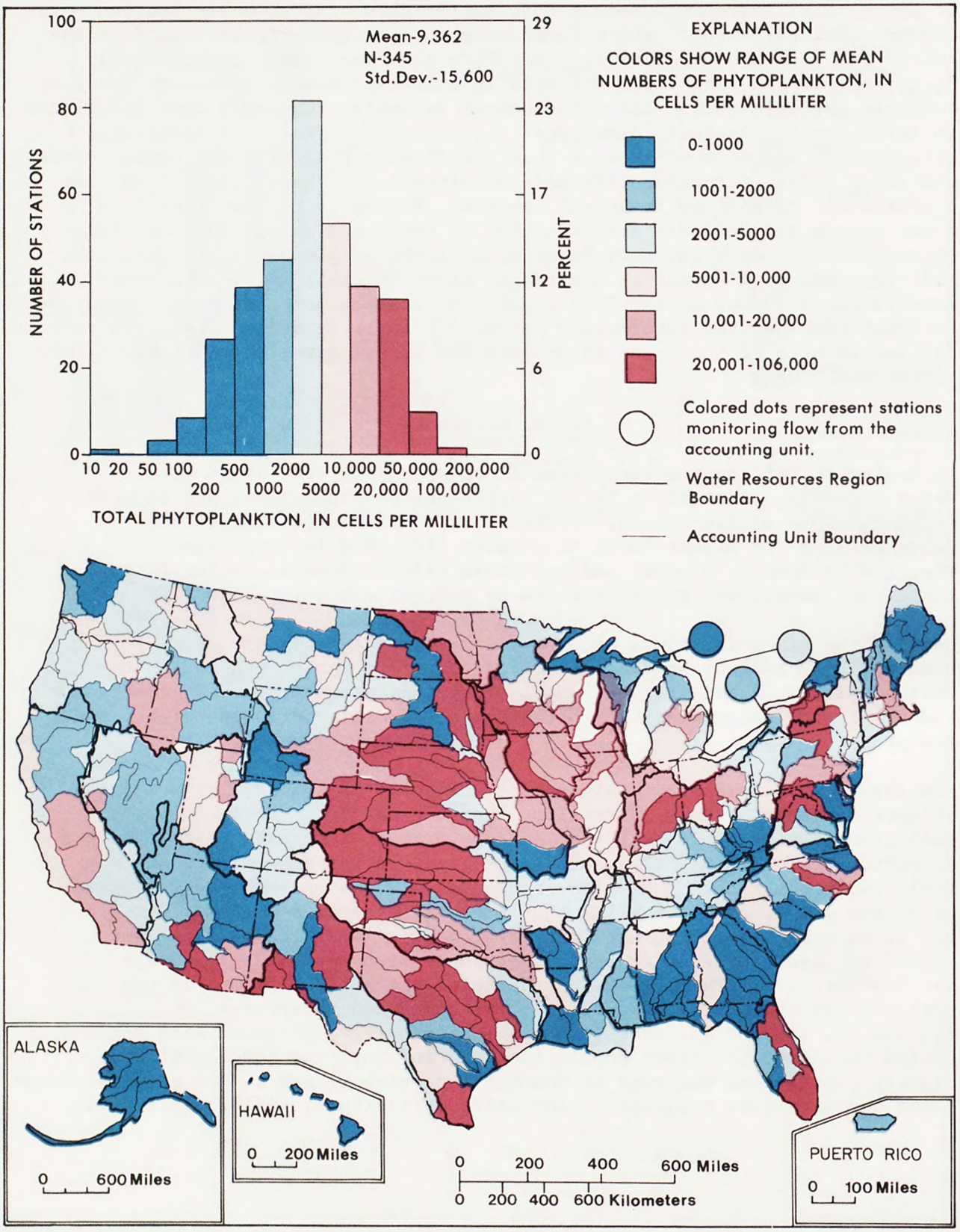

Figure 16.--Mean numbers of phytoplankton sampled at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

Periphyton

The term periphyton is applied to the community of microorganisms that are attached to or live upon submerged surfaces. They include algae that grow attached to stream bottoms, piers, rooted plants, floating debris, and other similar objects. They are studied in hydrologic investigations for much the same reasons that phytoplankton are studied--they serve as integrators and indicators of overall stream quality. Large growths of periphyton usually occur in waters rich in plant nutrients.

There are several ways to sample and measure periphyton. A common method is to scrape a sample from rocks or other objects, but such techniques do not provide the uniform results desired from a widely scattered network such as NASQAN. Consequently, data at NASQAN stations were collected using artificial (plastic strip) substrates placed in the streams for exposure periods of from two to four weeks each. An attempt is made to collect periphyton samples four times per year (once each calendar quarter), but because of vandalism and other disturbances, recovery rate has been poor.

When periphyton substrate strips are recovered from streams at NASQAN stations, they are preserved and shipped to laboratories for analyses of biomass and chlorophyll content. Biomass analyses of "dry weight" determine the amount of plant growth per unit area. Measurements of sample "ash weight" provide information on the amount of inorganic (mineral) content of the plants. Amounts of chlorophyll a and b in the periphyton serve to indicate the biological productivity of the plant community.

Data summarizing the biomass and the chlorophyll content of periphyton samples collected at NASQAN stations during the 1975 water year are shown in the tables in the lower portion of each page of table 14. Numbers of samples are small--too small to compute mean values and construct histograms and maps, as was done with major inorganic chemicals, bacteria, and phytoplankton.

Table 3 has been constructed in order to facilitate interpretation of the periphyton data from the NASQAN stations. Data are summarized according to the twenty-one Water Resources Regions designated by the U.S. Water Resources Council. Outlines of these regions are shown on the map in figure 2.

Because of the small amount of data and the variability at each station and in each region, it is difficult to interpret the periphyton data, even on a regional basis. The biomass and chlorophyll data in table 3 suggest that periphyton growths tended to be least in Alaska and the Caribbean Regions, but data from those two regions were so scarce that valid comparisons with other regions probably cannot be made. The New England, Mid Atlantic, and Souris-Red-Rainy Regions also seemed to have moderately small growths of periphyton. Relatively high periphyton growths were indicated in the Lower Mississippi, Missouri, Rio Grande, Great Basin, Pacific Northwest, and California Regions.

Table 3.--Ranges of periphyton biomass and chlorophyll measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions

Region Number	Region Name	Number of stations	Biomass dry wt. (gm/m^2)	Biomass ash wt. (g/m^2)	Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)
01	New England	10	0.0-350	0.5-170	0.1-8.4	0.1-2.0
02	Mid Atlantic	13	0.6-20	0.0-20	0.1-42	0.0-14
03	South Atlantic-Gulf	32	0.1-57	0.0-74	0.0-140	0.0-42
04	Great Lakes	27	0.1-90	0.0-82	0.0-120	0.0-23
05	Ohio	19	0.0-110	0.0-100	0.0-99	0.0-29
06	Tennessee	3	0.0-140	0.5-91	0.3-150	0.1-14
07	Upper Mississippi	12	0.1-6300	0.1-170	0.0-90	0.0-16
08	Lower Mississippi	11	0.6-1000	0.5-970	0.0-98	0.0-12
09	Souris-Red-Rainy	6	0.29-29	0.0-55	0.0-15	0.0-16
10	Missouri Basin	34	0.2-340	0.1-290	0.0-200	0.0-37
11	Arkansas-White-Red	10	0.8-91	0.4-65	0.0-87	0.0-16
12	Texas-Gulf	15	0.2-330	0.1-330	0.0-130	0.0-29
13	Rio Grande	8	0.1-1200	0.0-1100	0.0-77	0.0-5.5
14	Upper Colorado	7	0.1-71	0.1-39	0.0-64	0.0-11
15	Lower Colorado	11	0.3-74	0.0-64	0.0-83	0.0-19
16	Great Basin	12	1.7-540	0.8-170	0.2-160	0.0-28
17	Pacific Northwest	25	0.2-220	0.1-530	0.0-140	0.0-26
18	California	11	1.9-300	1.1-280	0.1-86	0.0-31
19	Alaska	2	0.2-1.8	0.2-1.3	0.2	0.0
20	Hawaii	6	0.8-18	0.5-14	0.0-100	0.0-39
21	Caribbean	2	0.2-0.6	0.2-0.5	0.1-0.8	0.0-0.2

Minor Elements

So-called minor elements are those that commonly occur in relatively small amounts in natural water. They also frequently are called trace metals. Many are of concern because, even in trace quantities, they may be toxic to people, to aquatic plants and animals, or to crops when present in irrigation water.

Eleven minor elements are measured regularly at NASQAN stations--arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, selenium, and zinc. Analyses are performed on unfiltered samples (water sediment mixtures) and on samples that have been filtered through 0.45 micrometer pore-size membrane filters. Concentrations of constituents measured in unfiltered samples are reported as "total" concentrations, and those measured in filtered samples are reported as "dissolved." In a few instances, dissolved values reported for a particular sample exceed reported total values because of the different precisions in the two determinations or non-representative sample-splitting for the analyses.

Data on dissolved constituents approximate what may be in water after it has passed through public-supply treatment plants which use only sedimentation, filtration, and chlorination. Water passing through plants with more extensive treatment where for example it may be softened or filtered through charcoal, may have part of the dissolved substances removed or other substances substituted for the original constituents. Data on total concentrations approximate amounts that may be consumed by livestock, may be in water used for irrigation, or may be taken up by aquatic plants or animals. Under some conditions, such as change of pH or total ionic balance of the sample, some of the metals present in the undissolved portion of the total concentrations may be converted to the dissolved state.

There are many different sets of standards and criteria for evaluating the suitability of water based upon the concentrations of minor elements. Some of these are summarized in table 4, including: (1) the criteria contained in the 1975 Annual Report of the U.S. Council on Environmental Quality (1975), (2) Water Quality Criteria of the National Academy of Sciences and National Academy of Engineering (1972), (3) criteria recently summarized by the U.S. Environmental Protection Agency (1976a), (4) "National Interim Primary Drinking Water Standards" (U.S. Environmental Protection Agency, 1975), and (5) a summary of criteria for fish and aquatic life based on a literature survey by Wentz (1974). The several criteria for public water supply generally are in close agreement, but the published criteria for aquatic life differ considerably among themselves and from the public-supply criteria.

Table 4.--Standards and criteria for maximum concentration of minor elements in water

(Concentration in micrograms per liter)

Source	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Manganese (Mn)	Mercury (Hg)	Selenium (Se)	Zinc (Zn)
U.S. Council on Environmental Quality (1975)											
Aquatic life	50	4	-	-	10	300	30	100	-	-	1000
Public water supply	50	10	-	-	1000	300	50	50	-	-	5000
Water Quality Criteria 1972 (National Academy of Sciences and National Academy of Engineering, 1972)											
Public water supply sources	100 a/	10	50 a/	-	1000	300 b/	50	50 b/	2 a/	10	5000
Freshwater aquatic life	-	30	50	-	c/	-	30	-	0.2	-	f/
Marine aquatic life	d/	c/	e/	-	d/	300	10	100	0.1	10	100
Agriculture, livestock	200	50	1000	1000	500	g/	50	g/	10	50	25000
Agriculture, irrigation h/	100-2000	10-50	100-1000	50-5000	200-5000	5000-20000	5000-10000	200-10000	-	20	2000-10000
U.S. Environmental Protection Agency (1976a)											
Domestic water supply	50	10	50	-	1000	300	50	50	2	10	5000
Irrigation	100	-	-	-	-	-	-	-	-	-	-
Aquatic life	-	0.4-12	300	-	c/	1000	e/	100	0.05-0.1	e/	e/
National Interim Primary Drinking Water Standards (U.S. Environmental Protection Agency, 1975)	50	10	50	-	-	-	50	-	2	10	-
Wentz (1974, p. 27)											
Fish and other aquatic life	1000	10	50	500	10-20	-	5-10	1000	1	1000	30-70

a/ Criterion specified for total form.
b/ Criterion specified for soluble form.
c/ 0.1 times the median lethal concentration with a 96-hour test period (96-hr. LC50).
d/ 0.05 times 96-hr. LC50.
e/ 0.01 times 96-hr. LC50.
f/ 0.005 times 96-hr. LC50.
g/ No limit needed.
h/ Range given; specific criteria depend on soil texture and pH.

Samples for analysis of minor elements are collected about four times per year at most NASQAN stations. Summaries of measured ranges at stations are shown in the bottom part of each summary page in table 14. For most constituents not enough data were available to compute mean values or construct maps and histograms as was done for major inorganics. Maps and histograms have been constructed only for dissolved arsenic and dissolved zinc.

Tables 5 and 6 summarize ranges of concentrations of total and dissolved minor elements by Water Resources Regions (see fig. 2). In some cases table 6 shows higher ranges for dissolved concentrations of some elements than table 5 shows for total concentrations of that same element in the same particular region. There are two possible explanations for this: (1) analytical and subsampling errors of the types mentioned in a previous paragraph; and (2) samples collected at different times, so that equivalent pairs of data are not presented.

The following paragraphs briefly summarize some of the more obvious patterns in the minor elements data and compare the measured concentrations with some of the common standards and criteria of water quality.

Arsenic.--Average values of dissolved arsenic at NASQAN stations are shown on the map and histogram in figure 17. Average concentrations did not exceed the drinking water standard of 50 µg/L at any of the stations, and indeed, exceeded 5 µg/L at only about 10 percent of the stations. The highest single measured concentration of dissolved arsenic was 65 µg/L in a sample from the Belle Fourche River, S. Dak. As shown on the map in figure 17, the highest concentrations of dissolved arsenic generally were in the Missouri, Great Basin, and Lower Colorado Regions.

Total arsenic concentrations were considerably higher than concentrations of dissolved arsenic in about half of the Water Resources Regions. Samples exceeded the drinking water standard of 50 µg/L in seven regions, mostly in the central and western parts of the country. The highest observed concentration of total arsenic was in the Belle Fourche River, the same stream that had highest dissolved arsenic.

Cadmium.--Measured concentrations of dissolved cadmium exceeded public supply standards and criteria of 10 µg/L at NASQAN stations in the Ohio and Lower Mississippi Regions. A maximum concentration of 23 µg/L was measured in the Kanawha River, W. Va. High values also were observed at two stations on the Mississippi River in January 1975: 190 µg/L in the Mississippi River at Memphis, Tenn., and 14 µg/L in the Mississippi River near Arkansas City, Ark. The highest measured value of total cadmium of 840 µg/L also was found at the Memphis station in January 1975. The identical timing of the high values at the two Mississippi River stations suggests that the river was polluted by a chemical spill. Relatively high values of total cadmium (exceeding some, but not all criteria and standards) also were measured at stations in about half of the Water Resources Regions.

Table 5.--Ranges of total concentrations of minor elements measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions

Region Number and Name	Range of Concentrations (micrograms per liter)										
	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Manganese (Mn)	Mercury (Hg)	Selenium (Se)	Zinc (Zn)
01 New England	0.0-2	0.0-18	0.0-70	0.0-2	0.0-30	110-920	0.0-100	10-130	0.0-1.1	0.0-2	0.0-150
02 Mid-Atlantic	.0-9	.0-1	.0-70	.0-8	.0-30	60-19000	.0-57	10-880	.1-1.3	.0-1	.0-190
03 South Atlantic-Gulf	.0-50	.0-50	.0-50	.0-100	.0-40	60-5500	.0-100	.0-370	.0-2.2	.0-3	.0-440
04 Great Lakes	.0-11	.0-20	.0-20	.0-50	.0-170	20-10000	.0-100	.0-530	.0-1.1	.0-3	4-320
05 Ohio	.0-6	.0-22	.0-20	.0-20	.0-110	70-7900	.0-250	20-12000	.0-1.2	.0-3	.0-600
06 Tennessee	.0-5	.0-13	.0-10	.0-10	3-40	60-1300	2-130	10-130	.0-0.9	.0-2	10-80
07 Upper Mississippi	.0-31	.0-20	.0-40	.0-100	.0-460	260-15000	1-200	10-1900	.0-2.1	.0-3	10-380
08 Lower Mississippi	.0-14	.0-840	.0-160	.0-50	.0-120	620-20000	.0-200	40-610	.0-0.5	.0-4	.0-230
09 Souris-Red-Rainy	.0-10	<10-20	.0-20	.0-50	<10-60	140-4800	<100-200	.0-420	.0-0.6	.0-2	6-110
10 Missouri Basin	.0-2300	.0-40	.0-250	.0-300	.0-610	.0-410000	1-600	.0-11000	.0-11	.0-5	.0-1900
11 Arkansas-White-Red	.0-240	.0-40	.0-290	.0-350	2-550	20-180000	.0-400	.0-3000	.0-1	.0-34	.0-870
12 Texas Gulf	.0-200	<10-50	.0-120	50-450	<10-180	.0-78000	<100-200	.0-6100	.0-1.2	.0-8	.0-710
13 Rio Grande	.0-140	.0-30	.0-150	.0-300	<10-210	.0-200000	<100-500	20-5600	.0-1.7	.0-7	.0-920
14 Upper Colorado	.0-56	<10-20	.0-140	.0-100	<10-1400	50-130000	<100-200	.0-3600	.0-0.6	.0-21	20-690
15 Lower Colorado	1-110	<10-20	.0-90	.0-100	<10-480	.0-88000	<100-300	.0-5000	.0-0.8	.0-14	.0-470
16 Great Basin	.0-50	.0-40	.0-20	.0-50	.0-270	10-44000	<100-300	.0-2000	.0-2.6	.0-4	.0-580
17 Pacific Northwest	.0-20	.0-20	.0-10	.0-50	.0-2300	.0-11000	<100	.0-1600	.0-1.5	.0-4	.0-360
18 California	.0-220	.0-30	.0-1100	.0-450	.0-4500	80-20000	<100-300	.0-1100	.0-1.1	.0-4	.0-1600
19 Alaska	.0-11	<10	.0-20	<50	10-140	.0-16000	<100	.0-320	.0-2.2	.0-1	10-90
20 Hawaii	.0-10	<10	.0-60	.0-100	.0-1000	60-8600	<100-200	.0-210	.0-0.9	.0-2	10-110
21 Caribbean	.0-2	.0-20	<10	.0-7	.0-29	50-8500	.0-15	.0-500	.0-0.3	.0	.0-170

Table 6.--Ranges of concentrations of dissolved minor elements measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions

Region Number and Name	Range of Concentrations (micrograms per liter)										
	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Manganese (Mn)	Mercury (Hg)	Selenium (Se)	Zinc (Zn)
01 New England	0.0-3	0.0-10	0.0-20	0.0-2	0.0-20	20-380	0.0-45	0.0-160	0.5	0.0-1	0.0-40
02 Mid Atlantic	.0-3	.0-5	.0-70	.0-5	.0-30	.0-1200	.0-42	.0-390	.0-1.3	.0-2	.0-130
03 South Atlantic-Gulf	.0-3	.0-7	.0-11	.0-9	.0-18	.0-1600	.0-73	.0-210	.0-2.0	.0-1	.0-100
04 Great Lakes	.0-5	.0-5	.0-20	.0-5	.0-24	.0-1100	.0-35	.0-150	.0-1.1	.0-3	.0-80
05 Ohio	.0-5	.0-23	.0-10	.0-8	.0-100	.0-1600	.0-34	.0-580	.0-0.5	.0-2	.0-260
06 Tennessee	.0-2	.0-2	.0-1	.0-5	1-8	.0-110	.0-9	.0-50	.0-0.3	.0	.0-40
07 Upper Mississippi	.0-5	.0-5	.0-10	.0-7	.0-20	.0-2200	.0-38	.0-1200	.0-1.2	.0-3	.0-190
08 Lower Mississippi	.0-4	.0-190	.0-10	.0-3	.0-25	.0-870	.0-10	.0-450	.0-0.5	.0-2	.0-90
09 Souris-Red-Rainy	.0-7	.0-2	.0-10	.0-4	.0-13	10-480	.0-6	.0-420	.0-0.2	.0-2	.0-30
10 Missouri Basin	.0-65	.0-8	.0-40	.0-10	.0-320	.0-7800	.0-16	.0-1500	.0-9.0	.0-6	.0-360
11 Arkansas-White-Red	.0-10	.0-8	.0-20	.0-3	.0-80	.0-6700	.0-50	.0-810	.0-8.2	.0-25	.0-460
12 Texas-Gulf	.0-17	.0-1	.0-30	.0-4	.0-8	.0-1100	.0-34	.0-770	.0-0.3	.0-7	.0-210
13 Rio Grande	.0-13	.0-1	.0-20	.0-3	.0-12	.0-3400	.0-20	.0-730	.0-1.0	.0-2	.0-60
14 Upper Colorado	.0-18	.0-2	.0-40	.0-20	1-46	.0-3700	.0-23	.0-150	.0-0.6	.0-16	.0-70
15 Lower Colorado	.0-20	.0-3	.0-20	.0-4	.0-35	.0-220	.0-12	.0-1100	.0-0.4	.0-13	.0-70
16 Great Basin	.0-48	.0-1	.0-20	.0-4	.0-11	10-590	.0-6	.0-290	.0-1.8	.0-4	.0-40
17 Pacific Northwest	.0-11	.0-10	.0-40	.0-3	.0-30	.0-620	.0-43	.0-60	.0-0.3	.0-1	.0-300
18 California	.0-32	.0-3	.0-40	.0-3	.0-80	.0-1100	.0-48	.0-280	.0-1.6	.0-4	.0-150
19 Alaska	.0-4	.0-1	.0-30	.0-2	1-10	.0-1200	.0-10	.0-80	.0-1.8	.0-1	.0-80
20 Hawaii	.0-8	.0-1	.0-10	.0-4	.0-5	.0-260	.0-11	.0-70	.0-0.2	.0-1	.0-20
21 Caribbean	.0-1	.0-5	.0-1	.0-4	.0-34	.0-2400	.0-17	.0-360	.0-0.3	.0	.0-40

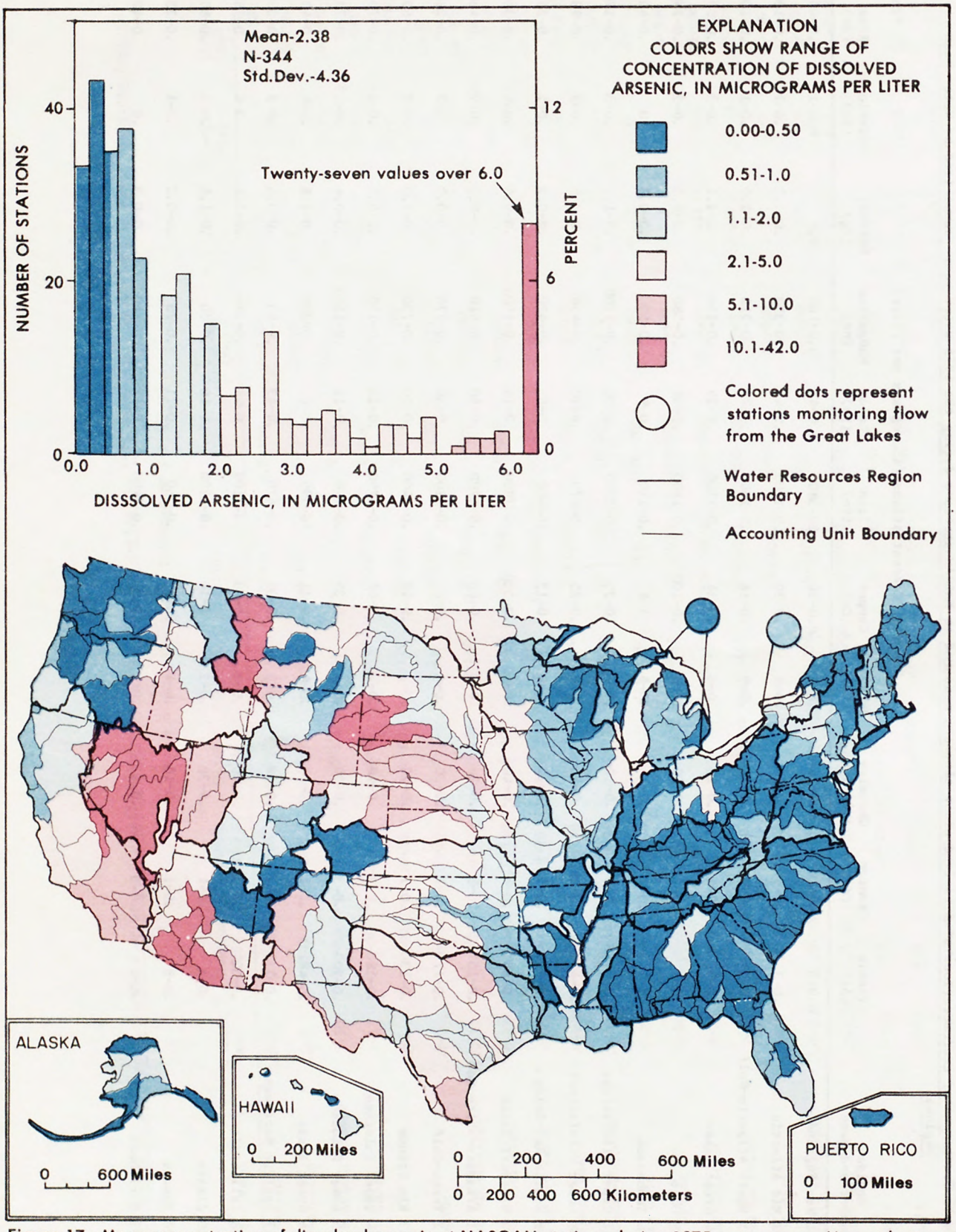

Figure 17.--Mean concentration of dissolved arsenic at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

Chromium.--The common public water supply and aquatic life standards of 50 μg/L for chromium were exceeded by the concentration of dissolved chromium in only one sample, which was from the Delaware River at Trenton, N. J. Dissolved and total concentrations of that sample were 70 μg/L, and the one time occurrence suggests that it may have resulted from a chemical spill which persisted for only a short time. Concentrations of total chromium, however, were above the 50 μg/L standard at stations in 12 of the 21 Water Resources Regions.

Cobalt.--Data on cobalt showed concentrations below most established standards and criteria at most NASQAN stations. Even the maximum measured values of total cobalt of 450 μg/L were below standards and criteria for livestock and aquatic life shown in table 4. The most stringent criterion of 50 μg/L for irrigation, as suggested by the National Academy of Sciences and National Academy of Engineering (1972), was exceeded by concentrations of total cobalt in 10 Water Resources Regions.

Copper.--The criterion for copper in public water supplies (1,000 μg/L) is high compared with the amounts found in most waters and was not exceeded by measured dissolved concentrations at any NASQAN station. Total copper, on the other hand, exceeded the 1,000 μg/L criterion in four Water Resources Regions. Some authors have suggested much more stringent criteria (10 to 20 μg/L) for aquatic life, however. These more stringent criteria were exceeded by measured values of dissolved copper in about half of the Water Resources Regions, and by some measured total concentrations in all of the Regions.

Iron.--Concentrations of iron measured at NASQAN stations frequently exceed water-quality criteria. The common criterion for public supply of 300 μg/L was exceeded by dissolved iron levels in all except three of the Water Resources Regions, Tennessee, Lower Colorado, and Hawaii, and by measured total concentrations in all of them. The highest measured values of both dissolved and total iron were in the Missouri Region.

Lead.--Standards and criteria for lead in public water supplies of 50 μg/L were exceeded by the dissolved concentration at stations in the South Atlantic-Gulf and the Arkansas-White-Red Regions. Total concentration exceeded 50 μg/L in all of the regions except the Caribbean. The more stringent criteria for aquatic life of 30 μg/L was exceeded by the dissolved concentration in 10 of the 21 regions.

There is a problem in interpreting some of the data on total lead because of interferences in the analytical methods. It is necessary, therefore, to report some values as "less than 100." The true value is not known and it is impossible to interpret if the standards in the range of 5 to 50 μg/L were exceeded.

Manganese.--Criteria for manganese in public supplies (usually 50 μg/L) are set to avoid consumer complaints about the brownish staining of laundry and the objectionable tastes in beverages associated with higher concentrations. Criteria were equaled or exceeded by dissolved and total levels in all of the Water Resources Regions. Criteria for aquatic life are much more lenient (from 100 to 1,000 μg/L), but even these higher values were exceeded by concentrations of dissolved and total manganese in the Upper Mississippi, Missouri, and Lower Colorado Regions, and by total concentrations in the Ohio, Arkansas-White-Red, Texas-Gulf, Rio Grande, Upper Colorado, Great Basin, Pacific Northwest, and California Regions. In general, lowest concentrations of manganese are in the Tennessee, Alaska, and Hawaii Regions.

Mercury.--Ten of the NASQAN samples analyzed for dissolved and total mercury exceeded the common public water supply standard of 2 μg/L, but only four of the ten were more than 2.6 μg/L. Total mercury of 11 μg/L and dissolved mercury of 9 μg/L were measured in samples taken from the Milk River in Montana. A maximum dissolved mercury concentration of 4.6 μg/L was determined in the Yellowstone River in Montana, and a maximum dissolved mercury of 8.2 μg/L was found in the Arkansas River in Oklahoma. The high samples from these three rivers, however, appear to be anomalous--other samples during the year from the same streams were less than 1 μg/L. Criteria for mercury for the protection of aquatic life are highly variable--some authors suggest criteria as low as 0.05 to 0.2 μg/L. These stringent criteria were exceeded by measured mercury levels at NASQAN stations in most regions of the United States.

Selenium.--NASQAN stations in the Arkansas-White-Red and Upper and Lower Colorado Regions reported dissolved and total selenium values greater than the common public supply and aquatic life standard of 10 μg/L; values in the other regions were less than 10 μg/L. In evaluating the selenium data, however, it should be noted that Wentz (1974), based on a literature survey, proposed an aquatic life criterion of 1,000 μg/L, a value higher than those measured at any of the NASQAN stations. The highest reported concentration at any NASQAN station was 34 μg/L total selenium for the Arkansas River at Dodge City, Kans.

Zinc.--In addition to the data on maximum and minimum concentrations of zinc given in tables 5 and 6, a summary of mean concentrations is shown on the histogram and map that make up figure 18. As illustrated by the data summarized in tables 5 and 6 and on figure 18, the common standard for zinc in public water supply of 5,000 μg/L was not exceeded by any measured values of total or dissolved concentrations at NASQAN stations. On the other hand, the much more stringent criteria for aquatic life of 30-70 or 100 μg/L were exceeded by dissolved concentrations in all but two of the Water Resources Regions, and by some values of total concentrations in all of the 21 regions. Mean values of dissolved zinc at NASQAN stations were not quite so high, however; the histogram on figure 18 shows about 80 percent of the mean values as less than 30 μg/L. Generally, zinc concentrations in streams were higher in the western half of the country than in the East, and were highest in the Missouri Basin and Arkansas-White-Red Regions.

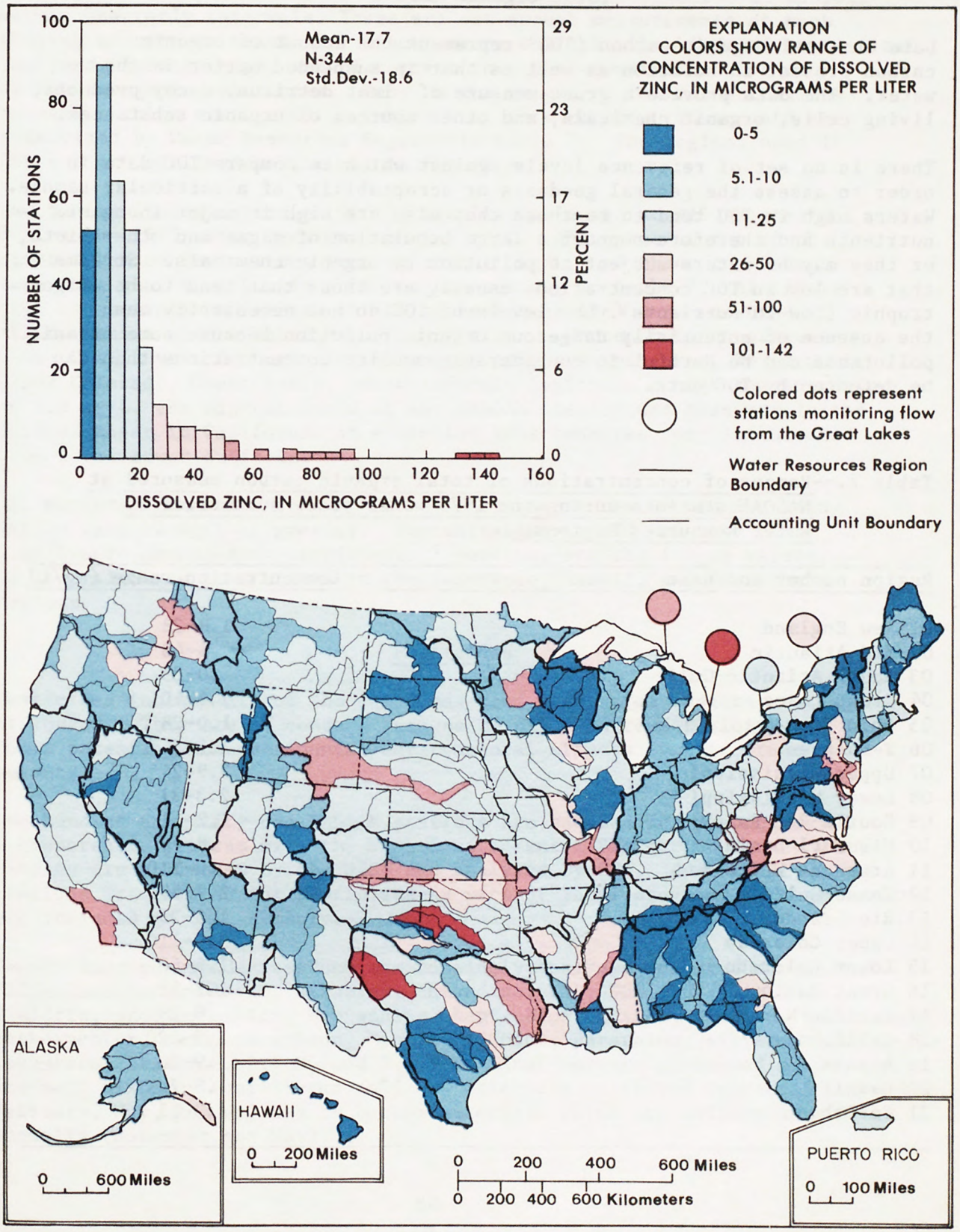

Figure 18.--Mean concentration of dissolved zinc at NASQAN stations during 1975 water year. Map at bottom is colored to show station data representing flow from the accounting unit.

Total Organic Carbon

Data on total organic carbon (TOC) represent the amount of organic carbon present in solution as well as that in suspended matter in the water. The data provide a gross measure of plant detritus, decay products, living cells, organic chemicals, and other sources of organic substances.

There is no set of reference levels against which to compare TOC data in order to assess the general goodness or acceptability of a particular sample. Waters high in TOC tend to be those that also are high in major inorganic nutrients and therefore support a large population of algae and other biota, or they may be waters subject to pollution by organic chemicals. Streams that are low in TOC concentrations usually are those that tend to be oligotrophic (low in nutrients). Low levels of TOC do not necessarily mean the absence of potentially dangerous organic pollution because some organic pollutants can be harmful in considerably smaller concentrations than can be detected by TOC data.

Table 7.--Ranges of concentrations of total organic carbon measured at NASQAN stations during the 1975 water year, summarized by Water Resources Regions

Region number and name	Concentration range (mg/L)
01 New England	1.8-28
02 Mid Atlantic	.4-48
03 South Atlantic-Gulf	.0-35
04 Great Lakes	1.6-40
05 Ohio	1.0-28
06 Tennessee	1.2-5.7
07 Upper Mississippi	3.9-24
08 Lower Mississippi	2.3-31
09 Souris-Red-Rainy	1.2-41
10 Missouri Basin	.8-78
11 Arkansas-White-Red	.6-110
12 Texas-Gulf	2.7-59
13 Rio Grande	1.6-25
14 Upper Colorado	3.0-110
15 Lower Colorado	1.5-50
16 Great Basin	1.1-55
17 Pacific Northwest	.0-28
18 California	1.3-320
19 Alaska	.9-30
20 Hawaii	.8-7.1
21 Caribbean	.9-11

Samples for analyses of TOC at NASQAN stations were collected at approximately quarterly intervals. There are not enough measurements at each station to compute meaningful annual means and make the kinds of statistical analyses, summary maps, and histograms that were constructed for many of the inorganic substances. Data on the ranges of TOC concentrations at each station are listed in table 14 of this report. These data are summarized by Water Resources Regions in table 7. The regions used in table 7 are outlined on the map in figure 2.

The median concentration of TOC in samples collected at NASQAN stations during the 1975 water year was about 6 mg/L. About one-fourth of the samples had concentrations greater than 11 mg/L, and about one-fourth were less than 4 mg/L. As shown in the summary in table 7, relatively high concentrations (values in the highest quartile) were measured in all but three of the Water Resources Regions. Concentrations greater than 50 mg/L were found in the Missouri, Arkansas-White-Red, Texas-Gulf, Upper Colorado, Great Basin, and California Regions. A high concentration of 320 mg/L, the highest found at any NASQAN station was measured in the Salinas River in California at a station that measures some influences from local sewer outfalls.

All measured concentrations of TOC at stations in the Souris-Red-Rainy Region were 12 mg/L or greater. Concentrations of TOC of less than 1 mg/L were measured at stations in 7 regions, and the lowest values, in general, were at stations in the Tennessee, Hawaii, and Caribbean Regions.

Pesticides

Pesticides include all of the compounds used to control insects, weeds, or fungus. They are of concern because of their extreme toxicity and their potential for detrimental environmental effects even in trace amounts.

One hundred and fifty-one NASQAN stations are sampled for pesticides in a cooperative program with the U.S. Environmental Protection Agency (EPA). Samples are collected by the USGS and analyzed by EPA. Additional NASQAN stations are sampled for pesticides as part of local programs. These results are included in this summary.

Twenty-four pesticide residues are routinely analyzed for at the selected NASQAN stations--aldrin, atrazine, chlordane, DDD, DDE, DDT, Diazinon, dieldrin, endrin, ethion, heptachlor, heptachlor epoxide, lindane, malathion, methoxychlor, methy parathion, Methyl Trithion, parathion, silvex, simazine, toxaphene, Trithion, 2,4-D, and 2,4,5-T. Analyses are performed on water-sediment mixtures (unfiltered samples) which are collected quarterly (November, February, May, August) and on bottom materials which are collected semi-annually (November and May).

Table 8 summarizes the pesticide residues which were found in samples of water-sediment mixtures during the 1975 water year. The number of NASQAN stations within a region in which a particular pesticide was found and the maximum concentration of that pesticide are listed by Water Resources Region (fig. 2). Recommended or mandatory limits which have been set for some of the pesticides are listed at the bottom of the table.

The Lower Mississippi, Arkansas-White-Red, Texas-Gulf, and California Regions have higher incidents of pesticide occurrence and higher maximum concentrations than the rest of the United States. The highest concentration of any pesticide in a water-sediment sample was 0.50 µg/L of 2,4-D in the Red River above Shreveport, La. This value is still below the maximum allowed for domestic water supplies. No sample collected contained pesticides in concentrations exceeding the mandatory limits for domestic water supplies. Recommended limits for aquatic-life protection were exceeded for chlordane, DDT, dieldrin, endrin, heptachlor epoxide, and lindane.

Table 9 summarizes the maximum concentrations of pesticides detected in bottom materials. Since pesticides may be associated with silt, clay, and organic matter, samples of bottom materials of a stream often contain higher concentrations of a pesticide than a sample of water-sediment mixture collected from the flowing stream at the same time. Most pesticide values shown in table 9 are considerably higher than the values for the water-sediment mixtures. Pesticides were found in bottom materials but not in water sediment mixtures in the New England, Great Lakes, Souris-Red-Rainy, Rio Grande, Upper Colorado, Pacific Northwest, and Caribbean Regions.

Highest values occurred in bottom materials in the Pacific Northwest in the Snake River at Nyssa, Oreg. No pesticides were found in the water-sediment mixture collected at the same time as the bottom-material sample. A bottom-material sample for the same station collected six months later still had pesticides present but in much smaller concentrations (for dieldrin, 0.1 µg/L compared to 1,890 µg/L).

Radioactive Substances

Radioactive substances are of concern because the effects of radioactivity, from any source, are generally considered to be harmful to health. Even though people are constantly exposed to natural radioactivity, they should avoid additional exposure to radioactive substances. Radioactive substances may occur naturally or be man-made. Naturally occurring isotopes include the uranium isotopes, radium-226, radium-228, radon, potassium-40, tritium, and carbon-14. Artificial or man-made isotopes include strontium-90, cesium-137, plutonium-239, and some of the isotopes which also occur naturally.

Table 8.--Maximum concentrations of pesticides in a water-sediment sample at which pesticide was detected at NASQAN stations during the 1975 water year, summarized by Water Resources Regions

Number of stations in region at which pesticide was detected / maximum concentrations in micrograms per liter

Region Number and Name	Number of pesticide stations	Chlordane	DDD	DDE	DDT	Diazion	Dieldrin	Endrin	Heptachlor Epoxide	Lindane	Methyl Parathion	Parathion	2,4-D	2,4,5-T	Silvex
01 New England	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02 Mid Atlantic	11	-	-	-	-	-	1/.01	-	-	-	-	-	-	-	-
03 South Atlantic-Gulf	18	-	-	-	-	1/.01	-	-	-	-	-	-	2/.18	1/.04	-
04 Great Lakes	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05 Ohio	11	-	-	-	-	-	2/.02	-	-	-	-	-	-	-	-
06 Tennessee	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07 Upper Mississippi	9	-	-	-	-	-	4/.04	-	-	-	-	-	-	-	-
08 Lower Mississippi	9	1/.10	-	-	1/.01	3/.20	3/.03	3/.03	1/.01	-	1/.03	-	3/.06	3/.08	3/.01
09 Souris-Red-Rainy	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Missouri Basin	20	-	-	-	-	-	3/.05	-	2/.02	-	-	-	-	-	-
11 Arkansas-White-Red	11	-	-	2/.02	-	1/.04	1/.01	-	-	-	1/.01	-	3/.50	1/.20	-
12 Texas Gulf	13	-	-	1/.02	-	5/.10	1/.01	-	-	1/.01	-	-	9/.11	6/.02	1/.01
13 Rio Grande	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 Upper Colorado	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Lower Colorado	4	-	-	-	-	-	-	-	-	-	1/.01	1/.03	2/.26	-	-
16 Great Basin	7	-	-	-	-	1/.02	1/.01	-	-	-	-	-	-	-	-
17 Pacific Northwest	11	-	-	-	-	.	-	-	-	-	-	-	-	-	-
18 California	6	2/.10	1/.06	1/.02	1/.05	3/.13	3/.02	-	-	2/.11	1/.01	-	1/.12	1/.03	1/.01
19 Alaska	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 Hawaii	2	-	-	-	-	-	1/.48	-	-	1/.01	-	-	-	-	-
21 Caribbean	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recommended maximum concentration for aquatic life protection a/	-	.01	-	-	.001	-	.003	.004	.001 c/	.01	-	-	100	-	10
Maximum allowable concentration for domestic water supply b/	-	-	-	-	-	-	-	.2	-	4	-	-	100	-	10

a/ U.S. Environmental Protection Agency (1976a).
b/ U.S. Environmental Protection Agency (1975) maximum allowable for domestic water supply.
c/ Value for Heptachlor.

Table 9.--Maximum concentrations of pesticides in bottom materials at which pesticide was detected at NASQAN stations during the 1975 water year, summarized by Water Resources Regions

Number of Stations in region at which pesticide was detected / maximum concentrations in micrograms per kilogram

Region Number and Name	Number of pesticide stations	Aldrin	Chlordane	DDD	DDE	DDT	Diazion	Dieldrin	Endrin	Ethion	Heptachlor Epoxide	Malathion	Toxaphene
01 New England	3	-	1/5.0	1/2.7	1/1.4	2/1.3	-	-	-	-	-	-	-
02 Mid Atlantic	9	-	2/19	3/26	3/12	2/48	-	5/17	-	-	-	-	-
03 South Atlantic-Gulf	14	-	4/23	4/9.8	6/6.8	2/3.5	-	5/5.2	1/.2	1/191	-	-	1/34
04 Great Lakes	5	-	-	-	1/.9	-	-	-	-	-	-	-	-
05 Ohio	5	-	-	-	-	-	-	3/2.4	-	-	-	-	-
06 Tennessee	1	-	-	-	-	-	-	-	-	-	-	-	-
07 Upper Mississippi	9	2/12	2/22	2/19	2/8.0	1/7.9	1/5.7	3/13	-	-	1/1.0	-	-
08 Lower Mississippi	3	-	1/1.0	2/19	2/8.6	1/.4	-	1/.2	1/.1	-	-	-	-
09 Souris-Red-Rainy	2	-	-	1/1.65	1/.6	1/2.2	-	1/.01	-	-	-	-	-
10 Missouri Basin	17	-	2/1.3	1/9.4	2/2.4	1/8.1	-	4/.1	-	-	-	-	-
11 Arkansas-White-Red	8	-	2/8.4	1/.8	1/1.2	1/1.1	-	3/1.5	1/.1	-	-	-	-
12 Texas Gulf	11	-	3/10	1/5.9	4/6.1	1/22	-	6/1.3	-	-	-	-	-
13 Rio Grande	5	-	-	2/.7	3/3.4	-	-	1/.1	-	-	-	-	-
14 Upper Colorado	4	-	-	-	-	-	-	1/.1	-	-	-	-	-
15 Lower Colorado	3	-	-	-	2/13	-	-	2/.6	-	-	-	-	-
16 Great Basin	4	-	-	-	-	-	-	1/.4	-	-	-	-	-
17 Pacific Northwest	4	1/889	1/9570	3/618	3/379	2/1760	-	3/1890	-	1/673	-	1/750	-
18 California	4	-	1/118	2/25	3/24	2/1.6	-	3/2.5	-	-	-	-	-
19 Alaska	1	-	-	-	-	-	-	-	-	-	-	-	-
20 Hawaii	1	-	1/111	1/36	1/46	1/75	-	1/3.5	-	-	-	-	-
21 Caribbean	3	-	-	-	-	-	-	3/.5	-	-	-	-	-

Measurements of gross alpha-radioactivity (reported as natural uranium), gross beta-radioactivity (reported as cesium-137 and also as strontium-90/yttrium-90 equilibrium mixture), uranium, and radium-226 have been made at fifty NASQAN sations. Samples are collected twice a year, once during high flow, the other during low flow, and analyses are made on both the dissolved and suspended material.

Under provisions of the Safe Drinking Water Act, the U.S. Environmental Protection Agency (1976) has set maximum contaminant levels for radium-226, radium-228, and gross alpha-radioactivity; and for beta- and photon-radioactivity from man-made radionuclides in community water systems. Water from a system is assumed to be in compliance for alpha-radioactivity if the measured gross alpha-radioactivity does not exceed 5 picocuries per liter (pCi/L). If the 5 pCi/L limit is exceeded, the water should be analyzed for radium-226. If radium-226 exceeds 3 pCi/L, the sample should be analyzed for radium-228 and the total radioactivity of radium-226 and radium-228 should not exceed 5 pCi/L. Gross alpha-radioactivity excluding radon and all isotopes of uranium should not exceed 15 pCi/L. Water from a system is assumed to be in compliance for beta-radioactivity if the average annual gross beta-radioactivity is less than 50 pCi/L and tritium and strontium-90 do not exceed 20,000 pCi/L and 8 pCi/L respectively.

Table 10 lists the ranges in radiochemical measurements made on samples from the 50 NASQAN sites in the 1975 water year. Radioactive substances were generally higher west of the Mississippi River with the Missouri, Arkansas, Rio Grande, and Colorado Regions having the highest values. Gross alpha-radioactivity is reported as micrograms per liter of natural uranium. To convert this value to picocuries per liter it may be multiplied by 0.68 pCi/ µg if the isotopic composition is assumed to be the same as natural uranium. In order to be within the maximum limit of 5 pCi/L for gross alpha radiation in the dissolved phase, the weight-equivalent activity should not exceed 7.4 µg/L. Of the 18 regions having radiochemical analyses, 9 had dissolved gross alpha-radiation values above 7.4 µg/L. The highest value, 150 µg/L, was in the South Platte River near Julesburg, Colo. Dissolved radium-226, however, did not exceed 3 pCi/L at any site. In fact, the highest value for radium-226 was 0.71 µg/L at the Cumberland River near Grand Rivers, Ky. The highest natural uranium value, 53 µg/L, was also from the South Platte River at Julesburg, Colo.

Gross beta-radioactivity is reported two ways; the first using a cesium-137 calibration standard, the other using a standard of strontium-90/ yttrium-90 equalbrium mixture. The screening method in the EPA standards specifies the cesium-137 calibration standard. No NASQAN station exceeded the dissolved phase limit of 50 pCi/L. The highest value measured was 42 pCi/L at the South Platte River near Julesburg, Colo. No analyses were made for tritium and strontium-90.

Table 10.--Ranges of concentrations of radioactive substances measured at NASQAN stations during the 1975 water year, summarized by Water Resources Region

Region Number and Name	Number of Stations	Alpha, gross dissolved as U Natural µg/L	Alpha, gross suspended as U Natural µg/L	Radium-266 dissolved radon method pCi/L	Natural Uranium dissolved µg/L	Beta, gross dissolved as CS-137 pCi/L	Beta, gross suspended a CS-137 pCi/L	Beta, gross dissolved as yttrium-90 pCi/L	Beta, gross suspended as strontium/ yttrium-90 pCi/L
01 New England	3	<0.4-3.8	<0.4-2.6	0.02-.04	0.02-.09	2.2-3.5	<0.4-512	1.8-3.3	<0.4-4.6
02 Mid Atlantic	5	.8-2.4	<.4-220	<.01-.12	<.01-.32	2.0-11	<.4-69	1.6-9.1	<.4-65
03 South Atlantic-Gulf	8	<.4-7.9	<.4-9.3	<.01-.32	<.01-.14	2.8-18	<.4-5.4	2.2-14	<.4-4.3
04 Great Lakes	2	<.4-2.2	<.4-.4	.03-.04	.03-.40	2.0-4.4	<.4-.4	1.6-3.6	<.4-.4
05 Ohio	4	.8-5.9	<.4-9.8	.02-.71	.04-.13	1.6-4.9	<.4-4.4	1.2-3.8	<.4-3.8
06 Tennessee	2	<.5-1.9	<.4-3.7	<.01-.04	.02-.21	2.4-3.4	.5-3.2	1.9-2.7	<.4-2.6
07 Upper Mississippi	2	3.7-15	1.4-4.5	.07-.08	1.8-2.7	6.8-10	1.7-5.0	5.5-8.2	1.4-4.0
08 Lower Mississippi	2	<.5-8.0	1.2-6.8	.02-.17	.03-1.5	3.2-11	.7-5.9	2.5-8.7	.6-5.0
09 Souris-Red-Rainy	2	1.2-4.2	1.0-7.9	.06-.10	.5-3.2	4.7-13	1.6-9.0	3.8-11	1.4-7.8
10 Missouri Basin	4	1.6-150	<.4-32	.03-.08	.23-53	3.1-42	<.4-19	2.5-33	<.4-17
11 Arkansas-White-Red	3	1.6-38	1.1-140	.04-.13	.4-3.2	4.1-13	1.2-91	3.3-10	1.1-74
12 Texas-Gulf	1	4.1-4.1	4.8-4.8	.07-.07	1.0-1.0	6.3-6.3	4.1-4.1	5.1-5.1	3.5-3.5
13 Rio Grande	3	2.6-17	<.4-73	<.01-.07	.8-4.7	4.3-6.3	.9-43	3.4-5.1	.8-36
14 Upper Colorado	2	8.3-13	5.1-120	.06-.09	2.3-14	4.9-6.5	4.2-50	4.2-5.2	3.3-43
15 Lower Colorado	1	12-13	<.4-1.4	.12-.12	4.1-4.7	9.7-11	1.1-1.9	7.8-8.5	1.0-1.5
16 Great Basin	0	-	-	-	-	-	-	-	-
17 Pacific Northwest	3	<.4-8.1	<.4-6.5	<.01-.13	<.01-9.5	.9-5.2	<.4-2.8	0.7-4.2	<.4-2.2
18 California	2	<.1-1.1	<.4-5.5	<.01-.02	.02-.16	1.5-4.2	<.4-2.1	1.2-3.4	<.4-1.7
19 Alaska	2	.7-2.4	<.4-28	.03-.17	.09-.6	1.6-14	<.4-11	1.3-11	<.4-9.7
20 Hawaii	0	-	-	-	-	-	-	-	-
21 Caribbean	0	-	-	-	-	-	-	-	-

VARIATIONS WITHIN THE MISSISSIPPI RIVER BASIN ABOVE MEMPHIS, TENNESSEE

The Mississippi River above Memphis, Tenn. and its major tributaries, the Ohio, Tennessee, and Missouri Rivers, drain the mid-section of the United States. This area is agriculturally diverse, ranging from areas of forest and rangeland to areas of intensive farming which produce much of the country's corn and soy bean crops. Precipitation varies widely from areas in the Tennessee Basin receiving over 48 inches (1,200 mm) of rain per year to areas in the western part of the Missouri Basin with less than 16 inches (410 mm) of rain a year.

The report to this point examined the general national pattern of water quality constituents in the NASQAN program. The following pages show in more detail the Mississippi drainage system and the occurrence of selected water quality constituents. Table 11 lists NASQAN stations in the Mississippi Basin above Memphis; map numbers in table 11 refer to numbers used to designate stations in figures 19-25.

Dissolved Solids

Figure 19 is a schematic diagram of the Mississippi River and its tributaries above Memphis, Tenn. with each triangle representing a NASQAN station. The size of the triangle represents discharge at the station. The distance from the lower point of each triangle to the top of the vertical line through it represents the drainage area above the station. A horizontal line indicates that a tributary with a NASQAN station enters the river. The length of the horizontal line has no significance. Total drainage area at the Missouri River below Fort Peck Dam, Mont. (49), for example, is represented by the distance from the tip of the triangle (49) to the top of the vertical line above (47) plus the length of the line from the tip of triangle (50) representing a tributary, the Musselshell River at Mosby, Mont. Because triangle size is related to discharge, several sites with small drainage areas have no visible vertical lines since the lines do not extend beyond the bounds of the triangle.

Figure 19, mean concentration of dissolved solids, shows expected general trends--lower dissolved solids in the east, higher in the west. The Tennessee River had less than 100 mg/L dissolved solids even at its mouth near Paducah, Ky. (27). In the Ohio drainage, only one site, the Muskingum River (3) had an average value above the proposed EPA secondary standard limit of 500 mg/L, but all of the streams entering the Ohio from the northern side of the river (3, 5, 8, 9, 11, 16, 17) were above 250 mg/L. This area of Ohio, Indiana, and Illinois is intensively cultivated and produces large quantities of corn and other grain crops. Streams entering the Ohio River from Kentucky and West Virginia, which flow through areas having more forests and less intensive agriculture, were all below 250 mg/L of dissolved solids. The Minnesota River (30), draining a major agricultural area and receiving less rainfall than other upper Mississippi tributaries, was the only upper Mississippi tributary to have mean dissolved solids greater than 500 mg/L.

Table 11.--NASQAN stations shown in figures 19-25

Map Number	Station Number	Station Name
1	03049625	Allegheny R at New Kensington, PA
2	03085000	Monongahela River at Braddock, PA
3	03150000	Muskingum R at McConnelsville, OH
4	03201300	Kanawha at Winfield
5	03234500	Scioto R at Higby, OH
6	03204500	Mud River near Milton, WV
7	03215000	Big Sandy R at Louisa, KY
8	03274600	G Miami R at New Baltimore, OH
9	03276500	Whitewater River at Brookville, IN
10	03216600	Ohio R at Greenup Dam nr Greenup, KY
11	03245500	L Miami R at Milford, OH
12	03277200	Ohio R at Markland Dam nr Warsaw, KY
13	03254000	Licking River at Butler, KY
14	03290500	Kentucky River at Lock 2, at Lockport, KY
15	03321230	Green River nr Beech Grove, KY
16	03378500	Wabash River at New Harmony, IN
17	03374100	White River at Hazleton, IN
18	03425000	Cumberland River at Carthage, TN
19	03438220	Cumberland River near Grand Rivers, KY
20	03303280	Ohio R at Cannelton Dam, KY
21	03301630	Rolling Fork nr Lebanon Junction, KY
22	03612500	Ohio R at Lock and Dam 53 nr Grand Chain, IL
23	03470500	French Broad River near Knoxville, TN
24	03543005	Tennessee River at Watts Bar Dam (Tailwater), TN
25	03571850	Tennessee River at South Pittsburg, TN
26	03593005	Tennessee River at Pickwick Landing Dam (LL), TN
27	03609750	Tennessee River at Highway 60, near Paducah, KY
28	05267000	Mississippi River near Royalton, MN
29	05331000	Mississippi River at St. Paul, MN
30	05330000	Minnesota River near Jordan, MN
31	05340500	St. Croix River at St. Croix Falls, WI
32	05378500	Mississippi River at Winona, MN
33	05369500	Chippewa River at Durand, WI
34	05420500	Mississippi River at Clinton, IA
35	05407000	Wisconsin River at Muscoda, WI
36	05474500	Mississippi River at Keokuk, IA
37	05446500	Rock River near Joslin, IL
38	05490600	Des Moines River at St. Francisville, MO
39	05587550	Mississippi River below Alton, IL
40	05543500	Illinois River at Marseilles, IL
41	05586100	Illinois River at Valley City, IL
42	05599500	Big Muddy River at Murphysboro, IL
43	07022000	Mississippi River at Thebes, IL
44	05594100	Kaskaskia River near Venedy Station, IL
45	07032000	Mississippi River at Memphis, TN
46	07026000	Obion River at Obion, TN
47	06054500	Missouri River at Toston, MT
48	06109500	Missouri River at Virgelle, MT
49	06132000	Missouri River below Fort Peck Dam, MT
50	06130500	Musselshell River at Mosby, MT
51	06174500	Milk River at Nashua, MT
52	06185500	Missouri River near Culbertson, MT
53	06214500	Yellowstone River at Billings, MT
54	06294700	Bighorn River at Bighorn, MT
55	06308500	Tongue River at Miles City, MT
56	06326500	Powder River near Locate, MT
57	06329500	Yellowstone River near Signey, MT
58	06338490	Missouri River at Garrison Dam, ND
59	06337000	Little Missouri River nr Watford City, ND
60	06439300	Cheyenne River at Cherry Creek, SD
61	06438000	Belle Fourche R nr Elm Springs, SD
62	06440000	Missouri River at Pierre, SD
63	06340500	Knife River at Hazen, ND
64	06354000	Cannonball River at Breinen, ND
65	06357800	Grand River at Little Eagle, SD
66	06453000	Missouri River at Fort Randall Dam, SD
67	06452000	White River near Oacoma, SD
68	06465500	Niobrara River nr Verdel, NB
69	06478500	James River near Scotlands, SD
70	06486000	Missouri River at Sioux City, IA
71	06485500	Big Sioux River at Akron, IA
72	06686000	North Platte River at Lisco, NB
73	06764000	South Platte River at Julesburg, CO
74	06796000	Platte River at North Bend, NB
75	06805500	Platte R at Louisville, NE
76	06807000	Missouri River at Nebraska City, NB
77	06818000	Missouri River at St. Joseph, MO
78	06856600	Republican R at Clay Center, KS
79	06877600	Smoky Hill R at Enterprise, KS
80	06892350	Kansas R at Desoto, KS
81	06887000	Big Blue R nr Manhattan, KS
82	06902000	Grand River near Sumner, MO
83	06926510	Osage River below St. Thomas, MO
84	06934500	Missouri River at Hermann, MO
85	06792499	Loup R Power Ca at Div nr Genoa, NB

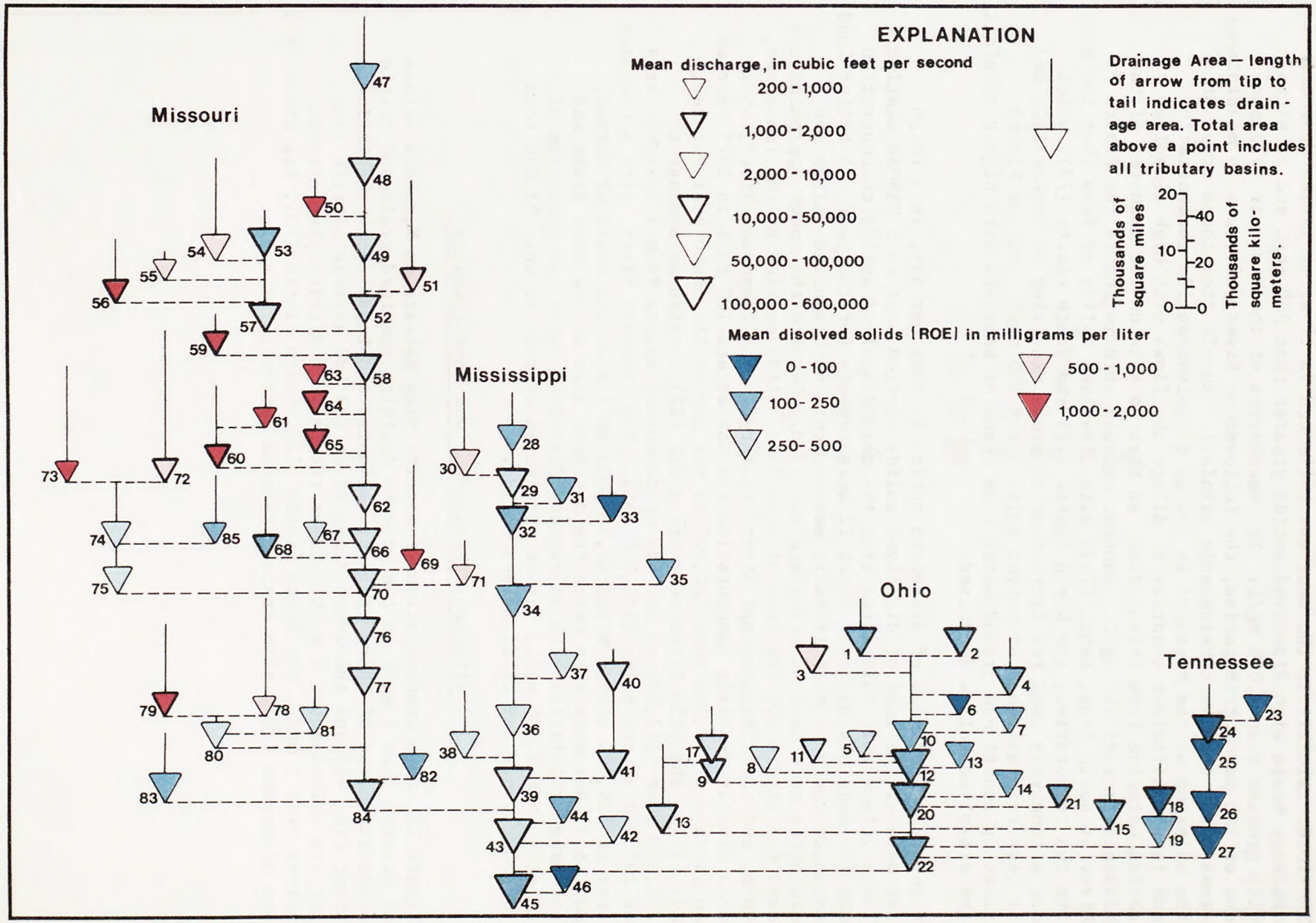

Figure 19.--Mean concentration of dissolved solids measured as residue on evaporation (ROE) at 180°C for the Mississippi River basin above Memphis, Tenn. during the 1975 water year.

The lower rainfall in the west was reflected in 17 sites in the Missouri drainage basin with dissolved solids greater than 500 mg/L and 11 sites with greater than 1,000 mg/L. The headwaters of the Missouri (47) and one of its major tributaries, the Yellowstone River (53), are in mountainous areas which receive considerable rainfall. Runoff from these areas of the mainstem of the Missouri is low in dissolved-solids concentration and is of sufficient quantity to dilute the flows with high dissolved solids entering from tributaries, so that no site on the mainstem of the Missouri exceeds 500 mg/L. Another example of dilution is the Platte River at North Bend, Nebr. (74), with dissolved solids of less than 500 mg/L. Its two tributaries, the North Platte (72) and South Platte (73), which are extensively used for irrigation in areas receiving 16 inches (406 mm) or less rainfall, had dissolved solids over 500 mg/L. As the Platte picks up runoff and ground water from areas of Nebraska with higher rainfall, the dissolved solids decreased.

Figure 20, mean load of dissolved solids in tons per day, is a rough estimate of the load of dissolved solids carried past each NASQAN station. These values were calculated from the mean dissolved solids concentration and the mean discharge of about 12 measurements for the year. A better load estimate could be made if daily measurements of dissolved solids and discharge were used to calculate the load. Despite the rough approximation used for figure 20, the load of dissolved solids carried by the Tennessee, Ohio, and upper Mississippi Rivers is large. The Tennessee River, whose mean dissolved-solids concentation did not exceed 100 mg/L in 1975 carried an average of 19,300 tons (17,500 t) per day at its mouth near Paducah, Ky. (27). The Ohio River near its mouth (22) carried an average of 201,000 tons (182,000 t) per day of dissolved solids from a drainage area of 203,000 square miles (526,000 km^2). The Missouri River, with a drainage area of 528,000 square miles (1,368,000 km^2) near its mouth at Herman, Mo. (84), has more than twice the drainage area of the Ohio River and has many tributaries with an average dissolved solid concentration of greater than 1,000 mg/L, but it carried an average of only 91,000 tons (83,000 t) per day of dissolved solids.

Nitrogen, Phosphorus, and Phytoplankton

Figure 21, mean concentration of nitrite plus nitrate as N, shows values of greater than 1 mg/L in the streams draining the feed grain and cattle producing areas of Ohio, Indiana, Illinois, and Iowa. Both the Illinois River (40, 41) and the Great Miami River (8) had average nitrite plus nitrate values above 3 mg/L. Other rivers with nitrite plus nitrate values over 1 mg/L, the North Platte (72), South Platte (73), Big Sioux (71), and Minnesota (30), also drain intensive agricultural areas.

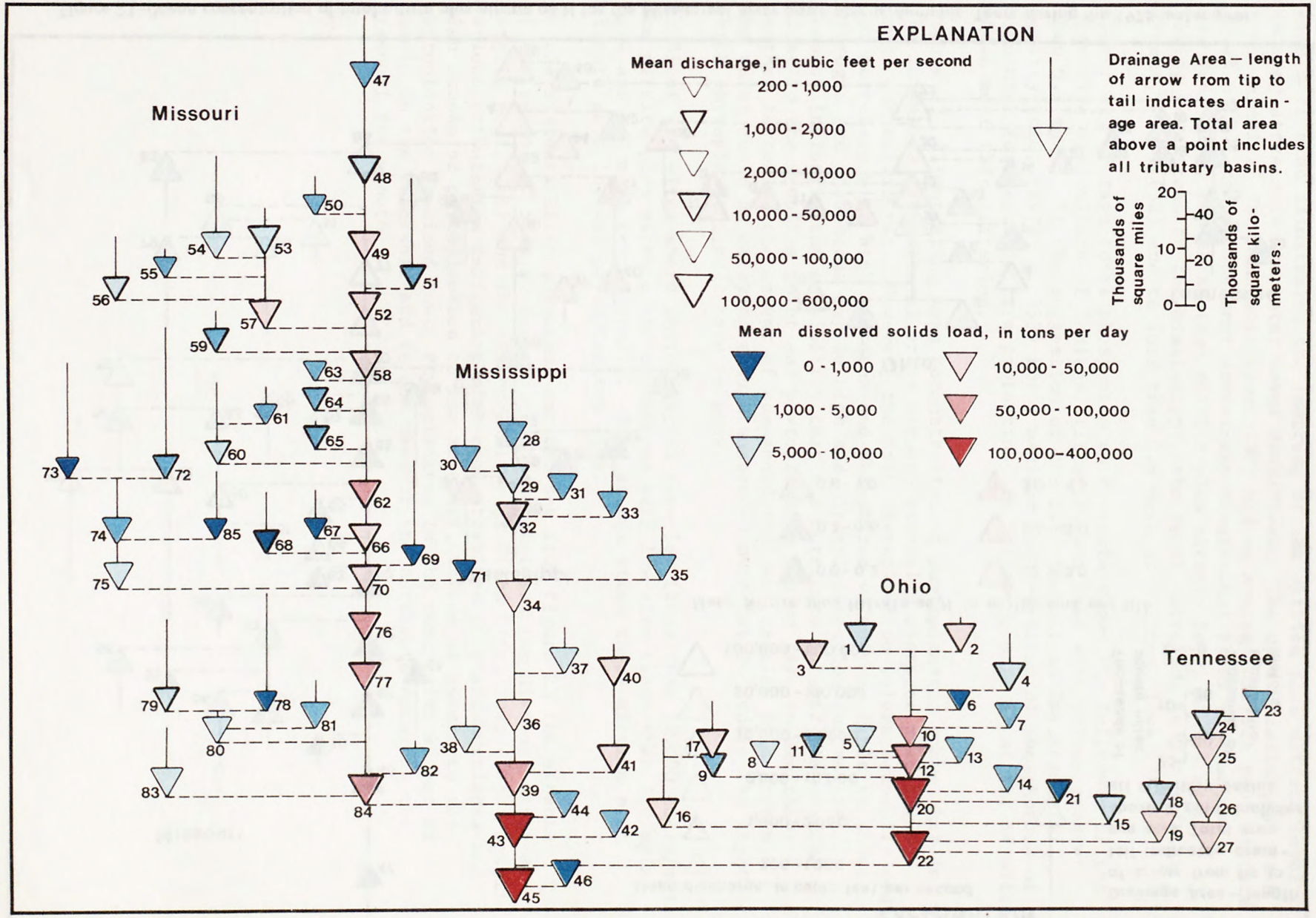

Figure 20.--Mean dissolved solids load in tons per day for the Mississippi River basin above Memphis, Tenn. during the 1975 water year.

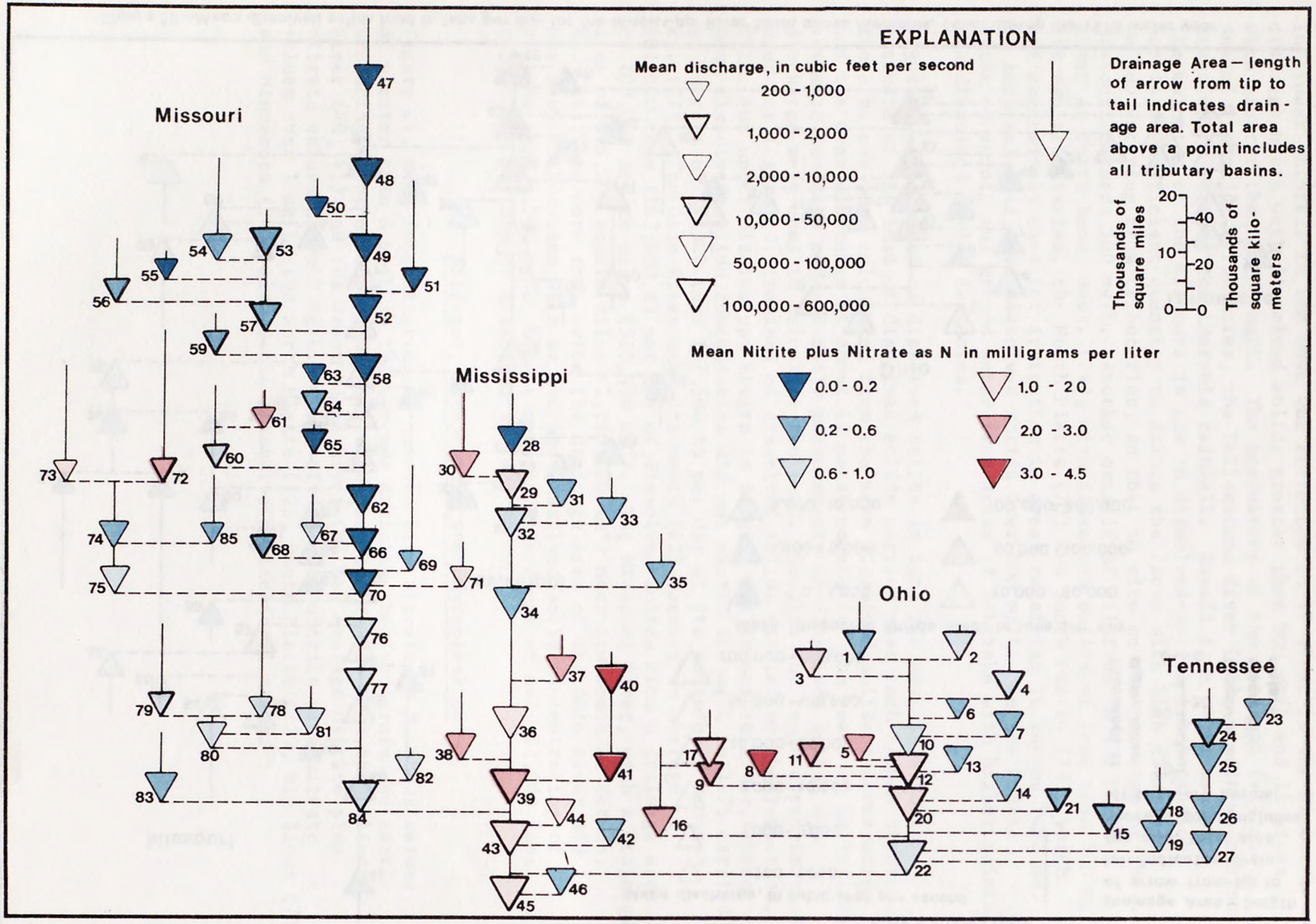

Figure 21.--Mean concentration of total nitrite plus nitrate as N for the Mississippi River basin above Memphis, Tenn. during the 1975 water year.

Figure 21 also illustrates the lowering of the nitrite plus nitrate level in many streams as the water moves downstream. The upper Mississippi is a good example. The Minnesota River (30) had an average nitrite plus nitrate level of 2.8 mg/L. The next downstream Mississippi River station, at St. Paul (29), had an average nitrite plus nitrate level of 1.1 mg/L. Moving downstream on the Mississippi, the level decreased to 0.7 mg/L at Winona, Minn. (32) and to less than 0.6 mg/L at Clinton, Iowa (34).

Figure 22, average total phosphorus as P, again shows the influence of the intensive agriculture of Indiana, Illinois, and Iowa with values greater than 0.1 mg/L. If the suggestion of the U.S. Council on Environmental Quality (CEQ) (1975, p. 353) for a maximum concentration of phosphorous of 0.03 mg/L for "aquatic life protection" is followed, only 11 of the 84 sites shown meet this criterion.

Figure 23, illustrating mean concentration of phytoplankton shows that in the intensive agricultural areas streams generally averaged over 10,000 cells per milliliter. However, the high phytoplankton values generally did not correlate with high nitrogen and phosphorus values, as table 12 shows. Nitrogen and phosphorus may be high and phytoplankton low for several reasons including the possibility that the nutrients entered the stream close to the sampling point and phytoplankton had no time to use them. Another factor is the amount of suspended sediment carried by a stream. The water could be carrying enough suspended material to reduce the light which phytoplankton must have to grow.

At 31 of the sites where phytoplankton were low (less than 10,000 cells/mL), the nitrite plus nitrate and phosphorus were low also (less than 1.0 mg/L mg/L and 0.2 mg/L respectively). Only at six sites where nitrite plus nitrate were low was phytoplankton high.

On the Missouri River mainstem, one can see from figure 23 the effects of the series of 5 major reservoirs located between the Missouri River at Virgil, Mont. (48) and the Missouri River at Sioux City, Iowa (70). Despite various tributaries delivering high concentrations of plant nutrients and high counts of phytoplankton to the Missouri, values of nutrients and phytoplankton remained low. Phytoplankton in the reservoirs appear to remain in the reservoir and to use many of the nutrients entering the Missouri for growth.

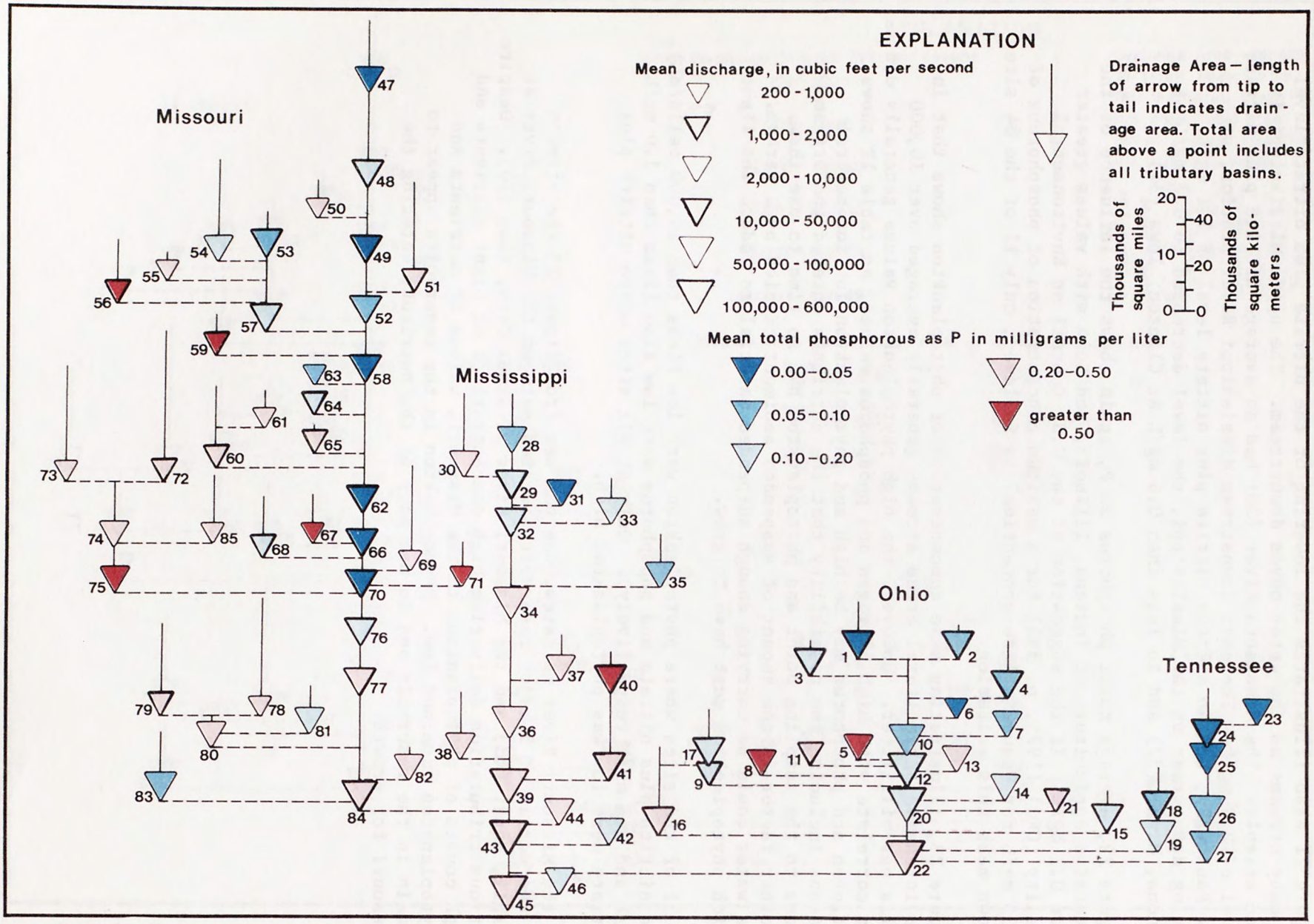

Figure 22.--Mean concentration of total phosphorus as P for the Mississippi River basin above Memphis, Tenn. during the 1975 water year.

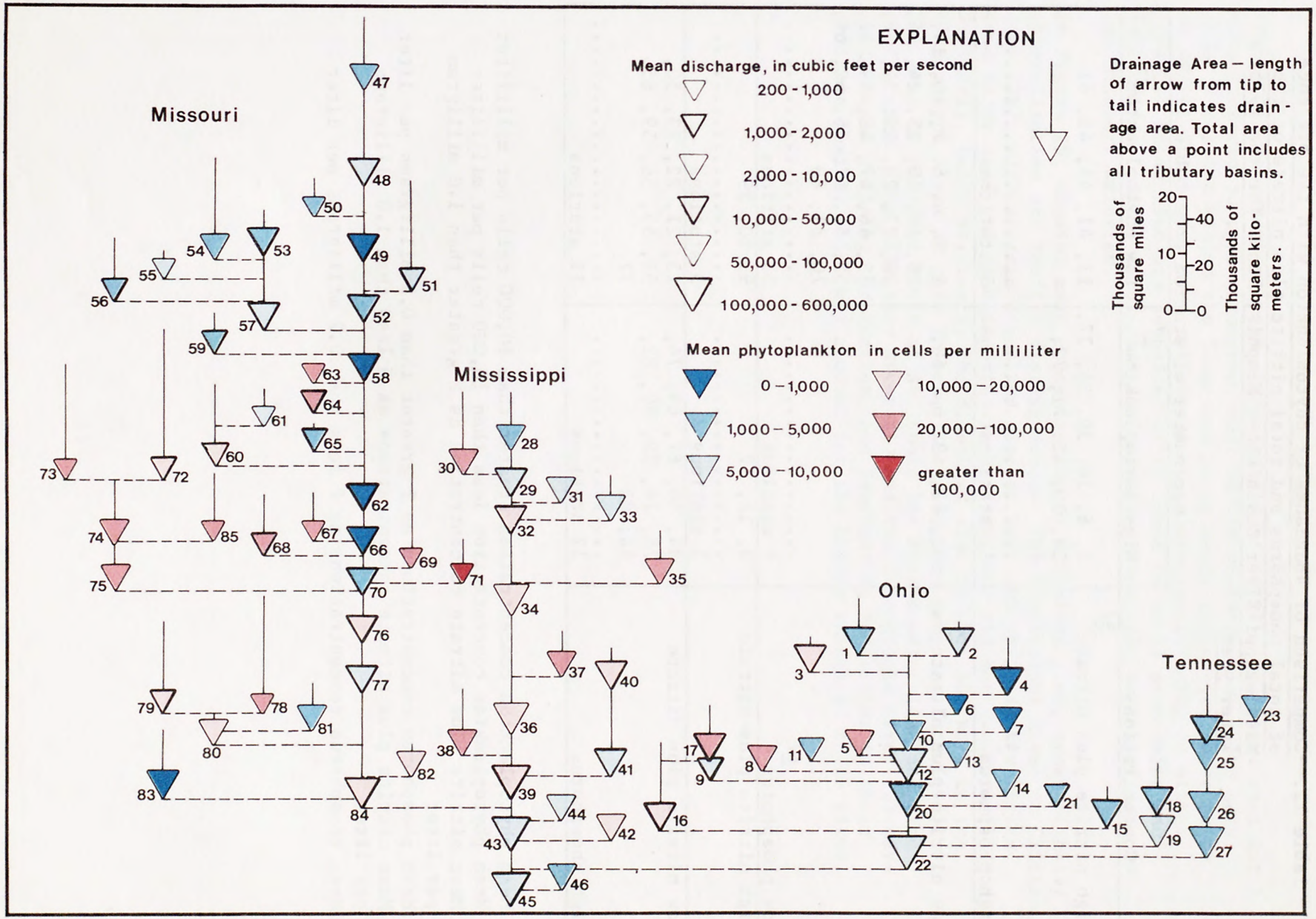

Figure 23.--Mean concentration of phytoplankton for the Mississippi River basin above Memphis, Tenn. during the 1975 water year.

Table 12.--Comparison of abundance of phytoplankton with the presence of total phosphorus and total nitrite plus nitrate of the Mississippi River Basin above Memphis, Tenn. for the 1975 water year

Concentrations	Map number of station from table 11: High phytoplankton 1/	Map number of station from table 11: Low phytoplankton 2/
High nitrite plus nitrate 3/	5, 8, 16, 30, 36, 37, 38, 39, 40, 71, 72, 73	11, 41, 44, 45, 61
High phosphorus 4/	12 stations	5 stations
Low nitrite plus nitrate 5/	32, 42, 63, 64, 68, 76	1, 2, 4, 6, 7, 10, 14, 15, 18, 19, 23, 24, 25, 26, 27, 28, 29, 31, 33, 35, 46, 47, 48, 49, 52, 53, 54, 57, 58, 62, 66, 70, 81, 83
Low phosphorus 6/	6 stations	33 stations
High nitrite plus nitrate	3, 12, 17	9, 20, 29
	3 stations	3 stations
Low nitrite plus nitrate	34, 60, 67, 69, 74, 75, 78, 79, 80, 82, 84, 85	13, 21, 22, 43, 50, 51, 55, 56, 59, 65, 77
High phosphorus	12 stations	11 stations

1/ Mean phytoplankton concentration greater than 10,000 cells per milliliter
2/ Mean phytoplankton concentration less than 10,000 cells per milliliter
3/ Mean nitrite plus nitrate concentration as N greater than 1.0 milligram per liter
4/ Mean phosphorus concentrations as P greater than 0.2 milligrams per liter
5/ Mean nitrite plus nitrate concentrations as N less than 1.0 milligrams per liter
6/ Mean phosphorus concentrations as P less than 0.2 milligrams per liter

Zinc

Figure 24, representing mean concentration of total zinc, shows that total zinc exceeded 30 µg/L throughout most of the drainage area. The only major exception was on the Tennessee River where three sites were below 30 µg/L. Total zinc does not appear to relate specifically to either areas of known zinc ore deposites or to areas of metal processing and fabrication. Also, total zinc was not affected by the series of dams on the Missouri mainstem.

In Figure 25, showing mean concentration of dissolved zinc, areas of heavy mineralization are readily distinguished. The Mississippi River at Clinton, Iowa (34), with average dissolved zinc of over 100 µg/L, is downstream from major lead and zinc deposits in eastern Iowa and northwestern Illinois. Similarly, below St. Louis, the dissolved zinc is over 100 µg/L in the Mississippi River at both Thebes, Ill. (43), and Memphis, Tenn. (45). The area of Missouri south of St. Louis has been a major lead and zinc mining area. The Allegheny River (1) and the Monongohela River (2) have large metal refining, production, and fabricating industries in their drainage basins, which may account for the higher values at those sites.

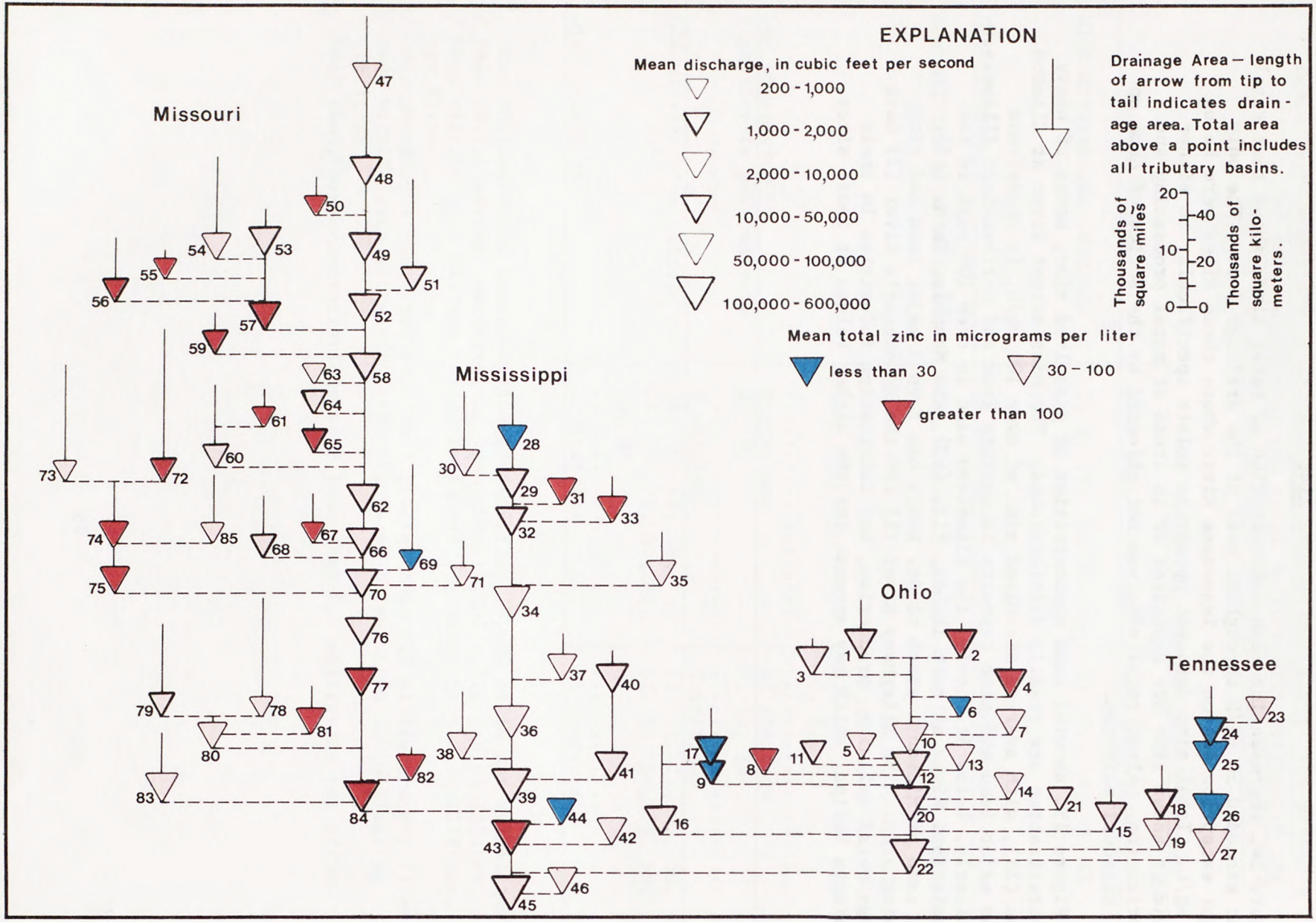

Figure 24.--Mean concentration of total zinc for the Mississippi River basin above Memphis, Tenn. during the 1975 water year.

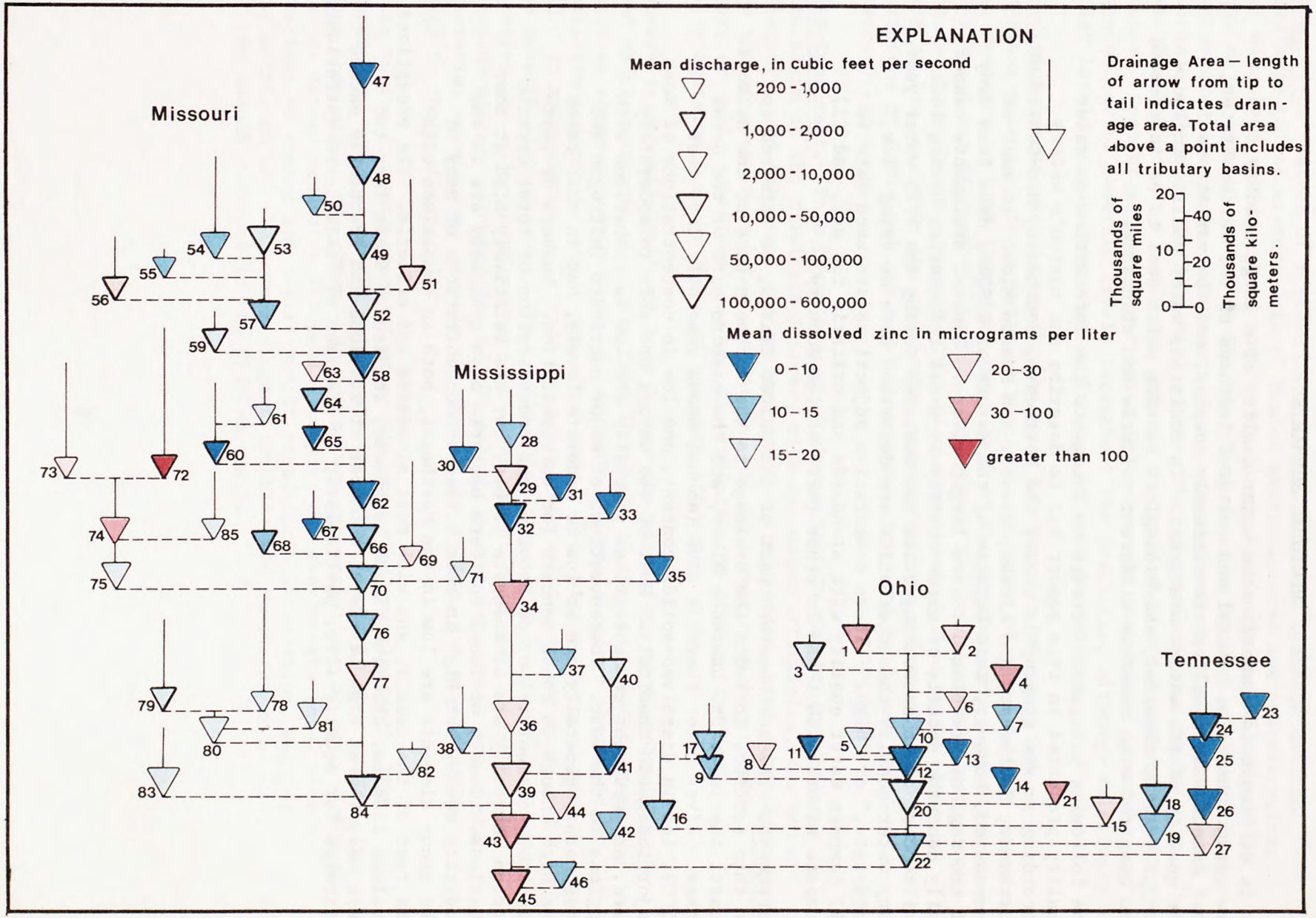

Figure 25.--Mean concentration of dissolved zinc for the Mississippi River basin above Memphis, Tenn. during the 1975 water year.

REGIONAL SUMMARIES

It is difficult to summarize the water quality of a large country in a few paragraphs. The natural and cultural features of the United States that affect water quality are extremely complex, and the variations in the quality of its waters are great. In addition, water quality includes many physical, chemical, and biological factors which need to be integrated and compared with numerous different criteria and standards.

The following paragraphs attempt to integrate the information on water quality presented in this report and to describe the nation's waters according to six geographic areas; the Northeast, Southeast, Mid-Continent, Northwest, Southwest, and Alaska, Hawaii, and Puerto Rico. It must be remembered, however, that because of the nature of NASQAN, data from many of the regions are biased toward larger rivers. General statements cannot fully describe details of water quality in small tributaries having local influences, or in accounting units not measured during the 1975 water year. Many water-quality characteristics are described here as being "low," "moderate," or "high." These comparative adjectives are used here to (1) compare water quality with standards and criteria for use, and (2) compare waters with those in other parts of the country.

Northeast.--The northeastern part of the United States, as referred to in this section, includes the drainage to the northern part of the Atlantic coast, the lower St. Lawrence River, and the eastern part of the Great Lakes. River water there is cool (annual means generally less that 15°C), low in dissolved-solids content, and low in concentrations of most major inorganic chemicals. Most of the waters are soft to moderately hard, and sediment concentrations generally are low in comparison with regions to the west. Concentrations of major nutrients (nitrogen and phosphorus) generally are at low or moderate levels, but in most cases are high enough to cause concern for eutrophication. Numbers of phyto-plankton, communities of periphyton, and concentration of total organic carbon generally are at moderate levels, but are relatively high at some stations. Counts of fecal coliform bacteria also generally are in the moderate range, but high in some streams. Concentrations of many of the minor elements are low in the Northeast, both in comparison with the rest of the country and with most standards and criteria. The exceptions include cadmium, chromium, lead, manganese, and iron. These last two were measured at high levels at a number of stations and frequently exceed criteria for aquatic life, particularly in analyses of "total" concentrations.

Southeast.--Waters of streams in the south Atlantic drainage and the drainage to the eastern Gulf of Mexico generally have low concentrations of dissolved solids and of most major inorganic chemicals and are soft. The major exceptions are in Florida where moderate to high concentrations of several inorganic constituents were measured and where several streams contain moderately hard or hard water. The concentration of fluoride in the Peace River of Florida was greater at times than standards for drinking water. Concentrations of nutrients (nitrogen and phosphorus) generally are at low or moderate levels throughout the Southeast, although relatively high levels of phosphorus exist in some streams in Florida.

Sediment concentrations are low in most southeastern streams, and so are concentrations of fecal coliform bacteria. Numbers of phytoplankton are at moderate to high levels in about half of the Southeastern accounting units and are highest in Florida. Periphyton and total organic carbon are at low to moderate concentrations in the Southeast. Most minor elements are at low levels in the Southeast, except for some moderately high concentrations of dissolved and total manganese, iron, and lead, and total mercury and zinc.

Mid-Continent.--This large region of the central United States includes the basin of the Mississippi River, with its major tributaries, the Ohio, Missouri, and Arkansas, and several smaller tributaries, plus some drainage to the western Great Lakes and Canada. It is a region with generally more erodible soils and less annual precipitation than in the East. It also contains a major share of the Nation's agriculture.

Waters in the Mid-Continent have higher concentrations of dissolved solids and major inorganic chemicals than do waters of the East, and in some streams these concentrations of inorganic materials exceed standards or criteria for public supply and other uses. The water is hard or very hard in many places. Fluoride concentrations are low to moderate, and in several streams are in the nearly ideal range of 0.5-1.0 mg/L. Concentrations of major nutrients and sediment are at moderate to high levels at many places. Communities of phytoplankton also frequently are high. Bacterial counts vary greatly throughout the region, and are relatively high in the southern half.

Data on the concentrations of minor elements vary greatly in the Mid-Continent, but most of the metals are at higher levels in this region than they are in any other. The dissolved concentrations of most of these do not exceed standards for public supply, but many of the total concentrations do exceed the public-supply standards. In addition, many of the metals exceed the more stringent aquatic-life standards at several of the NASQAN stations in the Mid-Continent.

Northwest.--Rivers of the relatively humid Northwest are somewhat like the rivers of the East. Their levels of dissolved solids and concentrations of major chemicals are low, and they generally are soft to moderately hard. Concentrations of major nutrients range from low to high levels, while sediment concentrations, phytoplankton numbers, and periphyton values range from low to moderately high. Counts of fecal coliform bacteria are low, and concentrations of total organic carbon are in the low to moderate range. Dissolved minor elements generally are at low or moderate levels; high concentrations were found for total concentrations of copper, iron, lead, and manganese.

Southwest.--Many of the highest concentrations of dissolved solids and major chemicals are found in the rivers of the Southwest, and concentrations commonly exceed water-quality standards or criteria. Waters in most rivers of this region are hard or very hard, and most carry large amounts of sediment and moderate to high concentrations of nutrients. Communities of phytoplankton and periphyton also are moderately high. Fluoride is at nearly ideal concentrations in several of the rivers, but exceeds the drinking water standards at one site in each of the lower Colorado and Rio Grande basins. Bacterial counts range widely and are moderately high in some streams, and total organic carbon varies over a large range. Concentrations of minor elements usually are at low levels in dissolved forms and are at moderate levels in total forms.

Alaska, Hawaii, and Puerto Rico.--Waters at NASQAN stations in Alaska, Hawaii, and Puerto Rico are low in dissolved solids and major constituents. The Hawaii water is soft, but water in several of the Alaska and Puerto Rico streams is hard. Nutrient concentrations generally are in the moderate range, but they vary considerably in Alaska and Hawaii. Phytoplankton communities are low and periphyton communities are at low-to moderate levels compared with the rest of the United States. Concentrations of sediment are at moderate levels and numbers of fecal coliform bacteria are low in Alaska, moderately high in Hawaii, and high in Puerto Rico. Minor elements are generally at low levels, except for total concentrations of copper, manganese, iron, lead, and zinc which are moderately high in some samples.

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TABLES 13 AND 14

(a) Table 13--a listing of NASQAN stations in numerical order by station number, supplementing the alphabetical listing in table 1.

(b) Table 14--a station-by-station summary of measurements of water-quality characteristics.

Table 14 includes one page per station, arranged in numerical order by USGS station number--the same order given in table 13. Identification information, including the station number and name, latitude and longitude, and drainage area are given at the top of each page.

The upper part of each page of table 14 contains a statistical summary of water-quality characteristics measured at approximately monthly intervals. Statistics include the number of measurements, their arithmetic mean, standard deviation, and range. A regression summary shows the results of a regression analysis performed with specific conductance as the independent variable. Use of the regression coefficient, R, the constant, B, and the standard error of estimate are explained in the subsection of this report on specific conductance (pages 32-33).

A duration table of daily measurements of specific conductance is included in table 14 for each station for which more than 100 daily measurements are available. Application of values in the duration table are explained in the subsection on specific conductance.

A summary of the harmonic analysis of data on stream temperature is included in table 14 for each station having more than 50 measurements during the year. The subsection of this report on stream temperature record (pages 17-21) explains the use of the temperature statistics.

Data on minor elements, periphyton, and organic carbon are collected only 4 times per year at most NASQAN stations. Consequently, the summary at the bottom of each page of table 14 is included to show only maximum and minimum measured values.

Details on all the individual measurements summarized in table 14 are published as USGS reports in the series "Water Resources Data for (State Name), Water Year 1975." These data reports are published annually on a state-by-state basis and copies are available from district offices of the USGS, Water Resources Division, or from the National Technical Information Service, Springfield, VA 22151. Most state data reports prior to 1975 are published in two volumes, with water-quality data usually included in volume 2.

TABLE 13: NATIONAL STREAM QUALITY ACCOUNTING NETWORK STATIONS OPERATED DURING 1975 WATER YEAR (SORTED BY STATION NO.)

USGS STAT.NO.	STATION NAME	ST	LATITUDE DEG/MIN	LONGITUDE DEG/MIN
01017100	AROOSTOOK RIVER AT CARIBOU	ME	4651	06800
01021050	ST. CROIX RIVER AT MILLTOWN	ME	4510	06718
01034500	PENOBSCOT RIVER AT WEST ENFIELD	ME	4514	06839
01046500	KENNEBEC RIVER AT BINGHAM	ME	4503	06953
01059000	ANDROSCOGGIN RIVER NEAR AUBURN	ME	4404	07013
01066000	SACO RIVER AT CORNISH	ME	4348	07047
01096550	MERRIMACK RIVER ABOVE LOWELL	MA	4238	07122
01103500	CHARLES RIVER AT CHARLES RIVER VILLAGE	MA	4215	07116
01155050	CONNECTICUT RIVER AT WALPOLE	NH	4305	07226
01184000	CONNECTICUT RIVER AT THOMPSONVILLE	CT	4159	07236
01205500	HOUSATONIC RIVER AT STEVENSON	CT	4123	07310
01304500	PECONIC RIVER AT RIVERHEAD	NY	4100	07241
01358000	HUDSON RIVER AT GREEN ISLAND	NY	4243	07341
01404100	RARITAN RIVER NEAR SOUTH BOUND BROOK	NJ	4031	07432
01408500	TOMS RIVER NEAR TOMS RIVER	NJ	3959	07413
01463500	DELAWARE RIVER AT TRENTON	NJ	4013	07447
01474500	SCHUYLKILL RIVER AT PHILADELPHIA	PA	4000	07512
01491000	CHOPTANK RIVER NEAR GREENSBORO	MD	3900	07547
01540500	SUSQUEHANNA RIVER AT DANVILLE	PA	4057	07637
01553500	W.BR. SUSQUEHANNA RIVER AT LEWISBURG	PA	4058	07653
01570500	SUSQUEHANNA RIVER AT HARRISBURG	PA	4015	07653
01645500	POTOMAC RIVER AT GREAT FALLS	MD	3900	07715
01673000	PAMUNKEY RIVER NEAR HANOVER	VA	3746	07720
02035000	JAMES RIVER AT CARTERSVILLE	VA	3740	07805
02049500	BLACKWATER RIVER NEAR FRANKLIN	VA	3646	07654
02081000	ROANOKE RIVER NEAR SCOTLAND NECK	NC	3612	07723
02083500	TAR RIVER AT TARBORO	NC	3554	07732
02089500	NEUSE RIVER AT KINSTON	NC	3515	07735
02105769	CAPE FEAR RIVER AT LOCK 1 NEAR KELLY	NC	3424	07818
02129000	PEE DEE RIVER NEAR ROCKINGHAM	NC	3457	07952
02132000	LYNCHES RIVER AT EFFINGHAM	SC	3403	07945
02136000	BLACK RIVER AT KINGSTREE	SC	3340	07950
02170500	LAKE MARION MOULTRIE CANAL NR PINEVILLE	SC	3323	08008
02171500	SANTEE RIVER NEAR PINEVILLE	SC	3327	08009
02175000	EDISTO RIVER NEAR GIVHANS	SC	3302	08024
02176500	COOSAWHATCHIE RIVER NEAR HAMPTON	SC	3250	08108
02198500	SAVANNAH RIVER NEAR CLYO (GA)	SC	3232	08116
02202500	OGEECHEE RIVER NEAR EDEN	GA	3211	08125
02226000	ALTAMAHA RIVER AT DOCTORTOWN	GA	3139	08150
02228000	SATILLA RIVER AT ATKINSON	GA	3113	08152
02231000	ST MARYS RIVER NEAR MACCLENNY	FL	3022	08205
02244450	ST JOHNS RIVER AT PALATKA	FL	2939	08138
02248000	SPRUCE CREEK NEAR SAMSULA	FL	2903	08103
02253000	MAIN CANAL AT VERO BEACH	FL	2739	08024
02273000	KISSIMMEE RIVER AT S65E NEAR OKEECHOBEE	FL	2714	08058
02279000	WEST PALM BEACH CANAL AT WEST PALM BEACH	FL	2639	08004
02288600	MIAMI CANAL AT NW 36TH STREET, MIAMI	FL	2548	08016

02292480	CALOOSAHATCHEE CNL AT ORTONA L.NR LABELLE	FL	2647	08118
02296750	PEACE RIVER AT ARCADIA	FL	2713	08153
02303000	HILLSBOROUGH RIVER NEAR ZEPHYRHILLS	FL	2809	08214
02313000	WITHLACOOCHEE RIVER NEAR HOLDER	FL	2859	08221
02320500	SUWANNEE RIVER AT BRANFORD	FL	2957	08256
02329000	OCHLOCKONEE RIVER NEAR HAVANA	FL	3033	08423
02358000	APALACHICOLA RIVER AT CHATTAHOOCHEE	FL	3042	08452
02359000	CHIPOLA RIVER NEAR ALTHA	FL	3032	08510
02366500	CHOCTAWHATCHEE RIVER NEAR BRUCE	FL	3027	08554
02368000	YELLOW RIVER AT MILLIGAN	FL	3045	08638
02375500	ESCAMBIA RIVER NEAR CENTURY	FL	3057	08714
02420000	ALABAMA RIVER NEAR MONTGOMERY	AL	3225	08624
02429500	ALABAMA RIVER AT CLAIBORNE	AL	3133	08731
02449000	TOMBIGBEE RIVER AT GAINESVILLE	AL	3249	08809
02469762	TOMBIGBEE R. AT COFFEEVILLE L&D NR. CFVL	AL	3146	08808
02479020	PASCAGOULA RIVER NEAR BENNDALE	MS	3053	08846
02489500	PEARL RIVER NEAR BOGALUSA	LA	3048	08949
02492000	BOGUE CHITTO NEAR BUSH	LA	3038	08954
03049625	ALLEGHENY RIVER AT NEW KENSINGTON	PA	4034	07946
03085000	MONONGAHELA RIVER AT BRADDOCK	PA	4024	07953
03150000	MUSKINGUM RIVER AT MCCONNELSVILLE	OH	3939	08151
03201300	KANAWHA RIVER AT WINFIELD	WV	3832	08155
03204500	MUD RIVER NEAR MILTON	WV	3823	08207
03215000	BIG SANDY RIVER AT LOUISA	KY	3810	08238
03216600	OHIO RIVER AT GREENUP DAM	KY	3839	08252
03234500	SCIOTO RIVER AT HIGBY	OH	3913	08252
03245500	LITTLE MIAMI RIVER AT MILFORD	OH	3910	08418
03254000	LICKING RIVER AT BUTLER	KY	3847	08421
03274600	GREAT MIAMI RIVER AT NEW BALTIMORE	OH	3916	08440
03276500	WHITEWATER RIVER AT BROOKVILLE	IN	3924	08501
03277200	OHIO R. AT MARKLAND DAM NEAR WARSAW	KY	3846	08458
03290500	KENTUCKY RIVER AT LOCK 2 AT LOCKPORT	KY	3826	08458
03301630	ROLLING FORK NEAR LEBANON JUNCTION	KY	3749	08545
03303280	OHIO RIVER AT CANNELTON DAM	KY	3754	08642
03321230	GREEN RIVER NEAR BEECH GROVE	KY	3735	08724
03374100	WHITE RIVER AT HAZELTON	IN	3829	08733
03378500	WABASH RIVER AT NEW HARMONY	IN	3808	08756
03425000	CUMBERLAND RIVER AT CARTHAGE	TN	3615	08557
03438220	CUMBERLAND RIVER NEAR GRAND RIVERS	KY	3701	08813
03470500	FRENCH BROAD RIVER NEAR KNOXVILLE	TN	3558	08346
03543005	TENNESSEE R. AT WATTS BAR DAM (TAILWATER)	TN	3537	08447
03571850	TENNESSEE RIVER AT SOUTH PITTSBURG	TN	3501	08542
03593005	TENNESSEE R. AT PICKWICK LAND. D.(L.LOCK)	TN	3504	08815
03609750	TENNESSEE RIVER AT HWY 60 NEAR PADUCAH	KY	3702	08832
03612500	OHIO RIVER AT L&D 53 NEAR GRAND CHAIN(IL)	KY	3712	08902
04014500	BAPTISM RIVER NEAR BEAVER BAY	MN	4720	09112
04024000	ST LOUIS RIVER AT SCANLON	MN	4642	09225
04027000	BAD RIVER NEAR ODANAH	WI	4629	09042
04040000	ONTONAGON RIVER NEAR ROCKLAND	MI	4643	08912
04045500	TAHQUAMENON R. NR TAHQUAMENON PARADISE	MI	4634	08516
04045580	ST MARYS RIVER ABOVE SAULT STE MARIE	MI	4629	08425
04057005	MANISTIQUE RIVER AT MANISTIQUE	MI	4557	08615
04059000	ESCANABA RIVER AT CORNELL	MI	4555	08713
04059500	FORD RIVER NEAR HYDE	MI	4545	08712
04085000	FOX RIVER AT WRIGHTSTOWN	WI	4420	08810

04087000	MILWAUKEE RIVER AT MILWAUKEE		WI	4306	08755
04108690	KALAMAZOO RIVER AT SAUGATUCK		MI	4239	08612
04122030	MUSKEGON RIVER NEAR BRIDGETON		MI	4319	08602
04126520	MANISTEE RIVER AT MANISTEE		MI	4415	08619
04132052	CHEBOYGAN RIVER AT CHEBOYGAN		MI	4539	08428
04142000	RIFLE RIVER NEAR STERLING		MI	4404	08401
04157000	SAGINAW RIVER AT SAGINAW		MI	4325	08358
04165500	CLINTON RIVER AT MT. CLEMENS		MI	4236	08255
04165700	DETROIT RIVER AT DETROIT		MI	4221	08258
04193500	MAUMEE RIVER AT WATERVILLE		OH	4130	08343
04208000	CUYAHOGA RIVER AT INDEPENDENCE		OH	4124	08138
04219640	NIAGARA RIVER AT FORT NIAGARA		NY	4316	07904
04232006	GENESEE R AT CHARLOTTE DOCKS AT ROCHESTER		NY	4313	07737
04249000	OSWEGO RIVER AT LOCK 7, OSWEGO		NY	4327	07630
04260500	BLACK RIVER AT WATERTOWN		NY	4359	07556
04264331	ST LAWRENCE R AT CORNWALL ONT NR MASSENA		NY	4500	07448
04269000	ST REGIS RIVER AT BRASHER CENTER		NY	4452	07447
04295000	RICHELIEU RIVER AT ROUSES POINT		NY	4500	07322
04296500	CLYDE RIVER AT NEWPORT		VT	4456	07211
05054020	RED RIVER OF THE NORTH BELOW FARGO		ND	4656	09647
05083500	RED RIVER OF THE NORTH AT OSLO	(MN)	ND	4812	09708
05112000	ROSEAU RIVER NEAR CARIBOU		MN	4859	09628
05124000	SOURIS (MOUSE) RIVER NEAR WESTHOPE		ND	4900	10057
05131500	LITTLE FORK RIVER AT LITTLEFORK		MN	4824	09334
05132000	BIG FORK RIVER AT BIG FALLS		MN	4812	09348
05267000	MISSISSIPPI RIVER NEAR ROYALTON		MN	4552	09422
05330000	MINNESOTA RIVER NEAR JORDAN		MN	4442	09338
05331000	MISSISSIPPI RIVER AT ST PAUL		MN	4457	09305
05340500	ST. CROIX RIVER AT ST. CROIX FALLS		WI	4524	09239
05369500	CHIPPEWA RIVER AT DURAND		WI	4438	09158
05378500	MISSISSIPPI RIVER AT WINONA		MN	4403	09138
05407000	WISCONSIN RIVER AT MUSCODA		WI	4312	09026
05420500	MISSISSIPPI RIVER AT CLINTON		IA	4147	09015
05446500	ROCK RIVER NEAR JOSLIN		IL	4134	09011
05474500	MISSISSIPPI RIVER AT KEOKUK		IA	4024	09122
05490600	DES MOINES RIVER AT ST FRANCISVILLE		MO	4028	09134
05543500	ILLINOIS RIVER AT MARSEILLES		IL	4120	08843
05586100	ILLINOIS RIVER AT VALLEY CITY		IL	3942	09039
05587550	MISSISSIPPI RIVER BELOW ALTON	(IL)	MO	3852	09008
05594100	KASKASKIA RIVER NEAR VENEDY STATION		IL	3827	08938
05599500	BIG MUDDY RIVER AT MURPHYSBORO		IL	3745	08921
06054500	MISSOURI RIVER AT TOSTON		MT	4609	11125
06109500	MISSOURI RIVER AT VIRGELLE		MT	4800	11015
06130500	MUSSELSHELL RIVER AT MOSBY		MT	4700	10753
06132000	MISSOURI RIVER BELOW FT PECK DAM		MT	4803	10621
06174500	MILK RIVER AT NASHUA		MT	4808	10622
06185500	MISSOURI RIVER NEAR CULBERTSON		MT	4807	10428
06214500	YELLOWSTONE RIVER AT BILLINGS		MT	4548	10828
06294700	BIGHORN RIVER AT BIGHORN		MT	4609	10728
06308500	TONGUE RIVER AT MILES CITY		MT	4622	10548
06326500	POWDER RIVER NEAR LOCATE		MT	4627	10519
06329500	YELLOWSTONE RIVER NEAR SIDNEY		MT	4741	10409
06337000	LITTLE MISSOURI RIVER NEAR WATFORD CITY		ND	4735	10315
06338490	MISSOURI RIVER AT GARRISON DAM		ND	4730	10126
06340500	KNIFE RIVER AT HAZEN		ND	4717	10137

06354000	CANNONBALL RIVER AT BREIEN		ND	4623	10056
06357800	GRAND RIVER AT LITTLE EAGLE		SD	4530	10049
06438000	BELLE FOURCHE RIVER NEAR ELM SPRINGS		SD	4422	10234
06439300	CHEYENNE RIVER AT CHERRY CREEK		SD	4436	10129
06440000	MISSOURI RIVER AT PIERRE		SD	4422	10022
06452000	WHITE RIVER NEAR OACOMA		SD	4345	09933
06453000	MISSOURI RIVER BELOW FT RANDALL DAM		SD	4304	09833
06465500	NIOBRARA RIVER NEAR VERDEL		NB	4244	09813
06478500	JAMES RIVER NEAR SCOTLAND		SD	4311	09738
06485500	BIG SIOUX RIVER AT AKRON	(IA)	SD	4250	09634
06486000	MISSOURI RIVER AT SIOUX CITY		IA	4229	09625
06686000	NORTH PLATTE RIVER AT LISCO		NB	4130	10238
06764000	SOUTH PLATTE RIVER AT JULESBURG		CO	4059	10215
06792499	LOUP R POWER CANAL AT DIV NR GENOA		NB	4124	09749
06796000	PLATTE RIVER AT NORTH BEND		NB	4127	09646
06805500	PLATTE RIVER NEAR LOUISVILLE		NB	4101	09609
06807000	MISSOURI RIVER AT NEBRASKA CITY	(NB)	IA	4041	09551
06818000	MISSOURI RIVER AT ST JOSEPH		MO	3948	09453
06856600	REPUBLICAN RIVER AT CLAY CENTER		KS	3921	09708
06877600	SMOKY HILL RIVER AT ENTERPRISE		KS	3854	09707
06887000	BIG BLUE RIVER NEAR MANHATTAN		KS	3914	09634
06892350	KANSAS RIVER AT DESOTO		KS	3859	09458
06902000	GRAND RIVER NEAR SUMNER		MO	3938	09316
06926510	OSAGE RIVER BELOW ST. THOMAS		MO	3820	09214
06934500	MISSOURI RIVER AT HERMANN		MO	3843	09126
07022000	MISSISSIPPI RIVER AT THEBES	(IL)	MO	3713	08928
07026000	OBION RIVER AT OBION		TN	3615	08912
07032000	MISSISSIPPI RIVER AT MEMPHIS	(TN)	AR	3508	09004
07047800	ST FRANCIS RIVER AT PARKIN		AR	3516	09034
07047900	ST FRANCIS BAY AT RIVERFRONT		AR	3516	09041
07077800	WHITE RIVER AT CLARENDON		AR	3441	09119
07137500	ARKANSAS RIVER NR COOLIDGE		KS	3802	10201
07139500	ARKANSAS RIVER AT DODGE CITY		KS	3745	10001
07146500	ARKANSAS RIVER AT ARKANSAS CITY		KS	3703	09704
07157950	CIMARRON RIVER NEAR BUFFALO		OK	3655	09924
07161000	CIMARRON RIVER AT PERKINS		OK	3558	09702
07164400	ARKANSAS RIVER AT SAND SPRINGS NR TULSA		OK	3607	09607
07178620	NEWT GRAHAM L&D (VERDIGRIS R) NEAR INOLA		OK	3603	09532
07193500	NEOSHO R BL FT GIBSON LAKE NR FT GIBSON		OK	3551	09514
07227140	CANADIAN RIVER ABOVE NM-TEX STATE LINE		NM	3523	10303
07228000	CANADIAN RIVER NEAR CANADIAN		TX	3556	10022
07231500	CANADIAN RIVER AT CALVIN		OK	3459	09614
07232500	BEAVER RIVER NEAR GUYMON		OK	3643	10130
07234000	BEAVER RIVER AT BEAVER		OK	3649	10031
07237500	NORTH CANADIAN RIVER AT WOODWARD		OK	3626	09917
07245000	CANADIAN RIVER NEAR WHITEFIELD		OK	3516	09514
07250550	ARKANSAS RIVER AT DAM 13 NEAR VAN BUREN		AR	3521	09418
07263620	ARKANSAS RIVER AT L AND D 6 LIT ROCK		AR	3440	09209
07265450	MISSISSIPPI RIVER NEAR ARKANSAS CITY		AR	3334	09115
07287120	YAZOO R AT SHELL BLUFF NR MORGAN CITY		MS	3324	09018
07289000	MISSISSIPPI RIVER AT VICKSBURG		MS	3219	09054
07290000	BIG BLACK RIVER NEAR BOVINA		MS	3221	09042
07292500	HOMOCHITTO RIVER AT ROSETTA		MS	3119	09106
07297910	PDTF RED RIVER NEAR WAYSIDE TEXAS		TX	3450	10125
07300000	SALT FORK RED RIVER NEAR WELLINGTON		TX	3457	10013

07305000	NF RED RIVER NEAR HEADRICK	OK	3438	09906
07308500	RED RIVER NEAR BURKBURNETT	TX	3406	09832
07331000	WASHITA RIVER NEAR DURWOOD	OK	3414	09659
07331600	RED RIVER AT DENISON DAM NEAR DENISON	TX	3349	09634
07344410	RED RIVER ABOVE SHREVEPORT	LA	3233	09346
07355500	RED RIVER AT ALEXANDRIA	LA	3119	09227
07362000	OUACHITA RIVER AT CAMDEN	AR	3336	09249
07367640	OUACHITA RIVER AT COLUMBIA	LA	3206	09204
07369500	TENSAS RIVER AT TENDAL	LA	3226	09122
07373420	MISSISSIPPI RIVER NEAR ST FRANCISVILLE	LA	3046	09124
07374508	MISSISSIPPI RIVER AT NEW ORLEANS	LA	2957	09008
07378510	AMITE RIVER AT 4-H CAMP NR DENHAM SPGS	LA	3026	09058
07381490	ATCHAFALAYA RIVER AT SIMMESPORT	LA	3059	09148
07385700	BAYOU TECHE AT KEYST L NR ST MARTINSVL	LA	3004	09150
08015900	CALCASIEU RIVER NEAR LAKE CHARLES	LA	3018	09311
08030500	SABINE RIVER NEAR RULIFF	TX	3018	09345
08041000	NECHES RIVER AT EVADALE	TX	3021	09406
08065350	TRINITY RIVER NEAR CROCKETT	TX	3120	09539
08066500	TRINITY RIVER AT ROMAYOR	TX	3026	09451
08068000	WEST FORK SAN JACINTO RIVER NEAR CONROE	TX	3015	09527
08082000	SALT FORK BRAZOS RIVER NEAR ASPERMONT	TX	3320	10014
08082500	BRAZOS RIVER AT SEYMOUR	TX	3335	09916
08098290	BRAZOS RIVER NEAR HIGHBANK	TX	3108	09649
08116650	BRAZOS RIVER AT ROSHARON	TX	2921	09535
08123800	BEALS CREEK NEAR WESTBROOK	TX	3212	10101
08136700	COLORADO RIVER NEAR STACY	TX	3130	09934
08158000	COLORADO RIVER AT AUSTIN	TX	3015	09742
08162000	COLORADO RIVER AT WHARTON	TX	2919	09606
08164500	NAVIDAD RIVER NEAR GANADO	TX	2902	09633
08176500	GUADALUPE RIVER AT VICTORIA	TX	2848	09701
08188500	SAN ANTONIO RIVER AT GOLIAD	TX	2839	09723
08210000	NUECES RIVER NEAR THREE RIVERS	TX	2826	09811
08212400	LOS OLMOS CREEK NEAR FALFURRIAS	TX	2716	09808
08251500	RIO GRANDE NEAR LOBATOS	CO	3705	10545
08313000	RIO GRANDE AT OTOWI BRDG NR S.ILDEFONSO	NM	3552	10608
08358300	RIO GRANDE CNV CH AT SAN MARCIAL	NM	3341	10700
08370500	RIO GRANDE AT FT QUITMAN	TX	3105	10536
08377200	RIO GRANDE AT FOSTER RANCH NR LANGTRY	TX	2947	10145
08407500	PECOS RIVER AT RED BLUFF	NM	3204	10402
08447410	PECOS RIVER NEAR LANGTRY	TX	2948	10127
08459000	RIO GRANDE AT LAREDO	TX	2730	09930
08475000	RIO GRANDE NEAR BROWNSVILLE	TX	2553	09727
08481500	RIO TULAROSA NEAR BENT	NM	3309	10554
09152500	GUNNISON RIVER NEAR GRAND JUNCTION	CO	3859	10827
09163530	COLORADO RIVER BLW. COLO-UTAH STATE LINE	CO	3905	10906
09180500	COLORADO RIVER NEAR CISCO	UT	3849	10918
09234500	GREEN RIVER NEAR GREENDALE	UT	4054	10925
09251000	YAMPA RIVER NEAR MAYBELL	CO	4030	10802
09260000	LITTLE SNAKE RIVER NEAR LILY	CO	4033	10825
09315000	GREEN RIVER AT GREEN RIVER	UT	3859	11009
09368000	SAN JUAN RIVER AT SHIPROCK	NM	3648	10844
09379500	SAN JUAN RIVER NEAR BLUFF	UT	3709	10952
09380000	COLORADO RIVER AT LEES FERRY	AZ	3652	11135
09401200	LITTLE COLORADO RIVER AT CAMERON	AZ	3553	11125
09421500	COLORADO RIVER BELOW HOOVER DAM	AZ	3601	11444

09424190	COLORADO RIVER AQUED. NR SAN JACINTO		CA	3349 11658
09426600	BILL WILLIAMS R NEAR PLANET		AZ	3416 11402
09429490	COLORADO RIVER ABOVE IMPERIAL DAM		AZ	3253 11428
09466500	GILA RIVER AT CALVA		AZ	3311 11013
09473500	SAN PEDRO RIVER AT WINKELMAN		AZ	3259 11046
09474000	GILA RIVER AT KELVIN		AZ	3306 11059
09489000	SANTA CRUZ RIVER NEAR LAVEEN		AZ	3314 11210
09502000	SALT RIVER BELOW STEWART MT DAM		AZ	3334 11132
09510000	VERDE RIVER BELOW BARTLETT DAM		AZ	3349 11138
09518000	GILA RIVER ABOVE DIV AT GILLESPIE DAM		AZ	3314 11246
09520700	GILA RIVER NEAR MOUTH NEAR YUMA		AZ	3243 11433
09522000	COLORADO R AT N INT BDRY AB MORELOS DAM		AZ	3243 11443
10059500	BEAR LAKE OUTLET CANAL NEAR PARIS	(ID)	UT	4213 11121
10126000	BEAR RIVER NEAR CORINNE		UT	4135 11206
10141000	WEBER RIVER NEAR PLAIN CITY		UT	4117 11205
10171000	JORDAN RIVER AT SALT LAKE CITY		UT	4044 11155
10224000	SEVIER RIVER NEAR LYNNDYL		UT	3929 11224
10237000	BEAVER RIVER AT ADAMSVILLE		UT	3815 11246
10249900	CHIATOVICH CREEK NEAR DYER		NV	3750 11812
10254970	NEW RIVER AT INT. BDRY. NR. CALEXICO		CA	3240 11530
10261500	MOJAVE R. AT LOW NARROWS NR VICTORVILLE		CA	3434 11719
10277400	OWENS RIVER BLW TINEMAHA D. NR BIG PINE		CA	3703 11813
10301500	WALKER RIVER NEAR WABUSKA		NV	3909 11906
10312000	CARSON RIVER NEAR FORT CHURCHILL		NV	3918 11919
10335000	HUMBOLDT RIVER NEAR RYE PATCH		NV	4028 11818
10346000	TRUCKEE RIVER AT FARAD	(CA)	NV	3926 12002
10351700	TRUCKEE RIVER NEAR NIXON		NV	3947 11920
10352500	MC DERMITT CREEK NEAR MC DERMITT		NV	4158 11750
10396000	DONNER UND BLITZEN R. NEAR FRENCHGLEN		OR	4247 11852
11074000	SANTA ANA RIVER BELOW PRADO DAM		CA	3353 11739
11103010	LOS ANGELES R.AT WIL.ST.BRDG.AT LONG BCH		CA	3348 11812
11152500	SALINAS RIVER NEAR SPRECKELS		CA	3638 12140
11250000	FRIANT-KERN CANAL AT FRIANT		CA	3700 11942
11303500	SAN JOAQUIN RIVER NEAR VERNALIS		CA	3741 12116
11325500	MOKELUMNE RIVER AT WOODBRIDGE		CA	3810 12118
11447650	SACRAMENTO RIVER AT FREEPORT		CA	3827 12130
11467000	RUSSIAN RIVER NEAR GUERNEVILLE		CA	3830 12256
11530500	KLAMATH RIVER NEAR KLAMATH		CA	4131 12358
12031000	CHEHALIS RIVER AT PORTER		WA	4656 12319
12045500	ELWHA R AT MCDONALD BRIDGE NR PT ANGELES		WA	4803 12335
12200500	SKAGIT RIVER NEAR MT VERNON		WA	4831 12220
12318500	KOOTENAI RIVER NEAR COPELAND		ID	4855 11625
12355000	FLATHEAD RIVER AT FLATHEAD, B.C.		MT	4900 11428
12398600	PEND OREILLE R AT INTERNATIONAL BOUNDARY		WA	4900 11721
12400520	COLUMBIA RIVER AT NORTHPORT		WA	4855 11747
12433000	SPOKANE RIVER AT LONG LAKE		WA	4750 11751
12510500	YAKIMA RIVER AT KIONA		WA	4615 11929
13022500	SNAKE RIVER ABOVE RESERVOIR NEAR ALPINE		WY	4318 11047
13154500	SNAKE RIVER AT KING HILL		ID	4300 11512
13213000	BOISE RIVER NEAR PARMA		ID	4347 11658
13213100	SNAKE RIVER AT NYSSA	(OR)	ID	4353 11659
13290450	SNAKE RIVER AT HELLS CANYON DAM	(OR)	ID	4515 11642
13317000	SALMON RIVER AT WHITE BIRD		ID	4545 11619
13353200	SNAKE RIVER AT BURBANK		WA	4613 11901
14048000	JOHN DAY RIVER AT MCDONALD FERRY		OR	4535 12024

14103000	DESCHUTES RIVER AT MOODY NEAR BIGGS	OR	4537	12054
14113000	KLICKITAT RIVER NEAR PITT	WA	4545	12113
14128910	COLUMBIA RIVER AT WARRENDALE	OR	4537	12202
14207500	TUALATIN RIVER AT WEST LINN	OR	4521	12240
14211720	WILLAMETTE RIVER AT PORTLAND	OR	4531	12240
14301000	NEHALEM RIVER NEAR FOSS	OR	4542	12345
14321000	UMPQUA RIVER NEAR ELKTON	OR	4335	12333
14372300	ROGUE RIVER NEAR AGNESS	OR	4235	12404
15024800	STIKINE RIVER NEAR WRANGELL	AK	5642	13208
15294350	SUSITNA RIVER AT SUSITNA STATION	AK	6133	15031
15304000	KUSKOKWIM RIVER AT CROOKED CREEK	AK	6152	15807
15565447	YUKON RIVER AT PILOT STATION	AK	6156	16253
15744500	KOBUK RIVER NEAR KIANA	AK	6659	16007
15896000	KUPARUK RIVER NEAR DEADHORSE	AK	7017	14858
16031000	WAIMEA RIVER AT WAIMEA	HI	2159	15940
16213000	WAIKELE STREAM AT WAIPAHU	HI	2123	15801
16229300	KALIHI STREAM AT KALIHI	HI	2120	15753
16400000	HALAWA STREAM NEAR HALAWA	HI	2110	15646
16618000	KAHAKULOA STREAM NEAR HONOKOHAU	HI	2059	15633
16704000	WAILUKU RIVER AT PIIHONUA	HI	1943	15509
50038100	RIO GRANDE DE MANATI AT HWY 2 NR MANATI	PR	1826	06632
50046000	RIO DE LA PLATA AT TOA ALTA	PR	1824	06615
50092000	RIO GRANDE DE PATILLAS NEAR PATILLAS	PR	1802	06602
50144000	RIO GRANDE DE ANASCO NEAR SAN SEBASTIAN	PR	1817	06703

Table 14.--Summary of measurements at each station

STATION NUMBER: 01017100 NAME: AROOSTOOK RIVER AT CARIBOU ME

LAT 46D50M57S LONG 068D00M12S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.71	9.62	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	103.9	21.7	72	128					
STREAMFLOW (CUBIC FT/SEC)	12	2051.5	2587.5	321	9580	12	-53.127	7572.324	-0.445*	2430.7
PH (STANDARD UNITS)	12	7.17	0.64	6.5	8.5	12	0.0089	6.2389	0.302*	0.64
PHOSPHORUS, TOTAL	12	0.077	0.047	0.04	0.19	12	0.00074	0.00081	0.341*	0.046
NITRITE + NITRATE, TOTAL	12	0.257	0.199	0.04	0.61	12	-0.00069	0.32805	-0.075*	0.209
NITROGEN, KJELDAHL, TOTAL	12	0.408	0.115	0.27	0.61	12	0.00117	0.28631	0.222*	0.117
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3361.9	5561.0	41	19000	12	60.048	-2878.068	0.234*	5670.6
SEDIMENT, SUSPENDED	11	5.4	3.5	1	10					
SEDIMENT, CLAY-SILT (PERCENT)	11	94.9	8.3	75	100					
COLIFORM, FECAL (COL/100 ML)	12	135.9	181.8	3	600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	156.3	278.1	1	1000					
SILICA, DISSOLVED	4	3.50	1.65	1.2	4.7	4	0.0218	1.1244	0.340*	1.90
CALCIUM, DISSOLVED	4	13.22	2.79	9.9	16.0	4	0.0704	5.5660	0.649*	2.60
MAGNESIUM, DISSOLVED	4	2.25	0.66	1.4	3.0	4	0.0172	0.3753	0.671*	0.60
SODIUM, DISSOLVED	4	2.80	0.99	1.7	4.1	4	0.0299	-0.4569	0.781*	0.75
POTASSIUM, DISSOLVED	4	1.20	0.91	0.4	2.4	4	0.0223	-1.2303	0.633*	0.86
BICARBONATE, ION	4	42.8	13.8	26	56	4	0.338	5.980	0.629*	13.2
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	7.75	2.34	6.0	11.0	4	0.0505	2.2625	0.556*	2.38
CHLORIDE, DISSOLVED	4	2.95	1.28	1.9	4.5	4	0.0383	-1.2128	0.770*	1.00
DISSOLVED SOLIDS, SUM OF CONST	4	55.0	11.3	38	61	4	0.416	9.787	0.943*	4.6
DISSOLVED SOLIDS, ROE 180 DEG C	4	83.5	13.8	65	98	4	0.504	28.680	0.939*	5.8
HARDNESS, TOTAL	4	42.0	9.6	30	52	4	0.252	14.576	0.674*	8.7
HARDNESS, NONCARBONATE	4	8.0	7.1	0	17	4	0.002	7.781	0.007*	8.7
TURBIDITY (JTU)	4	2.8	1.0	2	4	4	0.001	2.654	0.024*	1.2
FLOURIDE, DISSOLVED	4	0.20	0.08	0.1	0.3	4	-0.0028	0.5065	-0.888*	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
31	7.80	11.70	2.67	85	2.67

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01017100 -- AROOSTOOK RIVER AT CARIBOU ME

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	2
CADMIUM (CD), UG/L	4	0	0	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	20
COBALT (CO), UG/L	4	0	2	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	180	410	4	20	110
LEAD (PB), UG/L	4	13	69	4	2	8
MANGANESE (MN), UG/L	4	30	40	4	10	40
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	10	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.00	1.79			
BIOMASS, ASH WT., G/SQ M	2	.50	1.29			
CHLOROPHYLL A, MG/SQ M	2	.5	1.5			
CHLOROPHYLL B, MG/SQ M	2	.0	.0			
ORGANIC CARBON, MG/L	3	6.0	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01021050 NAME: ST. CROIX RIVER AT MILLTOWN, MAINE

LAT 45D10M11S LONG 067D17M50S
DRAINAGE AREA: 1460 SQ MI (3781 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	9.89	9.37	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	84.1	21.0	43	112					
STREAMFLOW (CUBIC FT/SEC)	23	1980.8	1495.7	793	7410	23	-47.987	6017.988	-0.672	1133.3
PH (STANDARD UNITS)	23	6.51	0.11	6.3	6.7	23	0.0003	6.4892	0.056 *	0.11
PHOSPHORUS, TOTAL	9	0.036	0.009	0.02	0.05	9	0.00015	0.02452	0.300 *	0.009
NITRITE + NITRATE, TOTAL	9	0.021	0.021	0.00	0.06	9	0.00029	-0.00068	0.243 *	0.022
NITROGEN, KJELDAHL, TOTAL	9	0.296	0.087	0.12	0.40	9	0.00059	0.25130	0.121 *	0.093
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	682.3	822.4	46	2500	9	0.618	634.328	0.017 *	879.1
SEDIMENT, SUSPENDED	9	5.7	2.6	1	10					
SEDIMENT, CLAY-SILT (PERCENT)	9	95.2	5.8	85	100					
COLIFORM, FECAL (COL/100 ML)	22	314.6	507.8	5	1800					
STREPTOCOCCI, FECAL (COL/100 ML)	21	66.7	127.6	1	600					
SILICA, DISSOLVED	3	2.03	0.51	1.6	2.6	3	-0.0346	5.2208	-0.761 *	0.47
CALCIUM, DISSOLVED	4	7.15	2.19	5.0	9.5	4	-0.0910	15.5720	-0.385 *	2.47
MAGNESIUM, DISSOLVED	4	1.05	0.66	0.5	2.0	4	0.0195	-0.7495	0.275 *	0.77
SODIUM, DISSOLVED	3	10.70	3.01	8.1	14.0	3	0.2571	-12.9522	0.962 *	1.16
POTASSIUM, DISSOLVED	3	0.83	0.21	0.6	1.0	3	0.0043	0.4349	0.234 *	0.29
BICARBONATE, ION	4	15.3	5.6	10	21	4	0.123	3.912	0.204 *	6.7
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	6.20	1.05	5.2	7.2	4	0.1020	-3.2304	0.902 *	0.55
CHLORIDE, DISSOLVED	4	12.00	1.41	10.0	13.0	4	0.0389	8.4008	0.255 *	1.67
DISSOLVED SOLIDS, SUM OF CONST	3	47.3	4.5	43	52	3	0.350	15.097	0.876 *	3.1
DISSOLVED SOLIDS, ROE 180 DEG C	3	72.0	4.4	67	75	3	0.217	52.079	0.560 *	5.1
HARDNESS, TOTAL	4	22.3	7.8	16	32	4	-0.169	37.907	-0.202 *	9.3
HARDNESS, NONCARBONATE	4	9.8	9.4	1	23	4	-0.224	30.446	-0.221 *	11.2
TURBIDITY (JTU)	23	3.7	1.9	1	8	23	0.027	1.503	0.295 *	1.8
FLOURIDE, DISSOLVED	3	0.20	0.10	0.1	0.3	3	0.0079	-0.5244	0.887 *	0.07

*Not significant at the 95 percent confidence level

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 140

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	145	124	116	109	102	88	77	60	54	49

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
142	8.86	14.02	2.75	91	2.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01021050 -- ST. CROIX RIVER AT MILLTOWN, MAINE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	1	3	0	1
CADMIUM (CD), UG/L	3	0	0	5	0	<7
CHROMIUM (CR), UG/L	3	0	10	5	0	<10
COBALT (CO), UG/L	3	0	0	5	0	0
COPPER (CU), UG/L	3	0	20	5	0	2
IRON (FE), UG/L	3	220	330	5	170	360
LEAD (PB), UG/L	3	9	37	5	6	45
MANGANESE (MN), UG/L	3	60	100	5	60	160
MERCURY (HG), UG/L	4	<0.5	1.1	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	0	10	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.79	1.79			
BIOMASS, ASH WT., G/SQ M	2	.59	4.39			
CHLOROPHYLL A, MG/SQ M	2	.8	3.0			
CHLOROPHYLL B, MG/SQ M	2	.3	.3			
ORGANIC CARBON, MG/L	16	3.3	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01034500 NAME: PENOBSCOT RIVER AT WEST ENFIELD, MAINE

LAT 45D14M15S LONG 068D39M10S
DRAINAGE AREA: 6670 SQ MI (17275 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.29	9.35	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	58.5	7.8	48	72					
STREAMFLOW (CUBIC FT/SEC)	12	9696.7	7241.1	4630	30200	12	-222.209	22695.875	-0.238 *	7376.5
PH (STANDARD UNITS)	12	6.58	0.13	6.4	6.8	12	-0.0003	6.6010	-0.018 *	0.13
PHOSPHORUS, TOTAL	11	0.024	0.008	0.01	0.04	11	-0.00084	0.07362	-0.795	0.005
NITRITE + NITRATE, TOTAL	11	0.045	0.050	0.00	0.14	11	0.00437	-0.21351	0.666	0.039
NITROGEN, KJELDAHL, TOTAL	11	0.312	0.143	0.14	0.69	11	0.00532	-0.00325	0.283 *	0.145
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	641.8	1225.2	70	4500	12	-44.468	3243.141	-0.281 *	1233.1
SEDIMENT, SUSPENDED	12	5.0	2.3	1	9					
SEDIMENT, CLAY-SILT (PERCENT)	12	90.4	18.0	43	100					
COLIFORM, FECAL (COL/100 ML)	12	138.3	83.4	50	350					
STREPTOCOCCI, FECAL (COL/100 ML)	12	92.1	76.3	38	290					
SILICA, DISSOLVED	4	3.20	0.36	2.9	3.6	4	0.0303	1.3445	0.686 *	0.32
CALCIUM, DISSOLVED	4	6.57	1.04	5.1	7.5	4	0.0582	3.0132	0.452 *	1.13
MAGNESIUM, DISSOLVED	4	1.35	0.39	0.8	1.7	4	0.0069	0.9254	0.144 *	0.47
SODIUM, DISSOLVED	4	3.07	0.75	2.2	4.0	4	0.0736	-1.4302	0.795 *	0.55
POTASSIUM, DISSOLVED	4	0.57	0.33	0.2	1.0	4	0.0027	0.4099	0.066 *	0.40
BICARBONATE, ION	4	14.3	2.5	11	17	4	0.297	-3.913	0.956 *	0.9
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	8.55	1.59	6.2	9.6	4	0.0711	4.1936	0.361 *	1.81
CHLORIDE, DISSOLVED	4	2.97	0.22	2.7	3.2	4	0.0207	1.7092	0.751 *	0.18
DISSOLVED SOLIDS, SUM OF CONST	4	33.8	5.0	27	38	4	0.392	9.769	0.632 *	4.7
DISSOLVED SOLIDS, ROE 180 DEG C	4	47.5	9.7	34	55	4	0.362	25.327	0.301 *	11.3
HARDNESS, TOTAL	4	22.3	4.2	16	25	4	0.189	10.692	0.363 *	4.8
HARDNESS, NONCARBONATE	4	10.5	4.1	5	15	4	-0.069	14.746	-0.135 *	5.0
TURBIDITY (JTU)	4	3.0	1.2	2	4	4	0.118	-4.234	0.824 *	0.8
FLOURIDE, DISSOLVED	4	0.17	0.05	0.1	0.2	4	-0.0004	0.1986	-0.062 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 330

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	124	94	81	71	67	61	54	48	42	35

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
338	9.12	12.98	2.66	93	2.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01034500 -- PENOBSCOT RIVER AT WEST ENFIELD, MAINE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	20
COBALT (CO), UG/L	4	0	2	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	220	300	4	80	120
LEAD (PB), UG/L	4	10	49	4	1	8
MANGANESE (MN), UG/L	4	40	60	4	30	60
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	0	10	4	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.29	11.00			
BIOMASS, ASH WT., G/SQ M	3	2.29	4.79			
CHLOROPHYLL A, MG/SQ M	3	.7	8.2			
CHLOROPHYLL B, MG/SQ M	3	.0	2.0			
ORGANIC CARBON, MG/L	3	6.1	9.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01046500 NAME: KENNEBEC RIVER AT BINGHAM, ME.

LAT 45D03M05S LONG 069D53M15S
DRAINAGE AREA: 2720 SQ MI (7045 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.38	7.94	0.5	21.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	36.5	3.7	32	41					
STREAMFLOW (CUBIC FT/SEC)	12	5370.0	2265.6	1580	8760	12	48.950	3583.329	0.081*	2368.4
PH (STANDARD UNITS)	12	6.59	0.09	6.4	6.7	12	0.0003	6.5795	0.014*	0.09
PHOSPHORUS, TOTAL	12	0.012	0.006	0.01	0.03	12	-0.00046	0.02837	-0.296*	0.006
NITRITE + NITRATE, TOTAL	12	0.112	0.043	0.06	0.21	12	0.00542	-0.08634	0.468*	0.040
NITROGEN, KJELDAHL, TOTAL	12	0.222	0.098	0.06	0.42	12	0.01667	-0.38669	0.632	0.080
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	383.5	304.6	24	920	12	-8.163	681.464	-0.100*	317.8
SEDIMENT, SUSPENDED	12	2.3	1.3	1	5					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.5	3.2	96	110					
COLIFORM, FECAL (COL/100 ML)	12	1.7	1.4	0	4					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2.7	3.8	0	13					
SILICA, DISSOLVED	4	3.52	0.39	3.2	4.0	4	-0.0985	6.9230	-0.827*	0.27
CALCIUM, DISSOLVED	4	4.27	0.61	3.4	4.8	4	0.0954	0.9821	0.521*	0.64
MAGNESIUM, DISSOLVED	4	0.92	0.22	0.6	1.1	4	0.0227	0.1408	0.340*	0.26
SODIUM, DISSOLVED	4	1.15	0.41	0.7	1.5	4	0.0515	-0.6273	0.414*	0.46
POTASSIUM, DISSOLVED	4	0.40	0.20	0.3	0.7	4	-0.0303	1.4454	-0.503*	0.21
BICARBONATE, ION	4	9.8	1.5	8	11	4	0.197	2.955	0.436*	1.7
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	4.40	0.63	3.8	5.2	4	0.1879	-2.0818	0.985*	0.13
CHLORIDE, DISSOLVED	4	1.52	0.59	0.8	2.0	4	-0.0045	1.6818	-0.026*	0.72
DISSOLVED SOLIDS, SUM OF CONST	4	21.5	2.4	18	23	4	0.364	8.955	0.507*	2.5
DISSOLVED SOLIDS, ROE 180 DEG C	4	28.5	6.0	20	34	4	0.606	7.591	0.333*	7.0
HARDNESS, TOTAL	4	14.5	2.4	11	16	4	0.242	6.136	0.338*	2.7
HARDNESS, NONCARBONATE	4	6.5	2.1	4	9	4	0.121	2.318	0.193*	2.5
TURBIDITY (JTU)	4	1.3	0.5	1	2	4	0.136	-3.455	0.905*	0.3
FLOURIDE, DISSOLVED	4	0.15	0.10	0.1	0.3	4	0.0030	0.0455	0.100*	0.12

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
42	8.59	11.28	2.46	96	1.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01046500 -- KENNEBEC RIVER AT BINGHAM, ME.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	0	4	0	0
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	0	<10	4	0	<10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	20	4	0	10
IRON (FE), UG/L	4	110	260	4	30	110
LEAD (PB), UG/L	4	2	100	4	2	7
MANGANESE (MN), UG/L	4	10	40	4	10	20
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.29	5.79			
BIOMASS, ASH WT., G/SQ M	2	.79	5.69			
CHLOROPHYLL A, MG/SQ M	2	.3	.5			
CHLOROPHYLL B, MG/SQ M	2	.1	.5			
ORGANIC CARBON, MG/L	4	5.8	7.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01059000 NAME: ANDROSCOGGIN RIVER NEAR AUBURN, ME.

LAT 44004M20S LONG 070D12M31S
DRAINAGE AREA: 3257 SQ MI (8436 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.00	9.57	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	108.3	41.6	50	200					
STREAMFLOW (CUBIC FT/SEC)	12	5805.0	3868.5	2620	13900	12	-55.387	11805.285	-0.596	3257.6
PH (STANDARD UNITS)	12	6.66	0.10	6.5	6.8	12	0.0014	6.5069	0.584	0.08
PHOSPHORUS, TOTAL	9	0.041	0.013	0.02	0.06	9	0.00012	0.02724	0.460*	0.012
NITRITE + NITRATE, TOTAL	9	0.187	0.071	0.10	0.28	9	-0.00004	0.19152	-0.029*	0.076
NITROGEN, KJELDAHL, TOTAL	9	0.577	0.245	0.25	0.94	9	0.00469	0.05603	0.896	0.116
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1820.0	1820.3	130	6100	9	5.046	1259.344	0.130*	1929.5
SEDIMENT, SUSPENDED	9	5.3	3.5	2	11					
SEDIMENT, CLAY-SILT (PERCENT)	9	98.4	3.3	90	100					
COLIFORM, FECAL (COL/100 ML)	12	1888.3	3101.2	100	11000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	720.3	1250.2	83	4600					
SILICA, DISSOLVED	4	5.02	1.01	4.1	6.0	4	0.0098	3.7170	0.468*	1.10
CALCIUM, DISSOLVED	4	7.10	1.43	5.8	8.7	4	0.0281	3.3441	0.956*	0.51
MAGNESIUM, DISSOLVED	4	0.97	0.22	0.7	1.2	4	0.0032	0.5422	0.708*	0.19
SODIUM, DISSOLVED	4	13.85	6.44	8.3	22.0	4	0.1308	-3.6474	0.986*	1.31
POTASSIUM, DISSOLVED	4	1.10	0.24	0.8	1.4	4	0.0045	0.5040	0.883*	0.14
BICARBONATE, ION	4	20.0	5.3	15	27	4	0.108	5.525	0.993*	0.8
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	12.37	3.14	9.6	16.0	4	0.0624	4.0237	0.965*	1.01
CHLORIDE, DISSOLVED	4	15.60	8.70	8.4	28.0	4	0.1753	-7.8434	0.978*	2.23
DISSOLVED SOLIDS, SUM OF CONST	4	66.5	22.5	49	97	4	0.464	4.485	1.000*	0.8
DISSOLVED SOLIDS, ROE 180 DEG C	3	87.0	24.1	62	110	3	0.451	21.554	0.988*	5.2
HARDNESS, TOTAL	4	21.8	4.4	17	26	4	0.082	10.799	0.898*	2.4
HARDNESS, NONCARBONATE	4	5.3	1.3	4	7	4	-0.008	6.267	-0.293*	1.5
TURBIDITY (JTU)	3	3.3	2.3	2	6	3	0.040	-2.414	0.904*	1.4
FLOURIDE, DISSOLVED	4	0.20	0.00	0.2	0.2	4	0.0000	0.2000	0.000*	0.00

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	9.76	12.56	2.74	94	2.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01059000 -- ANDROSCOGGIN RIVER NEAR AUBURN, ME.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	0	3	0	0
CADMIUM (CD), UG/L	3	0	0	3	0	0
CHROMIUM (CR), UG/L	3	10	70	3	<10	20
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	0	10	3	0	10
IRON (FE), UG/L	3	460	600	3	170	380
LEAD (PB), UG/L	3	2	23	3	2	6
MANGANESE (MN), UG/L	3	50	70	3	40	70
MERCURY (HG), UG/L	3	< 0.5	< 0.5	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	10	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.50	13.00			
BIOMASS, ASH WT., G/SQ M	2	3.69	10.00			
CHLOROPHYLL A, MG/SQ M	2	.3	4.5			
CHLOROPHYLL B, MG/SQ M	2	.0	1.0			
ORGANIC CARBON, MG/L	3	5.3	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01066000 NAME: SACO RIVER AT CORNISH, MAINE

LAT 43D48M30S LONG 070D46M55S
DRAINAGE AREA: 1298 SQ MI (3362 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.70	9.61	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	39.3	4.0	34	49					
STREAMFLOW (CUBIC FT/SEC)	12	2717.1	2571.8	519	9060	12	-311.457	14941.750	-0.485*	2359.2
PH (STANDARD UNITS)	12	6.58	0.15	6.4	6.8	12	0.0020	6.5052	0.052*	0.16
PHOSPHORUS, TOTAL	12	0.014	0.008	0.01	0.03	12	-0.00058	0.03699	-0.294*	0.008
NITRITE + NITRATE, TOTAL	12	0.099	0.012	0.08	0.12	12	0.00126	0.04962	0.407*	0.012
NITROGEN, KJELDAHL, TOTAL	12	0.181	0.120	0.10	0.55	12	-0.00478	0.36844	-0.159*	0.124
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	397.5	350.7	120	1100	12	-27.021	1458.085	-0.308*	349.8
SEDIMENT, SUSPENDED	12	4.3	4.1	1	15					
SEDIMENT, CLAY-SILT (PERCENT)	12	95.2	8.0	77	100					
COLIFORM, FECAL (COL/100 ML)	12	34.3	52.2	1	190					
STREPTOCOCCI, FECAL (COL/100 ML)	12	73.5	198.4	1	700					
SILICA, DISSOLVED	4	6.37	0.94	5.3	7.6	4	0.1750	-0.4499	0.643*	0.88
CALCIUM, DISSOLVED	4	3.10	0.71	2.4	4.0	4	0.1667	-3.3999	0.816*	0.50
MAGNESIUM, DISSOLVED	4	0.42	0.26	0.2	0.8	4	0.0583	-1.8500	0.768*	0.21
SODIUM, DISSOLVED	4	2.92	0.59	2.3	3.6	4	0.1194	-1.7331	0.707*	0.51
POTASSIUM, DISSOLVED	4	0.55	0.26	0.3	0.9	4	0.0278	-0.5333	0.364*	0.30
BICARBONATE, ION	4	7.8	1.0	7	9	4	0.139	2.333	0.503*	1.0
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	3.67	0.89	2.6	4.5	4	0.1583	-2.4996	0.617*	0.86
CHLORIDE, DISSOLVED	4	3.95	1.00	3.2	5.4	4	-0.0056	4.1671	-0.019*	1.22
DISSOLVED SOLIDS, SUM OF CONST	4	25.3	3.8	21	30	4	0.750	-4.000	0.688*	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	4	31.8	5.7	25	39	4	1.528	-27.833	0.922*	2.7
HARDNESS, TOTAL	4	9.3	2.6	7	13	4	0.583	-13.500	0.768*	2.1
HARDNESS, NONCARBONATE	4	3.3	2.6	1	7	4	0.583	-19.500	0.768*	2.1
TURBIDITY (JTU)	4	1.3	0.5	1	2	4	0.028	0.167	0.192*	0.6
FLOURIDE, DISSOLVED	4	0.37	0.15	0.3	0.6	4	0.0250	-0.6000	0.577*	0.15

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
92	9.82	14.32	2.86	92	1.78

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01066000 -- SACO RIVER AT CORNISH, MAINE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	0	4	0	0
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	4	180	270	4	90	110
LEAD (PB), UG/L	4	14	37	4	2	9
MANGANESE (MN), UG/L	4	10	30	4	10	20
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	0	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.50	4.79			
BIOMASS, ASH WT., G/SQ M	3	.79	3.69			
CHLOROPHYLL A, MG/SQ M	3	.0	1.3			
CHLOROPHYLL B, MG/SQ M	3	.1	.3			
ORGANIC CARBON, MG/L	3	3.3	4.2			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01096550 NAME: MERRIMACK RIVER ABOVE LOWELL, MASS.

LAT 42D38M20S LONG 071D22M17S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	11.45	10.73	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	93.6	19.2	56	115					
STREAMFLOW (CUBIC FT/SEC)	10	8780.0	7587.7	1450	22100	10	-318.494	38591.047	-0.808	4745.0
PH (STANDARD UNITS)	9	6.73	0.37	6.3	7.5	9	0.0020	6.5450	0.109*	0.40
PHOSPHORUS, TOTAL	10	0.141	0.075	0.05	0.30	10	0.00157	-0.00601	0.400*	0.073
NITRITE + NITRATE, TOTAL	10	0.301	0.176	0.12	0.77	10	-0.00082	0.37757	-0.089*	0.186
NITROGEN, KJELDAHL, TOTAL	10	0.908	0.369	0.53	1.60	10	0.00813	0.14706	0.424*	0.354
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	14765.6	26181.4	690	82000	9	517.475	-33647.082	0.403*	25610.9
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	4317.8	4591.1	430	12000					
STREPTOCOCCI, FECAL (COL/100 ML)	7	317.0	312.7	37	930					
SILICA, DISSOLVED	3	4.27	2.61	1.3	6.2	3	0.1801	-8.3375	0.881*	1.74
CALCIUM, DISSOLVED	3	5.13	1.63	4.0	7.0	3	-0.1153	13.2070	-0.904*	0.98
MAGNESIUM, DISSOLVED	3	0.90	0.10	0.8	1.0	3	-0.0025	1.0718	-0.313*	0.13
SODIUM, DISSOLVED	3	6.37	1.74	4.4	7.7	3	0.1353	-3.1026	0.993*	0.28
POTASSIUM, DISSOLVED	3	0.97	0.25	0.7	1.2	3	0.0147	-0.0640	0.747*	0.24
BICARBONATE, ION	4	9.5	3.7	5	14	4	0.167	-3.711	0.958*	1.3
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	7.55	0.95	6.5	8.8	4	0.0431	4.1315	0.960*	0.33
CHLORIDE, DISSOLVED	4	10.90	2.62	7.6	13.0	4	0.1067	2.4462	0.866*	1.60
DISSOLVED SOLIDS, SUM OF CONST	3	39.3	7.4	31	45	3	0.574	-0.820	0.994*	1.2
DISSOLVED SOLIDS, ROE 180 DEG C	3	50.3	9.8	39	56	3	0.730	-0.771	0.950*	4.3
HARDNESS, TOTAL	3	16.3	4.0	14	21	3	-0.301	37.376	-0.950*	1.8
HARDNESS, NONCARBONATE	3	10.0	6.1	6	17	3	-0.439	40.706	-0.921*	3.4
TURBIDITY (JTU)	10	4.5	2.7	2	9	10	-0.034	7.702	-0.242*	2.8
FLOURIDE, DISSOLVED	3	0.20	0.10	0.1	0.3	3	-0.0052	0.5650	-0.666*	0.11

*Not significant at the 95 percent confidence level

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01096550 -- MERRIMACK RIVER ABOVE LOWELL, MASS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	2	3	0	3
CADMIUM (CD), UG/L	4	0	<18	3	0	1
CHROMIUM (CR), UG/L	4	3	30	3	<10	10
COBALT (CO), UG/L	4	0	< 2	3	0	1
COPPER (CU), UG/L	4	3	10	3	0	10
IRON (FE), UG/L	4	340	920	3	80	310
LEAD (PB), UG/L	4	4	10	3	1	5
MANGANESE (MN), UG/L	4	27	100	3	20	90
MERCURY (HG), UG/L	3	<0.5	<0.5	3	< 0.5	< 0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	4	10	< 80	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	2.5	6.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01103500 NAME: CHARLES RIVER AT CHARLES RIVER VILLAGE, MASS.

LAT 42D15M22S LONG 071D15M38S
DRAINAGE AREA: 184 SQ MI (477 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	11.00	9.14	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	188.8	28.2	148	238					
STREAMFLOW (CUBIC FT/SEC)	11	299.9	254.8	36	786	11	-7.561	1727.472	-0.835	147.6
PH (STANDARD UNITS)	11	6.82	0.24	6.6	7.3	11	0.0050	5.8792	0.573*	0.21
PHOSPHORUS, TOTAL	11	0.232	0.122	0.06	0.42	11	0.00263	-0.26404	0.606	0.102
NITRITE + NITRATE, TOTAL	11	0.367	0.261	0.00	0.72	11	-0.00239	0.81911	-0.258*	0.265
NITROGEN, KJELDAHL, TOTAL	11	0.696	0.326	0.34	1.50	11	0.00720	-0.66334	0.622	0.269
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	14590.0	28925.7	400	100000	11	319.825	-45798.809	0.311*	28974.5
SEDIMENT, SUSPENDED	4	39.0	18.5	22	65					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	218.4	453.5	16	1500					
STREPTOCOCCI, FECAL (COL/100 ML)	9	90.2	100.7	12	320					
SILICA, DISSOLVED	5	3.92	3.10	1.5	8.9	5	0.0239	-0.9556	0.180*	3.53
CALCIUM, DISSOLVED	5	13.20	3.27	10.0	18.0	5	0.0513	2.7633	0.365*	3.52
MAGNESIUM, DISSOLVED	5	2.72	0.47	1.9	3.1	5	0.0159	-0.5252	0.789*	0.33
SODIUM, DISSOLVED	5	19.40	1.82	17.0	22.0	5	0.0703	5.0847	0.902*	0.90
POTASSIUM, DISSOLVED	5	1.92	0.54	1.1	2.5	5	0.0192	-1.9810	0.826*	0.35
BICARBONATE, ION	5	23.2	5.2	17	29	5	0.129	-2.976	0.580*	4.9
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	5	15.00	2.92	12.0	19.0	5	0.0902	-3.3626	0.721*	2.33
CHLORIDE, DISSOLVED	5	33.60	2.41	31.0	37.0	5	0.1004	13.1576	0.972*	0.66
DISSOLVED SOLIDS, SUM OF CONST	5	101.8	12.2	90	121	5	0.437	12.835	0.835*	7.7
DISSOLVED SOLIDS, ROE 180 DEG C	5	116.2	18.6	95	140	5	0.495	15.356	0.620*	16.9
HARDNESS, TOTAL	5	44.2	8.3	37	58	5	0.205	2.472	0.576*	7.8
HARDNESS, NONCARBONATE	5	25.2	7.8	16	35	5	0.095	5.957	0.283*	8.6
TURBIDITY (JTU)	5	3.4	1.1	2	5	5	0.025	-1.640	0.506*	1.1
FLOURIDE, DISSOLVED	5	0.24	0.09	0.1	0.3	5	-0.0024	0.7197	-0.614*	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 250

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	246	243	229	215	206	182	168	149	147	142

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
225	11.93	12.82	2.79	97	1.68

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01103500 -- CHARLES RIVER AT CHARLES RIVER VILLAGE, MASS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	2	5	0	1
CADMIUM (CD), UG/L	5	0	1	5	0	1
CHROMIUM (CR), UG/L	5	0	10	5	0	0
COBALT (CO), UG/L	5	0	0	5	0	2
COPPER (CU), UG/L	5	0	10	5	0	10
IRON (FE), UG/L	5	300	630	5	180	340
LEAD (PB), UG/L	5	2	14	5	2	7
MANGANESE (MN), UG/L	5	50	130	5	30	70
MERCURY (HG), UG/L	5	<0.5	0.7	5	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	5	10	30	5	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	7.09	350.00			
BIOMASS, ASH WT., G/SQ M	2	3.59	170.00			
CHLOROPHYLL A, MG/SQ M	1	8.3				
CHLOROPHYLL B, MG/SQ M	1	.5				
ORGANIC CARBON, MG/L	4	6.0	28.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01155050 NAME: CONNECTICUT RIVER AT WALPOLE, N.H.

LAT 43D05M04S LONG 072D26M04S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	7	14.86	9.05	0.5	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	7	128.4	22.9	82	150					
STREAMFLOW (CUBIC FT/SEC)	6	6156.7	4986.8	1520	11800	6	-140.530	24308.426	-0.704 *	3962.0
PH (STANDARD UNITS)	7	7.19	0.49	6.6	8.1	7	0.0107	5.8097	0.495 *	0.47
PHOSPHORUS, TOTAL	7	0.026	0.011	0.01	0.04	7	0.00005	0.01987	0.092 *	0.012
NITRITE + NITRATE, TOTAL	7	0.314	0.221	0.00	0.66	7	-0.00015	0.33321	-0.015 *	0.242
NITROGEN, KJELDAHL, TOTAL	7	0.470	0.304	0.11	0.90	7	0.00844	-0.61355	0.636 *	0.257
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1725.7	2003.5	180	5600	7	34.119	-2656.094	0.390 *	2021.4
SEDIMENT, SUSPENDED	3	26.7	35.1	3	67					
SEDIMENT, CLAY-SILT (PERCENT)	1	100.0	0.0	100						
COLIFORM, FECAL (COL/100 ML)	6	102.5	84.3	13	250					
STREPTOCOCCI, FECAL (COL/100 ML)	7	63.4	42.5	15	120					
SILICA, DISSOLVED	2	4.10	0.57	3.7	4.5					
CALCIUM, DISSOLVED	2	16.00	1.41	15.0	17.0					
MAGNESIUM, DISSOLVED	2	2.00	0.71	1.5	2.5					
SODIUM, DISSOLVED	2	5.80	1.41	4.8	6.8					
POTASSIUM, DISSOLVED	2	1.30	0.28	1.1	1.5					
BICARBONATE, ION	2	49.0	4.2	46	52					
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	2	9.55	0.64	9.1	10.0					
CHLORIDE, DISSOLVED	2	9.20	0.99	8.5	9.9					
DISSOLVED SOLIDS, SUM OF CONST	2	72.0	5.7	68	76					
DISSOLVED SOLIDS, ROE 180 DEG C	2	76.5	13.4	67	86					
HARDNESS, TOTAL	2	48.5	6.4	44	53					
HARDNESS, NONCARBONATE	2	8.0	2.8	6	10					
TURBIDITY (JTU)	2	1.5	0.7	1	2					
FLOURIDE, DISSOLVED	2	0.10	0.00	0.1	0.1					

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01155050 -- CONNECTICUT RIVER AT WALPOLE, N.H.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	0	2	0	0
CADMIUM (CD), UG/L	2	0	4	2	0	0
CHROMIUM (CR), UG/L	2	<10	20	2	0	20
COBALT (CO), UG/L	2	0	0	2	0	0
COPPER (CU), UG/L	2	0	0	2	0	0
IRON (FE), UG/L	2	170	310	2	30	100
LEAD (PB), UG/L	2	3	4	2	1	7
MANGANESE (MN), UG/L	2	30	50	2	0	10
MERCURY (HG), UG/L	2	<0.5	<0.5	2	<0.5	<0.5
SELENIUM (SE), UG/L	2	0	1	2	0	1
ZINC (ZN), UG/L	2	10	20	2	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	6.29				
BIOMASS, ASH WT., G/SQ M	1	4.79				
CHLOROPHYLL A, MG/SQ M	1	3.7				
CHLOROPHYLL B, MG/SQ M	1	.5				
ORGANIC CARBON, MG/L	1	4.2				

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01184000 NAME: CONNECTICUT R AT THOMPSONVILLE, CT

LAT 41D59M14S LONG 072D36M21S
DRAINAGE AREA: 9661 SQ MI (25022 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.63	9.72	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	110.7	25.8	79	175					
STREAMFLOW (CUBIC FT/SEC)	12	14424.2	8456.8	2200	27300	12	-254.761	42617.707	-0.778	5574.7
PH (STANDARD UNITS)	12	7.00	0.13	6.8	7.3	12	-0.0006	7.0681	-0.118*	0.14
PHOSPHORUS, TOTAL	12	0.077	0.027	0.04	0.14	12	0.00039	0.03325	0.374*	0.026
NITRITE + NITRATE, TOTAL	12	0.336	0.117	0.15	0.51	12	-0.00139	0.48928	-0.306*	0.117
NITROGEN, KJELDAHL, TOTAL	12	0.532	0.238	0.17	0.88	12	0.00608	-0.14094	0.659	0.188
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8926.7	14500.8	290	48000	11	285.290	-22379.324	0.504*	13640.7
SEDIMENT, SUSPENDED	12	17.8	11.4	4	41					
SEDIMENT, CLAY-SILT (PERCENT)	11	86.2	9.7	67	100					
COLIFORM, FECAL (COL/100 ML)	12	4939.2	4199.2	970	15000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	680.8	495.4	130	1400					
SILICA, DISSOLVED	12	5.06	1.09	2.6	6.2	12	-0.0203	7.3053	-0.482 *	1.00
CALCIUM, DISSOLVED	12	10.21	2.00	7.3	14.0	12	0.0588	3.7031	0.758	1.37
MAGNESIUM, DISSOLVED	12	1.70	0.35	1.0	2.3	12	0.0014	1.5491	0.100 *	0.37
SODIUM, DISSOLVED	12	6.75	1.50	4.2	8.5	12	0.0391	2.4203	0.674	1.16
POTASSIUM, DISSOLVED	12	1.22	0.38	0.8	2.1	12	0.0023	0.9654	0.161 *	0.39
BICARBONATE, ION	12	25.6	6.4	16	33	12	0.197	3.800	0.794	4.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	10.84	1.59	8.5	13.0	12	0.0038	10.4258	0.061 *	1.67
CHLORIDE, DISSOLVED	12	10.52	3.12	4.5	16.0	12	0.0324	6.9377	0.268 *	3.16
DISSOLVED SOLIDS, SUM OF CONST	12	59.3	8.4	41	68	12	0.212	35.782	0.649	6.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	70.1	11.0	50	82	12	0.120	56.812	0.282 *	11.1
HARDNESS, TOTAL	12	32.3	5.2	24	39	12	0.152	15.470	0.760	3.5
HARDNESS, NONCARBONATE	12	11.3	1.4	8	13	12	-0.002	11.600	-0.043 *	1.5
TURBIDITY (JTU)	12	3.8	1.2	1	5	12	-0.007	4.505	-0.145 *	1.3
FLOURIDE, DISSOLVED	12	0.10	0.07	0.0	0.2	12	0.0010	-0.0102	0.348 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 346

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	134	123	117	114	109	100	89	76	72	69

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
346	11.86	12.48	2.69	95	2.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01184000 -- CONNECTICUT R AT THOMPSONVILLE, CT

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	1	10	4	1	<10
CHROMIUM (CR), UG/L	4	0	20	4	0	<10
COBALT (CO), UG/L	4	0	2	4	0	2
COPPER (CU), UG/L	4	0	30	12	0	20
IRON (FE), UG/L	4	260	760	12	40	220
LEAD (PB), UG/L	4	2	6	4	0	3
MANGANESE (MN), UG/L	4	60	130	12	0	70
MERCURY (HG), UG/L	4	<0.5	< 0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	150	12	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.79	51.00			
BIOMASS, ASH WT., G/SQ M	3	2.09	39.00			
CHLOROPHYLL A, MG/SQ M	3	1.7	6.1			
CHLOROPHYLL B, MG/SQ M	3	.0	1.8			
ORGANIC CARBON, MG/L	12	3.5	7.7			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01205500 NAME: HOUSATONIC R AT STEVENSON, CT

LAT 41D23M02S LONG 073D10M05S
DRAINAGE AREA: 1541 SQ MI (3991 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.96	8.51	1.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	188.3	16.9	165	216					
STREAMFLOW (CUBIC FT/SEC)	12	5295.4	1905.0	95	8600	12	-30.484	11036.641	-0.270 *	1923.5
PH (STANDARD UNITS)	12	7.57	0.25	7.2	8.0	12	0.0052	6.5924	0.359 *	0.24
PHOSPHORUS, TOTAL	12	0.052	0.010	0.04	0.07	12	-0.00035	0.11906	-0.619	0.008
NITRITE + NITRATE, TOTAL	11	0.391	0.113	0.26	0.55	11	-0.00206	0.78174	-0.314 *	0.113
NITROGEN, KJELDAHL, TOTAL	11	0.362	0.143	0.12	0.54	11	0.00299	-0.20415	0.358 *	0.141
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4762.5	9301.1	560	34000	9	223.820	-36156.098	0.351 *	10793.7
SEDIMENT, SUSPENDED	13	6.8	5.4	1	20					
SEDIMENT, CLAY-SILT (PERCENT)	11	93.8	11.4	64	100					
COLIFORM, FECAL (COL/100 ML)	12	37.1	67.3	1	190					
STREPTOCOCCI, FECAL (COL/100 ML)	12	119.3	318.8	1	1100					
SILICA, DISSOLVED	12	4.12	0.82	2.6	5.6	12	-0.0009	4.2894	-0.019 *	0.86
CALCIUM, DISSOLVED	12	21.92	3.63	17.0	29.0	12	0.1574	-7.7265	0.733	2.59
MAGNESIUM, DISSOLVED	12	7.98	1.32	6.0	10.0	12	0.0692	-5.0568	0.884	0.65
SODIUM, DISSOLVED	11	6.89	0.97	5.7	8.9	11	0.0396	-0.6186	0.700	0.73
POTASSIUM, DISSOLVED	11	1.65	0.54	1.3	3.2	11	0.0155	-1.2898	0.491 *	0.50
BICARBONATE, ION	12	86.8	14.4	69	113	12	0.587	-23.784	0.687	11.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	12.52	2.58	9.3	17.0	12	0.1059	-7.4196	0.695	1.94
CHLORIDE, DISSOLVED	12	10.30	1.13	8.2	12.0	12	0.0268	5.2513	0.401 *	1.09
DISSOLVED SOLIDS, SUM OF CONST	11	110.1	13.0	92	130	11	0.667	-16.271	0.883	6.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	124.0	15.6	103	153	12	0.430	42.926	0.467 *	14.5
HARDNESS, TOTAL	12	86.9	13.2	67	110	12	0.626	-31.057	0.800	8.3
HARDNESS, NONCARBONATE	12	16.3	5.1	8	21	12	0.199	-21.125	0.661	4.0
TURBIDITY (JTU)	12	2.3	1.4	1	6	12	-0.060	13.567	-0.702	1.1
FLOURIDE, DISSOLVED	11	0.15	0.07	0.1	0.3	11	-0.0003	0.2206	-0.087 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 201

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	309	279	255	215	205	194	184	153	149	142

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
189	10.98	11.96	2.66	97	1.34

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01205500 -- HOUSATONIC R AT STEVENSON, CT

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	20	12	0	10
IRON (FE), UG/L	4	140	200	12	20	90
LEAD (PB), UG/L	4	2	5	4	0	5
MANGANESE (MN), UG/L	4	30	120	12	0	90
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	2	4	0	0
ZINC (ZN), UG/L	4	< 10	10	12	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.59				
BIOMASS, ASH WT., G/SQ M	1	1.29				
CHLOROPHYLL A, MG/SQ M	1	6.5				
CHLOROPHYLL B, MG/SQ M	1	.5				
ORGANIC CARBON, MG/L	12	1.7	10.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01304500 NAME: PECONIC RIVER AT RIVERHEAD NY

LAT 40D54M49S LONG 072D41M14S
DRAINAGE AREA: 75 SQ MI (194 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	11.27	8.36	2.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	92.1	14.1	76	128					
STREAMFLOW (CUBIC FT/SEC)	15	44.0	11.0	22	60	15	-0.601	99.347	-0.771	7.3
PH (STANDARD UNITS)	15	6.44	0.32	5.7	6.9	15	0.0011	6.3363	0.050*	0.33
PHOSPHORUS, TOTAL	15	0.090	0.047	0.03	0.19	15	0.00014	0.07743	0.041*	0.048
NITRITE + NITRATE, TOTAL	15	0.218	0.093	0.04	0.37	15	0.00151	0.07931	0.229*	0.094
NITROGEN, KJELDAHL, TOTAL	15	0.478	0.158	0.24	0.73	15	0.00030	0.45084	0.026*	0.164
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2337.0	4136.5	360	14000	10	-22.770	4463.754	-0.091*	4369.1
SEDIMENT, SUSPENDED	10	53.4	133.2	2	431					
SEDIMENT, CLAY-SILT (PERCENT)	10	71.2	14.1	55	97					
COLIFORM, FECAL (COL/100 ML)	9	173.2	188.6	1	500					
STREPTOCOCCI, FECAL (COL/100 ML)	9	97.6	107.5	1	320					
SILICA, DISSOLVED	15	5.34	1.05	3.7	6.7	15	0.0371	1.9277	0.496*	0.95
CALCIUM, DISSOLVED	15	6.49	1.16	4.3	9.0	15	0.0367	3.1088	0.448*	1.07
MAGNESIUM, DISSOLVED	15	2.01	0.25	1.6	2.5	15	0.0099	1.1040	0.556	0.22
SODIUM, DISSOLVED	15	6.29	0.37	5.6	7.0	15	0.0186	4.5730	0.713	0.27
POTASSIUM, DISSOLVED	15	1.43	0.50	1.0	3.1	15	0.0070	0.7857	0.197*	0.51
BICARBONATE, ION	15	14.9	3.2	11	21	15	0.138	2.125	0.605	2.7
CARBONATE, ION	15	0.0	0.0	0	0	15	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	15	10.69	1.84	7.3	13.0	15	0.0412	6.8988	0.315*	1.81
CHLORIDE, DISSOLVED	15	9.45	1.00	7.8	11.0	15	0.0047	9.0252	0.066*	1.04
DISSOLVED SOLIDS, SUM OF CONST	15	49.5	4.4	41	59	15	0.218	29.470	0.692	3.3
DISSOLVED SOLIDS, ROE 180 DEG C	10	56.9	9.6	42	72	10	0.177	40.376	0.306*	9.7
HARDNESS, TOTAL	15	24.5	3.8	18	33	15	0.136	11.911	0.507*	3.4
HARDNESS, NONCARBONATE	15	12.1	2.9	8	17	15	0.014	10.848	0.068*	3.0
TURBIDITY (JTU)	10	1.9	0.6	1	3	10	-0.006	2.414	-0.161*	0.6
FLOURIDE, DISSOLVED	15	0.10	0.07	0.0	0.2	15	-0.0005	0.1496	-0.116*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
134	12.29	11.54	2.80	88	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01304500 -- PECONIC RIVER AT RIVERHEAD NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	1	3	0	1
CADMIUM (CD), UG/L	3	0	0	3	0	0
CHROMIUM (CR), UG/L	3	0	<10	3	0	<10
COBALT (CO), UG/L	3	0	0	3	0	1
COPPER (CU), UG/L	3	0	0	3	0	10
IRON (FE), UG/L	8	450	2200	3	90	1200
LEAD (PB), UG/L	3	0	5	3	0	2
MANGANESE (MN), UG/L	8	50	120	3	40	70
MERCURY (HG), UG/L	3	< 0.5	< 0.5	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	0	20	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.79	5.79			
BIOMASS, ASH WT., G/SQ M	3	.00	2.69			
CHLOROPHYLL A, MG/SQ M	3	.1	2.0			
CHLOROPHYLL B, MG/SQ M	3	.0	.5			
ORGANIC CARBON, MG/L	3	4.2	6.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01372043 NAME: HUDSON RIVER NEAR POUGHKEEPSIE, NY

LAT 41D43M18S LONG 073D56M28S
DRAINAGE AREA: 11700 SQ MI (30303 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	15.48	7.59	0.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	178.3	29.8	149	255					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	10	7.40	0.18	7.0	7.6	9	-0.0008	7.6035	-0.246*	0.12
PHOSPHORUS, TOTAL	11	0.070	0.021	0.04	0.10	9	-0.00002	0.07427	-0.024*	0.024
NITRITE + NITRATE, TOTAL	11	0.669	0.129	0.52	0.86	9	-0.00230	1.11736	-0.628*	0.107
NITROGEN, KJELDAHL, TOTAL	11	0.417	0.086	0.32	0.57	9	0.00132	0.16738	0.527*	0.080
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	3612.0	5040.3	500	16000	9	20.075	-1790.551	0.262*	2781.4
SEDIMENT, SUSPENDED	2	13.0	7.1	8	18					
SEDIMENT, CLAY-SILT (PERCENT)	2	89.0	2.8	87	91					
COLIFORM, FECAL (COL/100 ML)	10	402.0	331.7	90	1100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	66.7	54.5	18	200					
SILICA, DISSOLVED	3	1.43	2.22	0.1	4.0					
CALCIUM, DISSOLVED	3	18.67	2.52	16.0	21.0					
MAGNESIUM, DISSOLVED	3	3.23	0.71	2.6	4.0					
SODIUM, DISSOLVED	3	5.57	1.30	4.3	6.9					
POTASSIUM, DISSOLVED	3	0.93	0.15	0.8	1.1					
BICARBONATE, ION	11	65.5	11.2	46	79	9	0.186	30.066	0.638*	8.4
CARBONATE, ION	11	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	18.00	2.93	14.0	23.0	9	0.0786	2.6748	0.946	1.02
CHLORIDE, DISSOLVED	11	10.06	2.33	6.7	13.0	9	0.0478	0.9668	0.740	1.63
DISSOLVED SOLIDS, SUM OF CONST	3	82.3	11.1	72	94					
DISSOLVED SOLIDS, ROE 180 DEG C	3	100.0	9.2	90	108					
HARDNESS, TOTAL	3	60.0	8.2	53	69					
HARDNESS, NONCARBONATE	3	12.7	2.1	11	15					
TURBIDITY (JTU)	11	15.0	12.3	5	40	9	0.062	4.396	0.166*	13.8
FLOURIDE, DISSOLVED	3	0.13	0.06	0.1	0.2					

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
311	11.96	12.69	2.63	98	1.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01372043 -- HUDSON RIVER NEAR POUGHKEEPSIE, NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	3	0	1
CADMIUM (CD), UG/L	3	0	1	3	0	1
CHROMIUM (CR), UG/L	3	<10	20	3	<10	20
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	4	10	20	3	0	10
IRON (FE), UG/L	11	470	1800	3	10	80
LEAD (PB), UG/L	4	5	8	3	1	2
MANGANESE (MN), UG/L	11	40	80	3	0	10
MERCURY (HG), UG/L	4	<0.5	0.5	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	30	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	7.39	8.89			
BIOMASS, ASH WT., G/SQ M	2	3.09	5.79			
CHLOROPHYLL A, MG/SQ M	2	24.0	42.0			
CHLOROPHYLL b, MG/SQ M	2	4.5	14.0			
ORGANIC CARBON, MG/L	11	1.8	14.0			

STATION NUMBER: 01404100 NAME: RARITAN R NR SOUTH BOUND BROOK NJ

LAT 40D30M47S LONG 074D32M24S
DRAINAGE AREA: 862 SQ MI (2233 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	13.95	8.62	2.3	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	288.3	97.6	149	543					
STREAMFLOW (CUBIC FT/SEC)	13	1343.8	1206.0	306	4700	13	-8.172	3699.903	-0.662	944.6
PH (STANDARD UNITS)	13	7.45	0.47	6.5	8.1	13	-0.0013	7.8280	-0.276*	0.47
PHOSPHORUS, TOTAL	12	0.209	0.098	0.11	0.49	12	-0.00016	0.25575	-0.166*	0.101
NITRITE + NITRATE, TOTAL	12	1.550	0.487	1.10	2.90	12	0.00190	0.99964	0.396*	0.469
NITROGEN, KJELDAHL, TOTAL	12	1.746	1.171	0.57	5.00	12	0.00907	-0.88853	0.787	0.758
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2801.0	1268.4	810	4700	10	0.919	2554.969	0.051*	1343.6
SEDIMENT, SUSPENDED	10	17.3	15.8	3	47					
SEDIMENT, CLAY-SILT (PERCENT)	10	94.9	6.7	84	100					
COLIFORM, FECAL (COL/100 ML)	11	1101.8	2958.2	50	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1126.5	3213.8	0	10800					
SILICA, DISSOLVED	12	9.52	1.81	6.8	12.0	12	-0.0040	10.6751	-0.222*	1.86
CALCIUM, DISSOLVED	12	20.75	6.40	13.0	37.0	12	0.0564	4.3570	0.897	2.97
MAGNESIUM, DISSOLVED	12	6.43	1.29	4.6	8.5	12	0.0100	3.5247	0.790	0.83
SODIUM, DISSOLVED	12	20.25	10.19	8.5	46.0	12	0.0956	-7.5196	0.954	3.21
POTASSIUM, DISSOLVED	12	2.93	1.19	1.3	5.5	12	0.0080	0.6000	0.688	0.90
BICARBONATE, ION	12	45.8	10.0	29	62	12	0.066	26.478	0.673	7.8
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	47.58	16.93	23.0	83.0	12	0.1573	1.8954	0.945	5.82
CHLORIDE, DISSOLVED	12	27.58	13.01	11.0	62.0	12	0.1254	-8.8470	0.980	2.72
DISSOLVED SOLIDS, SUM OF CONST	12	157.8	50.1	90	280	12	0.483	17.521	0.980	10.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	176.5	48.6	118	294	12	0.464	41.775	0.971	12.2
HARDNESS, TOTAL	12	78.6	21.2	55	130	12	0.188	24.090	0.901	9.7
HARDNESS, NONCARBONATE	12	40.8	16.8	16	77	12	0.129	3.239	0.783	10.9
TURBIDITY (JTU)	12	8.3	6.0	3	20	12	-0.038	19.245	-0.633	4.9
FLOURIDE, DISSOLVED	12	0.17	0.07	0.1	0.3	12	-0.0001	0.1977	-0.167*	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 291

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	541	455	387	295	253	213	183	156	138	104

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
245	13.17	11.34	2.79	92	2.08

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01404100 -- RARITAN R NR SOUTH BOUND BROOK NJ

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	0	2
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	<10	20	4	0	10
COBALT (CO), UG/L	4	0	2	4	0	0
COPPER (CU), UG/L	4	10	20	4	0	10
IRON (FE), UG/L	4	370	660	4	60	180
LEAD (PB), UG/L	4	2	11	4	1	7
MANGANESE (MN), UG/L	4	70	220	4	60	190
MERCURY (HG), UG/L	4	<0.5	0.7	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	20	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.59	7.79			
BIOMASS, ASH WT., G/SQ M	3	.59	7.79			
CHLOROPHYLL A, MG/SQ M	3	.0	6.5			
CHLOROPHYLL B, MG/SQ M	3	.0	1.2			
ORGANIC CARBON, MG/L	12	3.5	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01408500 NAME: TOMS R NR TOMS RIVER NJ

LAT 39D59M10S LONG 074D13M29S
DRAINAGE AREA: 124 SQ MI (321 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	12.48	7.55	1.2	23.2					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	66.1	4.7	57	72					
STREAMFLOW (CUBIC FT/SEC)	13	224.7	87.3	110	435	11	1.379	147.669	0.075 *	92.0
PH (STANDARD UNITS)	12	4.81	0.69	3.9	6.4	11	0.0612	0.7028	0.424 *	0.65
PHOSPHORUS, TOTAL	12	0.043	0.025	0.02	0.09	11	-0.00272	0.22161	-0.511 *	0.023
NITRITE + NITRATE, TOTAL	12	0.304	0.120	0.12	0.51	11	-0.00070	0.33462	-0.030 *	0.118
NITROGEN, KJELDAHL, TOTAL	12	0.373	0.198	0.18	0.76	11	-0.01655	1.44664	-0.405 *	0.187
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	298.0	279.2	46	1100	11	14.761	-661.367	0.244 *	293.3
SEDIMENT, SUSPENDED	12	8.8	9.8	2	38					
SEDIMENT, CLAY-SILT (PERCENT)	12	90.6	16.5	63	100					
COLIFORM, FECAL (COL/100 ML)	12	94.2	197.8	0	700					
STREPTOCOCCI, FECAL (COL/100 ML)	9	348.7	321.9	10	784					
SILICA, DISSOLVED	11	4.11	1.29	1.4	5.8	10	0.0535	0.3632	0.191 *	1.27
CALCIUM, DISSOLVED	12	3.26	1.61	2.3	7.8	11	0.1155	-4.3056	0.328 *	1.66
MAGNESIUM, DISSOLVED	12	1.07	0.27	0.5	1.5	11	-0.0077	1.5349	-0.146 *	0.26
SODIUM, DISSOLVED	12	4.37	0.65	3.5	5.8	11	-0.0103	4.9986	-0.075 *	0.69
POTASSIUM, DISSOLVED	12	1.05	0.20	0.8	1.5	11	-0.0015	1.1471	-0.034 *	0.22
BICARBONATE, ION	10	0.2	0.4	0	1	9	0.030	-1.913	0.417 *	0.3
CARBONATE, ION	12	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	10.81	4.78	5.7	24.0	11	0.5798	-27.5289	0.549 *	4.41
CHLORIDE, DISSOLVED	12	6.75	1.59	3.4	8.9	11	-0.1247	14.9874	-0.355 *	1.64
DISSOLVED SOLIDS, SUM OF CONST	10	33.5	5.3	27	45	9	0.630	-8.713	0.520 *	5.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	45.1	14.0	17	68	11	-0.639	85.962	-0.220 *	14.2
HARDNESS, TOTAL	12	12.7	4.4	8	25	11	0.241	-3.221	0.250 *	4.7
HARDNESS, NONCARBONATE	10	13.1	4.5	10	25	9	0.232	-2.312	0.225 *	4.9
TURBIDITY (JTU)	12	2.6	1.1	1	5	11	0.104	-4.347	0.438 *	1.1
FLOURIDE, DISSOLVED	11	0.14	0.09	0.0	0.3	10	-0.0057	0.4981	-0.312 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 229

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	80	76	72	69	67	63	60	58	56	53

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
225	12.35	9.89	2.76	95	1.51

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01408500 -- TOMS R NR TOMS RIVER NJ

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	0	40	4	0	40
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	20	4	0	20
IRON (FE), UG/L	4	400	1500	4	340	1200
LEAD (PB), UG/L	4	4	13	4	3	13
MANGANESE (MN), UG/L	4	30	60	4	20	60
MERCURY (HG), UG/L	4	<0.5	0.6	4	<0.5	0.6
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	110	4	20	110
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.79	4.39			
BIOMASS, ASH WT., G/SQ M	2	.89	2.50			
CHLOROPHYLL A, MG/SQ M	3	.0	2.1			
CHLOROPHYLL B, MG/SQ M	3	.0	.3			
ORGANIC CARBON, MG/L	12	4.6	19.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01463500 NAME: DELAWARE R AT TRENTON NJ

LAT 40D13M18S LONG 074D46M42S
DRAINAGE AREA: 6780 SQ MI (17560 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	11.73	8.61	2.1	25.6					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	160.8	38.0	110	226					
STREAMFLOW (CUBIC FT/SEC)	15	17892.0	16799.2	4580	72900	12	-141.580	35235.750	-0.795	4304.0
PH (STANDARD UNITS)	12	7.95	0.49	7.1	8.6	12	0.0007	7.8435	0.051 *	0.52
PHOSPHORUS, TOTAL	12	0.085	0.029	0.05	0.14	12	0.00025	0.04514	0.320 *	0.029
NITRITE + NITRATE, TOTAL	12	0.860	0.159	0.58	1.10	12	0.00371	0.26273	0.887	0.077
NITROGEN, KJELDAHL, TOTAL	12	0.430	0.177	0.20	0.74	12	0.00118	0.24004	0.253 *	0.180
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	4649.1	6242.1	500	21000	11	-13.213	6818.496	-0.080 *	6558.4
SEDIMENT, SUSPENDED	14	64.5	100.3	4	304					
SEDIMENT, CLAY-SILT (PERCENT)	13	96.5	5.0	86	100					
COLIFORM, FECAL (COL/100 ML)	11	805.1	1570.6	20	4026					
STREPTOCOCCI, FECAL (COL/100 ML)	9	334.0	724.0	10	2250					
SILICA, DISSOLVED	11	3.63	1.00	1.2	5.1	11	-0.0050	4.4314	-0.197 *	1.04
CALCIUM, DISSOLVED	12	15.00	4.05	7.0	22.0	12	0.1017	-1.3494	0.954	1.27
MAGNESIUM, DISSOLVED	12	6.01	4.16	2.1	18.0	12	0.0885	-8.2174	0.808	2.57
SODIUM, DISSOLVED	12	6.20	1.13	4.7	7.9	12	0.0231	2.4900	0.774	0.75
POTASSIUM, DISSOLVED	12	1.49	0.40	0.8	2.0	12	0.0061	0.5121	0.580	0.34
BICARBONATE, ION	12	44.8	14.1	21	69	12	0.344	-10.479	0.926	5.6
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	22.75	7.51	14.0	43.0	12	0.0888	8.4747	0.449 *	7.04
CHLORIDE, DISSOLVED	12	8.84	1.91	5.9	12.0	12	0.0171	6.0964	0.340 *	1.88
DISSOLVED SOLIDS, SUM OF CONST	11	86.6	21.7	49	125	11	0.491	7.232	0.896	10.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	102.6	23.2	75	147	12	0.526	17.995	0.860	12.4
HARDNESS, TOTAL	12	62.3	26.1	26	130	12	0.620	-37.393	0.903	11.7
HARDNESS, NONCARBONATE	12	25.5	16.5	9	73	12	0.334	-28.163	0.770	11.0
TURBIDITY (JTU)	12	5.4	4.8	2	20	12	-0.020	8.674	-0.161 *	4.9
FLOURIDE, DISSOLVED	11	0.15	0.08	0.0	0.3	11	-0.0003	0.2015	-0.168 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 227

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	242	224	208	189	161	146	133	120	114	94

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
257	13.28	11.72	2.76	94	1.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01463500 -- DELAWARE R AT TRENTON NJ

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	10	70	4	0	70
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	10	30	4	10	30
IRON (FE), UG/L	4	170	1800	4	20	80
LEAD (PB), UG/L	4	5	15	4	4	12
MANGANESE (MN), UG/L	4	10	150	4	10	70
MERCURY (HG), UG/L	4	<0.5	1.3	4	<0.5	1.3
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	80	4	20	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	3.59	15.00			
BIOMASS, ASH WT., G/SQ M	4	2.09	14.00			
CHLOROPHYLL A, MG/SQ M	4	2.1	15.0			
CHLOROPHYLL B, MG/SQ M	4	.2	4.1			
ORGANIC CARBON, MG/L	12	.5	8.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01474500 NAME: SCHUYLKILL RIVER AT PHILADELPHIA, PA.

LAT 39D59M42S LONG 075D11M40S
DRAINAGE AREA: 1893 SQ MI (4903 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	7	20.00	8.37	7.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	7	341.4	80.6	240	440					
STREAMFLOW (CUBIC FT/SEC)	7	5177.1	4567.0	1080	13900	7	-34.506	16958.527	-0.609*	3969.5
PH (STANDARD UNITS)	7	7.47	0.48	7.0	8.4	7	0.0010	7.1182	0.173*	0.52
PHOSPHORUS, TOTAL	7	0.246	0.070	0.16	0.38	7	0.00057	0.05198	0.656*	0.058
NITRITE + NITRATE, TOTAL	7	2.300	0.432	1.40	2.70	7	0.00425	0.84876	0.793	0.289
NITROGEN, KJELDAHL, TOTAL	7	0.964	0.579	0.49	2.20	7	0.00283	-0.00256	0.394*	0.583
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	16251.4	14741.2	360	37000	7	-10.844	19953.859	-0.059*	16119.7
SEDIMENT, SUSPENDED	7	53.4	28.7	13	91					
SEDIMENT, CLAY-SILT (PERCENT)	7	90.0	10.5	73	100					
COLIFORM, FECAL (COL/100 ML)	6	5716.7	3074.0	2200	9200					
STREPTOCOCCI, FECAL (COL/100 ML)	6	1366.7	1228.9	180	3400					
SILICA, DISSOLVED	7	8.16	0.42	7.4	8.6	7	0.0015	7.6536	0.286*	0.44
CALCIUM, DISSOLVED	7	29.57	8.00	18.0	40.0	7	0.0980	-3.8761	0.987	1.42
MAGNESIUM, DISSOLVED	7	10.26	2.85	6.6	14.0	7	0.0348	-1.6200	0.984	0.56
SODIUM, DISSOLVED	7	12.66	4.23	7.5	18.0	7	0.0487	-3.9815	0.928	1.73
POTASSIUM, DISSOLVED	7	2.94	0.66	2.0	3.7	7	0.0049	1.2542	0.608*	0.57
BICARBONATE, ION	7	71.0	20.1	45	103	7	0.234	-8.798	0.937	7.7
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	7	54.29	17.55	31.0	78.0	7	0.2134	-18.5599	0.979	3.87
CHLORIDE, DISSOLVED	7	18.14	4.91	11.0	24.0	7	0.0565	-1.1365	0.926	2.04
DISSOLVED SOLIDS, SUM OF CONST	7	171.3	46.4	116	229	7	0.573	-24.458	0.994	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	7	201.6	63.5	134	308	7	0.748	-53.908	0.949	21.9
HARDNESS, TOTAL	7	116.4	30.5	72	150	7	0.376	-11.912	0.993	4.1
HARDNESS, NONCARBONATE	7	57.9	17.0	35	84	7	0.197	-9.458	0.933	6.7
TURBIDITY (JTU)	7	22.3	22.5	4	60	7	-0.210	93.998	-0.751*	16.3
FLOURIDE, DISSOLVED	7	0.19	0.09	0.1	0.3	7	0.0002	0.1099	0.199*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 272

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	527	501	480	437	412	363	331	298	285	251

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
305	14.48	11.19	2.75	93	2.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01474500 -- SCHUYLKILL RIVER AT PHILADELPHIA, PA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	2	2	2	1	2
CADMIUM (CD), UG/L	2	0	0	2	0	0
CHROMIUM (CR), UG/L	2	<10	10	2	<10	10
COBALT (CO), UG/L	2	1	3	2	1	2
COPPER (CU), UG/L	2	0	10	2	10	10
IRON (FE), UG/L	2	270	530	2	30	50
LEAD (PB), UG/L	2	5	6	2	3	3
MANGANESE (MN), UG/L	2	130	230	2	40	230
MERCURY (HG), UG/L	2	< 0.5	0.5	2	<0.5	0.5
SELENIUM (SE), UG/L	2	0	1	2	0	1
ZINC (ZN), UG/L	2	40	190	2	40	130
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.89	14.00			
BIOMASS, ASH WT., G/SQ M	2	3.89	12.00			
CHLOROPHYLL A, MG/SQ M	2	5.5	9.5			
CHLOROPHYLL B, MG/SQ M	2	1.0	2.5			
ORGANIC CARBON, MG/L	2	2.5	3.6			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01491000 NAME: CHOPTANK RIVER NEAR GREENSBORO, MD.

LAT 38D59M50S LONG 075D47M10S
DRAINAGE AREA: 113 SQ MI (293 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.54	7.24	2.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	114.2	27.2	75	159					
STREAMFLOW (CUBIC FT/SEC)	12	199.2	206.1	25	764	12	-5.948	878.266	-0.784	134.1
PH (STANDARD UNITS)	11	6.66	0.53	5.6	7.3	11	0.0151	4.9200	0.795	0.34
PHOSPHORUS, TOTAL	10	0.082	0.054	0.03	0.20	10	-0.00127	0.23277	-0.641	0.044
NITRITE + NITRATE, TOTAL	10	0.885	0.336	0.33	1.40	10	0.00417	0.38849	0.338 *	0.335
NITROGEN, KJELDAHL, TOTAL	10	0.472	0.247	0.20	0.99	10	-0.00783	1.40362	-0.860	0.134
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	704.8	920.5	73	3400	11	4.505	183.080	0.136 *	961.2
SEDIMENT, SUSPENDED	11	15.1	20.3	1	71					
SEDIMENT, CLAY-SILT (PERCENT)	11	96.6	4.0	90	100					
COLIFORM, FECAL (COL/100 ML)	10	451.0	665.3	28	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	465.0	759.2	39	2500					
SILICA, DISSOLVED	11	14.57	2.92	9.3	18.0	11	0.0560	8.0823	0.534 *	2.61
CALCIUM, DISSOLVED	11	9.07	2.55	6.3	14.0	11	0.0849	-0.7639	0.929	0.99
MAGNESIUM, DISSOLVED	11	2.46	0.62	1.2	3.4	11	0.0187	0.2990	0.844	0.35
SODIUM, DISSOLVED	11	5.88	1.49	3.8	8.4	11	0.0506	0.0226	0.944	0.52
POTASSIUM, DISSOLVED	11	2.13	0.30	1.6	2.7	11	0.0075	1.2548	0.699	0.23
BICARBONATE, ION	11	17.5	9.7	7	35	11	0.316	-19.099	0.913	4.2
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	15.45	2.21	12.0	19.0	11	0.0310	11.8588	0.392 *	2.14
CHLORIDE, DISSOLVED	11	9.71	2.52	6.0	13.0	11	0.0751	1.0102	0.829	1.49
DISSOLVED SOLIDS, SUM OF CONST	11	68.3	13.6	50	89	11	0.476	13.159	0.971	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	90.0	12.8	71	114	11	0.377	46.283	0.821	7.7
HARDNESS, TOTAL	11	32.9	8.3	24	49	11	0.289	-0.507	0.963	2.4
HARDNESS, NONCARBONATE	11	18.4	3.1	14	23	11	0.020	16.009	0.184 *	3.2
TURBIDITY (JTU)	11	18.6	22.7	3	75	11	-0.520	78.828	-0.639	18.4
FLOURIDE, DISSOLVED	11	0.21	0.09	0.0	0.3	11	-0.0019	0.4267	-0.555 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 288

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	164	160	154	138	130	113	99	81	73	59

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
261	13.68	10.39	2.74	92	2.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01491000 -- CHOPTANK RIVER NEAR GREENSBORO, MD.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	2	3	0	1
CADMIUM (CD), UG/L	3	0	0	3	0	1
CHROMIUM (CR), UG/L	3	0	<10	3	0	<10
COBALT (CO), UG/L	3	0	2	3	0	1
COPPER (CU), UG/L	3	0	10	3	0	10
IRON (FE), UG/L	3	910	2500	3	300	440
LEAD (PB), UG/L	3	0	5	3	1	3
MANGANESE (MN), UG/L	3	50	70	3	40	50
MERCURY (HG), UG/L	3	< 0.5	< 0.5	3	< 0.5	<0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	30	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.59	12.00			
BIOMASS, ASH WT., G/SQ M	3	.50	2.50			
CHLOROPHYLL A, MG/SQ M	3	.0	20.0			
CHLOROPHYLL B, MG/SQ M	3	.0	1.7			
ORGANIC CARBON, MG/L	3	3.8	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01540500 NAME: SUSQUEHANNA RIVER AT DANVILLE, PA.

LAT 40D57M29S LONG 076D37M10S
DRAINAGE AREA: 11220 SQ MI (29060 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	29	12.59	8.78	1.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	254.4	81.6	110	420					
STREAMFLOW (CUBIC FT/SEC)	29	33620.7	47050.3	2810	166000	24	-241.637	81174.625	-0.600	26897.5
PH (STANDARD UNITS)	24	7.23	0.67	6.3	8.7	24	0.0051	5.9222	0.626	0.53
PHOSPHORUS, TOTAL	24	0.086	0.070	0.03	0.31	24	-0.00023	0.14513	-0.270 *	0.069
NITRITE + NITRATE, TOTAL	24	0.579	0.298	0.00	1.10	24	-0.00173	1.02012	-0.475	0.268
NITROGEN, KJELDAHL, TOTAL	24	0.514	0.271	0.09	1.20	24	0.00100	0.26096	0.300 *	0.264
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	24927.8	27516.3	160	84000	9	222.013	-28972.133	0.799	17688.1
SEDIMENT, SUSPENDED	15	208.6	267.2	8	762					
SEDIMENT, CLAY-SILT (PERCENT)	15	92.1	4.8	82	100					
COLIFORM, FECAL (COL/100 ML)	24	689.7	781.5	20	3400					
STREPTOCOCCI, FECAL (COL/100 ML)	9	1857.7	4929.5	47	15000					
SILICA, DISSOLVED	3	2.73	1.40	1.6	4.3	3	-0.0175	6.9050	-0.968 *	0.50
CALCIUM, DISSOLVED	3	23.67	8.08	15.0	31.0	3	0.1035	-0.9931	0.992 *	1.42
MAGNESIUM, DISSOLVED	3	6.97	3.05	3.9	10.0	3	0.0393	-2.4113	1.000 *	0.04
SODIUM, DISSOLVED	3	7.20	2.60	4.6	9.8	3	0.0335	-0.7929	1.000 *	0.07
POTASSIUM, DISSOLVED	3	1.50	0.30	1.2	1.8	3	0.0039	0.5777	1.000 *	0.01
BICARBONATE, ION	4	47.3	11.9	32	61	4	0.184	4.263	0.988 *	2.2
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	45.25	15.17	28.0	64.0	4	0.2357	-9.8354	0.993 *	2.17
CHLORIDE, DISSOLVED	4	9.62	1.92	7.3	12.0	4	0.0296	2.7161	0.984 *	0.42
DISSOLVED SOLIDS, SUM OF CONST	3	122.7	40.1	81	161	3	0.517	-0.467	0.999 *	3.0
DISSOLVED SOLIDS, ROE 180 DEG C	24	164.2	69.7	58	356	24	0.779	-33.848	0.911	29.3
HARDNESS, TOTAL	3	88.3	33.1	54	120	3	0.426	-13.248	0.999 *	2.4
HARDNESS, NONCARBONATE	3	49.0	21.1	27	69	3	0.271	-15.657	0.998 *	1.9
TURBIDITY (JTU)	24	15.5	39.4	3	200	24	-0.184	62.408	-0.382 *	37.2
FLOURIDE, DISSOLVED	3	0.07	0.06	0.0	0.1	3	-0.0006	0.2187	-0.857 *	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 351

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	372	352	342	307	279	227	188	147	135	108

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
225	11.69	11.04	2.65	91	1.75

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01540500 -- SUSQUEHANNA RIVER AT DANVILLE, PA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	24	0	9	4	0	3
CADMIUM (CD), UG/L	24	0	1	3	0	0
CHROMIUM (CR), UG/L	24	0	30	3	0	10
COBALT (CO), UG/L	3	2	7	3	0	1
COPPER (CU), UG/L	24	0	20	3	0	0
IRON (FE), UG/L	24	800	19000	3	20	240
LEAD (PB), UG/L	24	0	50	3	2	3
MANGANESE (MN), UG/L	24	130	760	3	90	150
MERCURY (HG), UG/L	3	<0.5	0.5	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	24	10	80	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	6.50				
BIOMASS, ASH WT., G/SQ M	1	5.00				
CHLOROPHYLL A, MG/SQ M	1	12.0				
CHLOROPHYLL B, MG/SQ M	1	2.6				
ORGANIC CARBON, MG/L	24	1.8	15.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01553500 NAME: WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA.

LAT 40D58M02S LONG 076D52M45S
DRAINAGE AREA: 6847 SQ MI (17734 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	12.65	9.11	2.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	182.2	64.2	110	300					
STREAMFLOW (CUBIC FT/SEC)	10	23401.0	33035.0	2020	112000	9	-304.147	76934.625	-0.566 *	30360.0
PH (STANDARD UNITS)	10	6.84	0.40	6.4	7.6	9	0.0055	5.8443	0.851	0.24
PHOSPHORUS, TOTAL	9	0.036	0.024	0.01	0.09	9	-0.00010	0.05386	-0.274 *	0.024
NITRITE + NITRATE, TOTAL	9	0.502	0.155	0.28	0.77	9	0.00184	0.16629	0.763	0.107
NITROGEN, KJELDAHL, TOTAL	9	0.209	0.119	0.02	0.37	9	0.00032	0.15015	0.174 *	0.125
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	1066.0	866.8	130	2600	9	3.850	449.569	0.283 *	896.2
SEDIMENT, SUSPENDED	9	38.9	39.1	10	119					
SEDIMENT, CLAY-SILT (PERCENT)	9	89.9	7.0	76	100					
COLIFORM, FECAL (COL/100 ML)	10	1885.0	2967.0	100	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	1890.6	3201.9	20	10000					
SILICA, DISSOLVED	3	4.23	0.90	3.2	4.8	3	-0.0141	6.4409	-0.998 *	0.07
CALCIUM, DISSOLVED	3	13.67	4.62	11.0	19.0	3	0.0727	2.2727	1.000 *	0.01
MAGNESIUM, DISSOLVED	3	4.87	1.42	4.0	6.5	3	0.0223	1.3773	0.999 *	0.07
SODIUM, DISSOLVED	3	2.83	1.10	2.1	4.1	3	0.0173	0.1273	0.996 *	0.14
POTASSIUM, DISSOLVED	3	1.17	0.25	0.9	1.4	3	0.0032	0.6682	0.803 *	0.21
BICARBONATE, ION	3	12.3	4.2	9	17	3	0.064	2.364	0.971 *	1.4
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	3	42.33	10.21	35.0	54.0	3	0.1591	17.4091	0.989 *	2.12
CHLORIDE, DISSOLVED	3	4.00	0.10	3.9	4.1	3	0.0014	3.7864	0.866 *	0.07
DISSOLVED SOLIDS, SUM OF CONST	3	79.7	18.5	68	101	3	0.291	34.091	0.999 *	1.4
DISSOLVED SOLIDS, ROE 180 DEG C	3	95.7	35.9	73	137	3	0.564	7.364	0.998 *	2.8
HARDNESS, TOTAL	3	54.0	17.3	44	74	3	0.273	11.273	1.000 *	0.0
HARDNESS, NONCARBONATE	3	44.0	13.9	35	60	3	0.218	9.818	0.997 *	1.4
TURBIDITY (JTU)	3	5.7	4.5	1	10	3	-0.064	15.636	-0.896 *	2.8
FLOURIDE, DISSOLVED	3	0.10	0.10	0.0	0.2	3	0.0014	-0.1136	0.866 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 335

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	317	273	259	210	189	162	138	115	108	103

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
333	11.32	11.65	2.73	94	1.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01553500 -- WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	3	3	0	2
CADMIUM (CD), UG/L	3	0	1	3	0	1
CHROMIUM (CR), UG/L	3	<10	30	3	<10	20
COBALT (CO), UG/L	3	0	7	3	0	5
COPPER (CU), UG/L	3	10	10	3	0	10
IRON (FE), UG/L	3	70	700	3	10	60
LEAD (PB), UG/L	3	2	12	3	1	4
MANGANESE (MN), UG/L	3	10	380	3	230	380
MERCURY (HG), UG/L	3	<0.5	<0.5	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	50	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.59	6.00			
BIOMASS, ASH WT., G/SQ M	2	3.19	7.19			
CHLOROPHYLL A, MG/SQ M	2	5.2	5.7			
CHLOROPHYLL B, MG/SQ M	2	.8	1.2			
ORGANIC CARBON, MG/L	3	.3	9.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01570500 NAME: SUSQUEHANNA RIVER AT HARRISBURG, PA.

LAT 40D15M27S LONG 076D53M12S
DRAINAGE AREA: 24100 SQ MI (62419 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	50	12.84	8.52	2.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	50	207.6	77.2	91	380					
STREAMFLOW (CUBIC FT/SEC)	51	111107.6	149533.4	6900	525999	50	-1295.765	374904.688	-0.684	107893.8
PH (STANDARD UNITS)	42	7.56	0.59	6.7	9.0	42	0.0068	6.0320	0.794	0.36
PHOSPHORUS, TOTAL	50	0.080	0.051	0.02	0.33	50	-0.00003	0.08610	-0.048*	0.051
NITRITE + NITRATE, TOTAL	42	0.921	0.517	0.06	2.90	42	0.00091	0.71629	0.121*	0.520
NITROGEN, KJELDAHL, TOTAL	50	0.402	0.200	0.12	1.10	50	0.00066	0.26445	0.256*	0.195
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	12479.2	16961.3	280	61000	12	47.410	745.168	0.188*	17470.1
SEDIMENT, SUSPENDED	32	120.5	166.2	2	500					
SEDIMENT, CLAY-SILT (PERCENT)	32	90.8	9.6	57	100					
COLIFORM, FECAL (COL/100 ML)	42	866.1	1255.5	36	5100					
STREPTOCOCCI, FECAL (COL/100 ML)	30	678.0	821.4	23	3700					
SILICA, DISSOLVED	22	4.59	1.14	1.5	7.2	22	0.0037	3.8463	0.196*	1.15
CALCIUM, DISSOLVED	22	20.23	7.91	11.0	38.0	22	0.1253	-4.6246	0.949	2.55
MAGNESIUM, DISSOLVED	22	5.52	1.78	3.1	9.6	22	0.0257	0.4205	0.866	0.91
SODIUM, DISSOLVED	22	5.14	2.27	2.2	11.0	22	0.0343	-1.6774	0.907	0.98
POTASSIUM, DISSOLVED	22	1.51	0.61	0.9	3.6	22	0.0083	-0.1294	0.820	0.36
BICARBONATE, ION	22	45.4	27.8	14	113	22	0.370	-28.004	0.798	17.2
CARBONATE, ION	22	0.0	0.0	0	0	22	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	22	34.73	12.88	19.0	66.0	22	0.0437	26.0635	0.203*	12.92
CHLORIDE, DISSOLVED	22	7.77	3.22	3.5	17.0	22	0.0487	-1.8996	0.906	1.40
DISSOLVED SOLIDS, SUM OF CONST	22	102.3	28.9	65	160	22	0.474	8.236	0.983	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	42	137.1	52.6	40	278	42	0.644	-8.754	0.844	28.5
HARDNESS, TOTAL	22	73.4	25.8	40	130	22	0.423	-10.588	0.983	4.8
HARDNESS, NONCARBONATE	22	35.9	13.1	19	63	22	0.115	13.150	0.526	11.4
TURBIDITY (JTU)	42	13.8	17.1	2	100	42	-0.068	29.266	-0.275*	16.7
FLOURIDE, DISSOLVED	22	0.15	0.10	0.0	0.5	22	0.0005	0.0429	0.336*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 302

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	330	294	280	253	222	180	155	130	121	111

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
302	13.28	12.31	2.72	94	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01570500 -- SUSQUEHANNA RIVER AT HARRISBURG, PA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	42	0	5	22	0	1
CADMIUM (CD), UG/L	42	0	1	22	0	5
CHROMIUM (CR), UG/L	42	0	20	22	0	<10
COBALT (CO), UG/L	22	1	8	22	0	4
COPPER (CU), UG/L	42	0	10	22	0	10
IRON (FE), UG/L	42	110	3100	22	10	510
LEAD (PB), UG/L	42	0	40	22	0	15
MANGANESE (MN), UG/L	42	40	880	22	0	390
MERCURY (HG), UG/L	22	< 0.5	1.1	22	<0.5	<0.5
SELENIUM (SE), UG/L	22	0	1	22	0	1
ZINC (ZN), UG/L	42	10	70	22	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.50	14.00			
BIOMASS, ASH WT., G/SQ M	2	2.79	12.00			
CHLOROPHYLL A, MG/SQ M	2	4.5	21.0			
CHLOROPHYLL B, MG/SQ M	2	1.0	4.5			
ORGANIC CARBON, MG/L	42	1.5	22.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01645500 NAME: POTOMAC RIVER AT GREAT FALLS MD

LAT 39D00M03S LONG 077D14M56S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.38	9.90	0.5	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	281.8	78.6	195	455					
STREAMFLOW (CUBIC FT/SEC)	13	11860.8	9633.7	2850	33200	12	-91.831	37944.273	-0.719	7306.4
PH (STANDARD UNITS)	12	8.19	0.44	7.6	8.8	12	0.0036	7.1808	0.638	0.36
PHOSPHORUS, TOTAL	12	0.109	0.078	0.02	0.32	12	-0.00032	0.20007	-0.325 *	0.077
NITRITE + NITRATE, TOTAL	12	0.857	0.355	0.39	1.40	12	-0.00275	1.63236	-0.608	0.296
NITROGEN, KJELDAHL, TOTAL	12	0.584	0.250	0.20	1.10	12	0.00031	0.49682	0.098 *	0.261
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	28118.3	25526.4	820	75000	12	227.864	-36082.434	0.702	19078.0
SEDIMENT, SUSPENDED	12	43.5	54.6	8	208					
SEDIMENT, CLAY-SILT (PERCENT)	11	98.5	2.2	93	100					
COLIFORM, FECAL (COL/100 ML)	12	1962.6	5734.4	9	20000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3806.4	10588.1	87	37000					
SILICA, DISSOLVED	12	4.12	2.38	0.1	6.5	12	-0.0206	9.9426	-0.683	1.82
CALCIUM, DISSOLVED	12	33.33	9.52	23.0	52.0	12	0.1186	-0.0773	0.979	2.03
MAGNESIUM, DISSOLVED	12	7.72	2.01	5.0	11.0	12	0.0226	1.3475	0.884	0.98
SODIUM, DISSOLVED	12	10.00	6.35	5.0	23.0	12	0.0768	-11.6482	0.951	2.06
POTASSIUM, DISSOLVED	12	2.44	0.75	1.5	3.8	12	0.0068	0.5320	0.707	0.56
BICARBONATE, ION	12	102.3	28.9	65	150	12	0.336	7.588	0.915	12.3
CARBONATE, ION	0									
SULFATE, DISSOLVED	12	36.50	14.89	23.0	66.0	12	0.1735	-12.3843	0.916	6.27
CHLORIDE, DISSOLVED	12	11.41	4.53	7.2	22.0	12	0.0542	-3.8606	0.941	1.61
DISSOLVED SOLIDS, SUM OF CONST	12	156.1	47.9	108	249	12	0.596	-11.962	0.978	10.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	178.8	50.4	118	273	12	0.610	6.926	0.951	16.4
HARDNESS, TOTAL	12	115.4	32.1	78	180	12	0.399	3.088	0.977	7.2
HARDNESS, NONCARBONATE	12	31.1	10.7	19	56	12	0.112	-0.379	0.820	6.4
TURBIDITY (JTU)	12	19.1	21.1	5	80	12	-0.132	56.242	-0.492 *	19.2
FLOURIDE, DISSOLVED	12	0.16	0.07	0.0	0.2	12	0.0001	0.1360	0.093 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 348

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	460	409	388	311	278	226	204	176	164	150

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
334	14.99	12.09	2.72	94	2.01

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01645500 -- POTOMAC RIVER AT GREAT FALLS MD

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	0	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	<10
COBALT (CO), UG/L	4	0	3	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	520	3500	4	30	170
LEAD (PB), UG/L	4	6	10	4	4	11
MANGANESE (MN), UG/L	4	50	230	4	10	20
MERCURY (HG), UG/L	4	<0.5	<0.5	4	< 0.5	< 0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.29	8.09			
BIOMASS, ASH WT., G/SQ M	4	1.00	4.89			
CHLOROPHYLL A, MG/SQ M	4	.6	23.0			
CHLOROPHYLL B, MG/SQ M	4	.0	4.5			
ORGANIC CARBON, MG/L	3	4.7	6.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 01673000 NAME: PAMUNKEY RIVER NR HANOVER VA

LAT 37D46M03S LONG 077D19M57S
DRAINAGE AREA: 1081 SQ MI (2800 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	37	14.69	8.11	2.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	37	62.3	17.2	25	130					
STREAMFLOW (CUBIC FT/SEC)	11	1723.3	1232.6	304	4000	11	-0.266	1742.014	-0.006*	1299.2
PH (STANDARD UNITS)	12	6.73	0.70	6.0	8.2	12	0.0043	6.4308	0.155*	0.73
PHOSPHORUS, TOTAL	12	0.048	0.033	0.01	0.12	12	-0.00001	0.04902	-0.008*	0.034
NITRITE + NITRATE, TOTAL	12	0.169	0.073	0.04	0.29	12	-0.00042	0.19859	-0.146*	0.075
NITROGEN, KJELDAHL, TOTAL	12	0.601	0.320	0.24	1.40	12	0.00172	0.48134	0.134*	0.333
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1645.6	1327.3	410	4200	9	-27.425	3321.540	-0.315*	1346.7
SEDIMENT, SUSPENDED	11	18.3	20.9	3	66					
SEDIMENT, CLAY-SILT (PERCENT)	11	97.2	5.2	86	100					
COLIFORM, FECAL (COL/100 ML)	12	439.5	702.1	15	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1305.5	4006.9	4	14000					
SILICA, DISSOLVED	29	10.46	1.74	7.4	14.0	29	-0.0182	11.5932	-0.176*	1.74
CALCIUM, DISSOLVED	29	5.50	0.97	3.5	8.1	29	0.0105	4.8520	0.181*	0.97
MAGNESIUM, DISSOLVED	29	2.12	0.45	1.4	3.1	29	0.0032	1.9227	0.119*	0.45
SODIUM, DISSOLVED	29	3.99	0.67	2.9	5.3	29	0.0033	3.7870	0.083*	0.68
POTASSIUM, DISSOLVED	29	2.27	0.66	1.5	5.0	29	0.0137	1.4109	0.348*	0.63
BICARBONATE, ION	29	23.7	5.6	16	35	29	0.040	21.192	0.121*	5.6
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	29	6.69	1.17	4.7	8.7	29	0.0102	6.0583	0.146*	1.18
CHLORIDE, DISSOLVED	29	3.75	0.99	2.3	7.3	29	0.0120	3.0058	0.203*	0.99
DISSOLVED SOLIDS, SUM OF CONST	29	48.4	5.4	40	61	29	0.048	45.469	0.149*	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	29	55.8	9.3	36	73	29	0.014	54.972	0.025*	9.5
HARDNESS, TOTAL	29	22.5	3.4	17	31	29	0.037	20.189	0.182*	3.5
HARDNESS, NONCARBONATE	29	3.3	3.2	0	9	29	0.008	2.788	0.044*	3.2
TURBIDITY (JTU)	4	11.3	13.0	2	30	4	-0.015	12.487	-0.035*	15.9
FLOURIDE, DISSOLVED	29	0.17	0.16	0.0	0.9	29	0.0001	0.1642	0.014*	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	83	80	75	65	62	55	50	45	45	37

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.28	11.62	2.72	95	1.90

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

01673000 -- PAMUNKEY RIVER NR HANOVER VA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	1	0		4	0	0
CADMIUM (CD), UG/L	3	0	1	4	0	2
CHROMIUM (CR), UG/L	3	0	10	4	0	1
COBALT (CO), UG/L	3	0	8	4	0	0
COPPER (CU), UG/L	3	9	11	4	6	17
IRON (FE), UG/L	3	1900	3000	29	0	270
LEAD (PB), UG/L	3	2	8	4	0	2
MANGANESE (MN), UG/L	3	180	380	4	0	60
MERCURY (HG), UG/L	1	0.2		4	0.0	0.4
SELENIUM (SE), UG/L	0			4	0	0
ZINC (ZN), UG/L	3	40	100	4	0	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	7	2.5	9.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02035000 NAME: JAMES RIVER AT CARTERSVILLE, VA

LAT 37D40M15S LONG 078D05M10S
DRAINAGE AREA: 6257 SQ MI (16206 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	61	15.25	7.87	3.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	61	119.0	41.3	55	240					
STREAMFLOW (CUBIC FT/SEC)	30	9840.2	7876.8	120	23800	30	-87.650	20536.355	-0.479	7036.7
PH (STANDARD UNITS)	37	7.03	0.40	6.3	7.9	37	0.0015	6.8395	0.176*	0.40
PHOSPHORUS, TOTAL	35	0.091	0.074	0.01	0.30	35	-0.00052	0.15756	-0.335*	0.071
NITRITE + NITRATE, TOTAL	35	0.333	0.112	0.10	0.64	35	-0.00012	0.34860	-0.051*	0.114
NITROGEN, KJELDAHL, TOTAL	35	0.524	0.282	0.10	1.20	35	-0.00240	0.82979	-0.403	0.262
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2358.0	2476.0	330	7800	10	-3.242	2740.543	-0.060*	2621.4
SEDIMENT, SUSPENDED	38	61.6	85.5	1	381					
SEDIMENT, CLAY-SILT (PERCENT)	11	95.7	5.7	87	100					
COLIFORM, FECAL (COL/100 ML)	35	553.2	770.4	2	3168					
STREPTOCOCCI, FECAL (COL/100 ML)	10	287.9	419.3	10	1100					
SILICA, DISSOLVED	28	9.32	2.14	0.5	12.0	28	0.0224	6.8599	0.275*	2.10
CALCIUM, DISSOLVED	28	14.14	3.43	6.4	21.0	28	0.0719	6.2281	0.554	2.91
MAGNESIUM, DISSOLVED	28	3.37	0.91	1.7	5.3	28	0.0130	1.9413	0.376*	0.86
SODIUM, DISSOLVED	28	5.52	2.34	2.4	11.0	28	0.0448	0.6033	0.505	2.06
POTASSIUM, DISSOLVED	28	1.76	0.41	1.2	2.4	28	0.0042	1.2966	0.266*	0.41
BICARBONATE, ION	31	52.1	14.2	20	76	31	0.294	19.486	0.523	12.3
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	31	10.09	2.22	6.8	16.0	31	0.0252	7.2946	0.288*	2.16
CHLORIDE, DISSOLVED	31	6.38	3.65	1.5	17.0	31	0.0599	-0.2549	0.416	3.37
DISSOLVED SOLIDS, SUM OF CONST	28	77.2	22.8	4	116	28	0.439	28.941	0.509	20.0
DISSOLVED SOLIDS, ROE 180 DEG C	48	82.6	26.4	40	189	48	0.299	47.450	0.424	24.2
HARDNESS, TOTAL	28	49.3	12.2	23	73	28	0.233	23.639	0.503	10.8
HARDNESS, NONCARBONATE	28	6.4	5.0	0	14	28	-0.006	7.116	-0.033*	5.1
TURBIDITY (JTU)	28	16.2	18.5	2	60	27	-0.150	35.090	-0.342*	17.9
FLOURIDE, DISSOLVED	27	0.18	0.18	0.0	1.0	27	-0.0005	0.2337	-0.069*	0.18

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 344

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	220	168	150	132	121	110	99	77	74	61

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
344	14.68	11.14	2.79	94	2.03

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02035000 -- JAMES RIVER AT CARTERSVILLE, VA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	4	0	2
CADMIUM (CD), UG/L	2	0	1	4	0	1
CHROMIUM (CR), UG/L	2	<10	<10	4	0	5
COBALT (CO), UG/L	2	0	3	4	0	0
COPPER (CU), UG/L	2	9	12	4	4	8
IRON (FE), UG/L	2	2600	8000	28	0	290
LEAD (PB), UG/L	2	9	13	4	0	10
MANGANESE (MN), UG/L	2	40	210	4	0	30
MERCURY (HG), UG/L	4	0.1	0.6	4	0.0	0.2
SELENIUM (SE), UG/L	2	0	0	4	0	0
ZINC (ZN), UG/L	2	70	90	4	0	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	20.00				
BIOMASS, ASH WT., G/SQ M	1	20.00				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	31	1.1	20.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02049500 NAME: BLACKWATER R NR FRANKLIN, VA

LAT 36D45M45S LONG 076D53M55S
DRAINAGE AREA: 617 SQ MI (1598 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	15.04	7.62	4.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	92.7	24.6	55	125					
STREAMFLOW (CUBIC FT/SEC)	13	782.0	747.2	27	2190	13	-8.484	1550.806	-0.276*	750.2
PH (STANDARD UNITS)	13	6.77	0.76	5.8	8.2	13	0.0156	5.3587	0.496*	0.69
PHOSPHORUS, TOTAL	12	0.039	0.014	0.02	0.06	12	0.00017	0.02357	0.301*	0.014
NITRITE + NITRATE, TOTAL	12	0.251	0.140	0.02	0.48	12	0.00025	0.22881	0.044*	0.146
NITROGEN, KJELDAHL, TOTAL	12	0.670	0.190	0.46	1.20	12	-0.00070	0.73232	-0.091*	0.199
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	598.8	1253.6	9	3900	9	-16.006	1991.332	-0.283*	1285.5
SEDIMENT, SUSPENDED	13	10.1	6.7	2	24					
SEDIMENT, CLAY-SILT (PERCENT)	9	93.1	20.7	38	100					
COLIFORM, FECAL (COL/100 ML)	12	174.3	270.9	1	980					
STREPTOCOCCI, FECAL (COL/100 ML)	10	478.2	966.9	2	3000					
SILICA, DISSOLVED	4	8.67	2.00	6.6	11.0	4	0.0641	2.4535	0.876*	1.18
CALCIUM, DISSOLVED	5	11.36	4.17	7.2	18.0	5	0.1169	-0.2857	0.682*	3.52
MAGNESIUM, DISSOLVED	5	1.70	0.56	1.0	2.5	5	0.0184	-0.1291	0.802*	0.38
SODIUM, DISSOLVED	5	4.00	1.32	2.2	5.3	5	0.0468	-0.6614	0.864*	0.77
POTASSIUM, DISSOLVED	5	2.76	0.71	1.8	3.6	5	-0.0151	4.2638	-0.517*	0.70
BICARBONATE, ION	5	28.0	13.4	15	48	5	0.125	15.525	0.228*	15.0
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	5	9.20	2.98	6.7	14.0	5	0.0656	2.6675	0.535*	2.91
CHLORIDE, DISSOLVED	5	9.36	3.35	5.3	14.0	5	0.1050	-1.0972	0.761*	2.51
DISSOLVED SOLIDS, SUM OF CONST	4	64.3	16.2	46	85	4	0.538	12.049	0.907*	8.4
DISSOLVED SOLIDS, ROE 180 DEG C	4	75.5	17.9	56	96	4	0.168	59.217	0.255*	21.2
HARDNESS, TOTAL	5	35.2	12.6	22	55	5	0.367	-1.315	0.706*	10.3
HARDNESS, NONCARBONATE	5	12.4	7.8	2	23	5	0.258	-13.343	0.802*	5.4
TURBIDITY (JTU)	4	9.3	7.4	4	20	4	0.127	-2.723	0.426*	8.2
FLOURIDE, DISSOLVED	5	0.20	0.07	0.1	0.3	5	-0.0004	0.2421	-0.145*	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	15.09	10.56	2.71	98	1.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02049500 -- BLACKWATER R NR FRANKLIN, VA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	1	4	0	1
CADMIUM (CD), UG/L	3	1	1	3	1	1
CHROMIUM (CR), UG/L	3	0	<10	4	0	2
COBALT (CO), UG/L	3	0	3	4	0	1
COPPER (CU), UG/L	3	8	9	4	6	8
IRON (FE), UG/L	3	680	1900	5	40	1300
LEAD (PB), UG/L	3	6	16	4	0	9
MANGANESE (MN), UG/L	3	20	130	4	0	130
MERCURY (HG), UG/L	2	0.1	0.3	4	0.1	0.3
SELENIUM (SE), UG/L	1	0		4	0	0
ZINC (ZN), UG/L	3	50	440	4	10	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	17.00				
BIOMASS, ASH WT., G/SQ M	1	16.00				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	7	8.8	17.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02081000 NAME: ROANOKE RIVER NEAR SCOTLAND NECK NC

LAT 36D12M33S LONG 077D23M02S
DRAINAGE AREA: 8700 SQ MI (22533 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	25	15.64	7.21	6.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	76.5	24.2	55	160					
STREAMFLOW (CUBIC FT/SEC)	27	14618.5	10429.1	1300	33000	24	-240.756	33770.313	-0.555	8926.6
PH (STANDARD UNITS)	26	6.79	0.25	6.3	7.3	24	-0.0037	7.0806	-0.357*	0.24
PHOSPHORUS, TOTAL	13	0.045	0.013	0.03	0.07	12	0.00050	0.00258	0.585	0.011
NITRITE + NITRATE, TOTAL	13	0.160	0.051	0.09	0.24	12	-0.00023	0.17907	-0.065*	0.056
NITROGEN, KJELDAHL, TOTAL	13	0.403	0.089	0.28	0.64	12	0.00481	-0.00121	0.787	0.060
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	9196.4	6110.1	460	22000	11	11.030	8253.801	0.028*	6438.1
SEDIMENT, SUSPENDED	13	19.2	6.5	10	31					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.3	5.9	80	100					
COLIFORM, FECAL (COL/100 ML)	26	695.8	997.1	10	3600					
STREPTOCOCCI, FECAL (COL/100 ML)	11	330.5	259.7	96	1000					
SILICA, DISSOLVED	12	9.28	1.59	7.0	11.0	12	0.0342	6.4022	0.329*	1.57
CALCIUM, DISSOLVED	12	6.88	1.52	4.0	10.0	12	0.0695	1.0328	0.695	1.15
MAGNESIUM, DISSOLVED	12	2.39	0.26	2.0	2.9	12	0.0054	1.9373	0.311*	0.26
SODIUM, DISSOLVED	12	6.56	2.25	4.4	12.0	12	0.1391	-5.1534	0.942	0.79
POTASSIUM, DISSOLVED	12	2.08	0.36	1.8	3.1	12	0.0176	0.5992	0.744	0.25
BICARBONATE, ION	12	32.8	5.8	26	46	12	0.358	2.735	0.946	2.0
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	8.15	1.81	5.9	12.0	12	0.0788	1.5183	0.665	1.42
CHLORIDE, DISSOLVED	12	4.93	0.97	3.8	7.3	12	0.0397	1.5947	0.622	0.80
DISSOLVED SOLIDS, SUM OF CONST	12	56.8	9.6	42	80	12	0.572	8.683	0.911	4.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	61.1	10.5	49	91	12	0.444	23.735	0.644	8.4
HARDNESS, TOTAL	12	27.0	4.4	18	35	12	0.202	10.000	0.699	3.3
HARDNESS, NONCARBONATE	12	1.6	2.3	0	7	12	0.007	0.997	0.046*	2.4
TURBIDITY (JTU)	14	14.9	8.8	4	35	13	0.034	11.484	0.096*	9.4
FLOURIDE, DISSOLVED	12	0.17	0.15	0.0	0.5	12	0.0053	-0.2738	0.548*	0.13

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	134	121	105	100	97	85	80	70	69	67

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.19	9.72	2.57	95	1.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02081000 -- ROANOKE RIVER NEAR SCOTLAND NECK NC

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	7	0	30	6	0	1
CADMIUM (CD), UG/L	7	0	0	6	0	2
CHROMIUM (CR), UG/L	7	<10	<50	6	0	1
COBALT (CO), UG/L	6	0	2	6	0	0
COPPER (CU), UG/L	7	2	<40	6	2	7
IRON (FE), UG/L	7	480	1400	6	50	220
LEAD (PB), UG/L	7	4	<100	6	0	34
MANGANESE (MN), UG/L	7	70	170	6	10	60
MERCURY (HG), UG/L	6	0.0	0.3	6	0.0	0.1
SELENIUM (SE), UG/L	6	0	0	6	0	0
ZINC (ZN), UG/L	7	0	<50	6	10	90
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.50	1.79			
BIOMASS, ASH WT., G/SQ M	2	.50	1.50			
CHLOROPHYLL A, MG/SQ M	2	.0	.1			
CHLOROPHYLL B, MG/SQ M	2	.0	.0			
ORGANIC CARBON, MG/L	7	4.2	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02083500 NAME: TAR RIVER AT TARBORO, N. C.

LAT 35D53M38S LONG 077D32M00S
DRAINAGE AREA: 2140 SQ MI (5543 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	42	16.07	5.97	5.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	38	68.6	25.1	30	120					
STREAMFLOW (CUBIC FT/SEC)	44	3850.9	5083.9	332	19400	38	-116.040	12333.945	-0.551	4472.7
PH (STANDARD UNITS)	41	6.58	0.89	1.6	7.7	37	0.0107	5.9573	0.707	0.27
PHOSPHORUS, TOTAL	12	0.142	0.053	0.10	0.29	11	0.00151	0.02036	0.721	0.039
NITRITE + NITRATE, TOTAL	12	0.287	0.093	0.11	0.43	11	0.00171	0.14435	0.480 *	0.085
NITROGEN, KJELDAHL, TOTAL	12	0.562	0.148	0.35	0.97	11	0.00359	0.27716	0.596 *	0.131
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	13251.8	29162.0	160	100000	11	227.231	-4513.543	0.200 *	30117.7
SEDIMENT, SUSPENDED	12	27.8	16.4	6	57					
SEDIMENT, CLAY-SILT (PERCENT)	11	90.9	10.8	66	100					
COLIFORM, FECAL (COL/100 ML)	43	480.7	1086.5	10	7100					
STREPTOCOCCI, FECAL (COL/100 ML)	11	902.7	950.5	60	2800					
SILICA, DISSOLVED	11	11.56	3.53	6.5	16.0	11	0.1142	2.6340	0.830	2.08
CALCIUM, DISSOLVED	11	6.14	1.57	3.6	8.0	11	0.0466	2.4913	0.762	1.07
MAGNESIUM, DISSOLVED	11	1.96	0.42	1.3	2.6	11	0.0098	1.1989	0.598 *	0.36
SODIUM, DISSOLVED	11	6.84	2.99	3.0	12.0	11	0.1143	-2.0998	0.981	0.62
POTASSIUM, DISSOLVED	11	2.21	0.45	1.6	3.0	11	0.0119	1.2806	0.670	0.36
BICARBONATE, ION	11	24.5	11.6	10	44	11	0.418	-8.130	0.923	4.7
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	7.65	1.69	6.0	12.0	11	0.0275	5.5008	0.420 *	1.61
CHLORIDE, DISSOLVED	11	6.69	2.42	3.1	10.0	11	0.0858	-0.0153	0.910	1.06
DISSOLVED SOLIDS, SUM OF CONST	11	55.9	16.6	36	80	11	0.633	6.412	0.976	3.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	63.9	11.4	48	82	11	0.384	33.864	0.864	6.1
HARDNESS, TOTAL	11	23.4	5.5	14	31	11	0.159	10.895	0.749	3.8
HARDNESS, NONCARBONATE	11	4.4	6.0	0	20	11	-0.145	15.723	-0.618	5.0
TURBIDITY (JTU)	16	22.5	18.7	4	60	15	-0.484	59.531	-0.616	14.7
FLOURIDE, DISSOLVED	11	0.24	0.14	0.0	0.5	11	0.0028	0.0202	0.521 *	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	133	116	112	107	101	88	73	59	53	47

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.84	10.87	2.86	92	2.20

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02083500 -- TAR RIVER AT TARBORO, N. C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	7	0	30	6	0	1
CADMIUM (CD), UG/L	7	0	<50	6	0	1
CHROMIUM (CR), UG/L	8	<10	<50	7	0	1
COBALT (CO), UG/L	6	0	2	6	0	1
COPPER (CU), UG/L	8	1	<40	7	2	7
IRON (FE), UG/L	8	1300	1800	7	310	850
LEAD (PB), UG/L	8	1	<100	7	0	8
MANGANESE (MN), UG/L	7	50	190	6	16	100
MERCURY (HG), UG/L	6	0.0	0.3	6	0.0	0.3
SELENIUM (SE), UG/L	6	0	0	6	0	0
ZINC (ZN), UG/L	8	0	<50	7	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	19.00				
BIOMASS, ASH WT., G/SQ M	1	14.00				
CHLOROPHYLL A, MG/SQ M	1	18.0				
CHLOROPHYLL B, MG/SQ M	1	3.1				
ORGANIC CARBON, MG/L	7	5.0	22.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02089500 NAME: NEUSE RIVER AT KINSTON, N. C.

LAT 35D15M29S LONG 077D35M09S
DRAINAGE AREA: 2690 SQ MI (6967 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	43	19.12	7.04	5.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	42	93.8	32.3	48	185					
STREAMFLOW (CUBIC FT/SEC)	44	3749.2	4284.3	484	16000	42	-78.982	11292.449	-0.587	3556.6
PH (STANDARD UNITS)	16	6.69	0.42	6.1	7.4	16	0.0136	5.4572	0.801	0.26
PHOSPHORUS, TOTAL	15	0.204	0.082	0.08	0.33	15	0.00265	-0.01718	0.793	0.052
NITRITE + NITRATE, TOTAL	15	0.491	0.292	0.09	1.10	15	0.00222	0.30602	0.187*	0.297
NITROGEN, KJELDAHL, TOTAL	15	0.682	0.224	0.44	1.10	15	0.00524	0.24435	0.575	0.190
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	27606.2	46374.2	580	170000	13	722.422	-34188.715	0.392*	44557.6
SEDIMENT, SUSPENDED	14	29.8	18.2	14	78					
SEDIMENT, CLAY-SILT (PERCENT)	13	91.0	10.6	67	100					
COLIFORM, FECAL (COL/100 ML)	42	702.3	1719.4	20	11000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	636.7	784.0	80	2400					
SILICA, DISSOLVED	13	10.00	2.40	6.7	14.0	13	0.0589	4.9632	0.617	1.98
CALCIUM, DISSOLVED	13	5.49	1.42	3.5	7.8	13	0.0481	1.3798	0.853	0.77
MAGNESIUM, DISSOLVED	13	1.80	0.40	1.1	2.5	13	0.0148	0.5351	0.930	0.15
SODIUM, DISSOLVED	13	7.72	3.30	3.5	15.0	13	0.1281	-3.2406	0.977	0.73
POTASSIUM, DISSOLVED	13	2.46	0.47	1.7	3.1	13	0.0128	1.3703	0.678	0.36
BICARBONATE, ION	13	20.4	8.1	7	36	13	0.302	-5.434	0.938	2.9
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	9.25	1.34	7.3	13.0	13	0.0150	7.9591	0.282*	1.35
CHLORIDE, DISSOLVED	13	8.37	3.40	3.6	15.0	13	0.1294	-2.6996	0.957	1.04
DISSOLVED SOLIDS, SUM OF CONST	13	55.8	14.9	36	80	13	0.579	6.331	0.978	3.3
DISSOLVED SOLIDS, ROE 180 DEG C	13	64.2	16.5	39	93	13	0.505	20.987	0.770	11.0
HARDNESS, TOTAL	13	21.2	4.9	15	29	13	0.179	5.956	0.917	2.0
HARDNESS, NONCARBONATE	13	4.8	2.7	0	9	13	-0.056	9.522	-0.521*	2.4
TURBIDITY (JTU)	13	13.9	6.7	1	21	13	-0.201	31.112	-0.755	4.6
FLOURIDE, DISSOLVED	13	0.21	0.14	0.0	0.4	13	0.0014	0.0879	0.245*	0.15

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	147	130	122	106	100	87	73	57	52	46

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.93	10.05	2.87	92	2.00

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02089500 -- NEUSE RIVER AT KINSTON, N. C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	8	1	50	6	0	1
CADMIUM (CD), UG/L	8	0	<50	6	0	1
CHROMIUM (CR), UG/L	9	<10	<50	7	0	2
COBALT (CO), UG/L	8	0	<100	6	0	0
COPPER (CU), UG/L	9	3	<40	7	2	7
IRON (FE), UG/L	9	920	1600	7	210	480
LEAD (PB), UG/L	9	3	<100	7	0	5
MANGANESE (MN), UG/L	8	59	250	6	10	50
MERCURY (HG), UG/L	8	0.0	2.2	6	0.0	0.1
SELENIUM (SE), UG/L	6	0	0	6	0	0
ZINC (ZN), UG/L	9	4	<50	7	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	13.00				
BIOMASS, ASH WT., G/SQ M	1	10.00				
CHLOROPHYLL A, MG/SQ M	1	4.5				
CHLOROPHYLL B, MG/SQ M	1	1.8				
ORGANIC CARBON, MG/L	7	5.0	15.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02105769 NAME: CAPE FEAR R AT LOCK # 1 NR KELLY, NC

LAT 34D24M15S LONG 078D17M38S
DRAINAGE AREA: 5220 SQ MI (13520 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	46	18.46	6.84	5.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	44	65.6	26.3	10	130					
STREAMFLOW (CUBIC FT/SEC)	47	8477.9	10191.6	1170	46600	44	-205.364	22293.195	-0.517	9045.1
PH (STANDARD UNITS)	45	6.59	0.41	5.3	7.6	43	0.0001	6.5953	0.006 *	0.42
PHOSPHORUS, TOTAL	13	0.171	0.072	0.06	0.35	13	0.00219	0.01533	0.602	0.060
NITRITE + NITRATE, TOTAL	13	0.450	0.101	0.28	0.60	13	0.00333	0.21318	0.659	0.079
NITROGEN, KJELDAHL, TOTAL	13	0.588	0.126	0.43	0.83	13	0.00087	0.52551	0.138 *	0.130
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1360.8	1917.4	28	5700	12	-4.937	1703.864	-0.051 *	2008.3
SEDIMENT, SUSPENDED	12	50.2	50.2	14	186					
SEDIMENT, CLAY-SILT (PERCENT)	12	96.5	6.3	80	100					
COLIFORM, FECAL (COL/100 ML)	45	266.3	430.9	10	2100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	279.2	349.0	28	1100					
SILICA, DISSOLVED	12	7.71	1.24	6.0	9.3	12	-0.0158	8.8053	-0.254 *	1.26
CALCIUM, DISSOLVED	12	4.04	0.97	2.8	5.9	12	0.0165	2.8939	0.341 *	0.95
MAGNESIUM, DISSOLVED	12	1.68	0.26	1.3	2.2	12	0.0040	1.4073	0.302 *	0.26
SODIUM, DISSOLVED	12	6.92	3.73	2.8	15.0	12	0.1832	-5.8097	0.980	0.77
POTASSIUM, DISSOLVED	12	1.87	0.48	1.1	2.7	12	0.0102	1.1591	0.421 *	0.46
BICARBONATE, ION	12	16.3	6.9	10	36	12	0.304	-4.873	0.875	3.5
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	8.59	2.02	6.4	13.0	12	0.0864	2.5865	0.855	1.10
CHLORIDE, DISSOLVED	12	6.37	2.91	2.8	13.0	12	0.1431	-3.5815	0.981	0.60
DISSOLVED SOLIDS, SUM OF CONST	12	46.3	13.2	32	80	12	0.619	3.203	0.938	4.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	54.0	11.6	29	71	12	0.337	30.601	0.577	10.0
HARDNESS, TOTAL	12	17.0	3.0	14	22	12	0.062	12.669	0.421 *	2.8
HARDNESS, NONCARBONATE	12	4.3	3.3	0	9	12	-0.109	11.825	-0.652	2.6
TURBIDITY (JTU)	12	26.8	31.4	2	100	12	-0.722	76.979	-0.459 *	29.3
FLOURIDE, DISSOLVED	12	0.16	0.11	0.0	0.4	12	-0.0018	0.2829	-0.330 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	121	111	106	91	79	70	64	54	52	46

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.77	10.87	2.80	93	1.94

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02105769 -- CAPE FEAR R AT LOCK # 1 NR KELLY, NC

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	7	1	30	6	0	1
CADMIUM (CD), UG/L	7	0	<50	6	0	2
CHROMIUM (CR), UG/L	7	<10	<50	6	0	3
COBALT (CO), UG/L	7	0	<100	6	0	2
COPPER (CU), UG/L	7	3	<40	6	2	5
IRON (FE), UG/L	7	790	5300	6	250	660
LEAD (PB), UG/L	7	2	<100	6	1	10
MANGANESE (MN), UG/L	7	70	200	6	40	110
MERCURY (HG), UG/L	7	0.0	1.0	6	0.0	0.2
SELENIUM (SE), UG/L	6	0	0	6	0	0
ZINC (ZN), UG/L	7	8	60	6	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.09	31.00			
BIOMASS, ASH WT., G/SQ M	3	2.29	24.00			
CHLOROPHYLL A, MG/SQ M	3	.0	44.0			
CHLOROPHYLL B, MG/SQ M	3	.1	9.6			
ORGANIC CARBON, MG/L	6	7.0	14.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02129000 NAME: PEE DEE R NR ROCKINGHAM, NC

LAT 34D56M46S LONG 079D52M11S
DRAINAGE AREA: 6870 SQ MI (17793 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	41	19.75	6.90	7.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	40	62.3	20.8	20	120					
STREAMFLOW (CUBIC FT/SEC)	41	12600.6	9710.0	914	57600	40	-170.274	23389.898	-0.362	9219.4
PH (STANDARD UNITS)	41	6.78	0.36	6.2	7.8	40	-0.0014	6.8619	-0.078 *	0.36
PHOSPHORUS, TOTAL	12	0.106	0.062	0.06	0.29	12	-0.00055	0.14401	-0.069 *	0.064
NITRITE + NITRATE, TOTAL	12	0.416	0.108	0.25	0.53	12	-0.00690	0.89743	-0.498 *	0.098
NITROGEN, KJELDAHL, TOTAL	11	0.440	0.166	0.30	0.88	11	0.00704	-0.05227	0.345 *	0.164
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1531.2	2790.0	25	8900	12	196.385	-12166.703	0.546 *	2451.2
SEDIMENT, SUSPENDED	12	39.8	19.9	10	76					
SEDIMENT, CLAY-SILT (PERCENT)	12	99.2	1.1	97	100					
COLIFORM, FECAL (COL/100 ML)	38	312.3	1292.4	8	8000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	142.3	168.3	20	600					
SILICA, DISSOLVED	12	10.82	0.98	8.6	12.0	12	0.0819	5.1035	0.648	0.78
CALCIUM, DISSOLVED	11	4.30	0.84	3.3	6.2	11	0.0430	1.2973	0.415 *	0.81
MAGNESIUM, DISSOLVED	11	1.94	0.20	1.5	2.2	11	-0.0087	2.5479	-0.362 *	0.19
SODIUM, DISSOLVED	11	5.54	1.57	3.3	7.7	11	0.1570	-5.4383	0.814	0.96
POTASSIUM, DISSOLVED	11	2.07	0.39	1.6	2.6	11	0.0364	-0.4708	0.757	0.27
BICARBONATE, ION	12	21.9	5.1	15	32	12	0.475	-11.234	0.727	3.7
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	6.24	0.58	5.3	7.2	12	0.0411	3.3746	0.554 *	0.50
CHLORIDE, DISSOLVED	12	4.99	1.16	3.2	7.9	12	0.0971	-1.7781	0.652	0.92
DISSOLVED SOLIDS, SUM OF CONST	11	47.3	7.3	36	60	11	0.720	-3.047	0.795	4.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	57.3	8.4	45	66	12	0.317	35.159	0.291 *	8.5
HARDNESS, TOTAL	11	18.6	2.5	15	24	11	0.059	14.537	0.193 *	2.5
HARDNESS, NONCARBONATE	11	2.3	2.5	0	7	11	-0.197	16.037	-0.641	2.0
TURBIDITY (JTU)	12	39.6	23.6	10	85	12	-2.312	200.859	-0.760	16.1
FLOURIDE, DISSOLVED	12	0.20	0.12	0.1	0.5	12	0.0024	0.0315	0.155 *	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	105	92	87	80	76	71	67	58	56	52

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	18.05	10.50	2.70	95	1.71

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02129000 -- PEE DEE R NR ROCKINGHAM, NC

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	6	1	7	6	0	1
CADMIUM (CD), UG/L	6	0	1	6	0	0
CHROMIUM (CR), UG/L	6	0	25	6	0	1
COBALT (CO), UG/L	6	0	5	6	0	6
COPPER (CU), UG/L	6	1	13	6	2	4
IRON (FE), UG/L	6	720	3900	6	0	140
LEAD (PB), UG/L	6	4	8	6	0	7
MANGANESE (MN), UG/L	6	94	370	6	0	140
MERCURY (HG), UG/L	6	0.0	0.3	6	0.0	0.2
SELENIUM (SE), UG/L	6	0	0	6	0	0
ZINC (ZN), UG/L	6	8	60	6	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	27.00				
BIOMASS, ASH WT., G/SQ M	1	24.00				
CHLOROPHYLL A, MG/SQ M	1	8.0				
CHLOROPHYLL B, MG/SQ M	1	3.0				
ORGANIC CARBON, MG/L	7	4.0	15.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02132000 NAME: LYNCHES RIVER AT EFFINGHAM S. C.

LAT 34D03M05S LONG 079D45M15S
DRAINAGE AREA: 1030 SQ MI (2668 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	16.23	7.15	5.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	56.4	7.4	50	76					
STREAMFLOW (CUBIC FT/SEC)	13	1301.0	777.0	326	2440	13	-42.474	3695.894	-0.403*	742.8
PH (STANDARD UNITS)	13	6.68	0.23	6.1	7.0	13	0.0195	5.5874	0.622	0.19
PHOSPHORUS, TOTAL	13	0.040	0.012	0.02	0.06	13	0.00063	0.00450	0.402*	0.011
NITRITE + NITRATE, TOTAL	13	0.188	0.076	0.02	0.33	13	0.00470	-0.07745	0.455*	0.071
NITROGEN, KJELDAHL, TOTAL	13	0.351	0.103	0.10	0.46	13	-0.00246	0.48965	-0.176*	0.106
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	223.0	306.7	10	900	13	4.024	-3.897	0.097*	318.8
SEDIMENT, SUSPENDED	12	10.5	3.9	2	16					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	339.6	718.2	42	2600					
STREPTOCOCCI, FECAL (COL/100 ML)	3	180.0	131.1	40	300					
SILICA, DISSOLVED	13	6.68	1.89	3.3	8.6	13	0.0946	1.3521	0.369*	1.83
CALCIUM, DISSOLVED	13	3.26	0.84	2.0	5.2	13	-0.0269	4.7777	-0.235*	0.86
MAGNESIUM, DISSOLVED	13	1.08	0.20	0.7	1.4	13	-0.0129	1.8031	-0.463*	0.19
SODIUM, DISSOLVED	13	6.39	2.31	4.3	13.0	13	0.2750	-9.1125	0.875	1.17
POTASSIUM, DISSOLVED	13	1.24	0.32	0.9	2.0	13	-0.0134	1.9913	-0.305*	0.32
BICARBONATE, ION	13	14.2	5.6	6	22	13	0.366	-6.477	0.483*	5.1
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	5.03	1.25	3.6	8.4	13	-0.0181	6.0485	-0.106*	1.30
CHLORIDE, DISSOLVED	13	6.98	1.53	5.6	11.0	13	0.1783	-3.0675	0.861	0.81
DISSOLVED SOLIDS, SUM OF CONST	13	38.1	6.3	29	52	13	0.651	1.391	0.762	4.3
DISSOLVED SOLIDS, ROE 180 DEG C	13	47.8	12.3	20	66	13	0.947	-5.567	0.569	10.5
HARDNESS, TOTAL	13	12.6	2.5	9	17	13	-0.125	19.637	-0.367*	2.4
HARDNESS, NONCARBONATE	13	2.7	3.7	0	10	13	-0.107	8.708	-0.215*	3.7
TURBIDITY (JTU)	13	5.0	2.6	0	9	13	0.065	1.363	0.182*	2.7
FLOURIDE, DISSOLVED	13	0.17	0.15	0.0	0.6	13	0.0059	-0.1645	0.282*	0.16

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 103

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	111	76	70	68	64	59	51	43	36	32

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
124	17.83	7.79	2.81	85	1.52

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02132000 -- LYNCHES RIVER AT EFFINGHAM S. C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	1	<10	4	0	1
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	1	10	4	1	4
IRON (FE), UG/L	4	500	1500	4	260	730
LEAD (PB), UG/L	4	3	19	4	0	7
MANGANESE (MN), UG/L	4	40	90	4	30	60
MERCURY (HG), UG/L	3	0.1	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	4	8	40	4	3	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	9.09				
BIOMASS, ASH WT., G/SQ M	1	6.50				
CHLOROPHYLL A, MG/SQ M	1	32.0				
CHLOROPHYLL B, MG/SQ M	1	6.5				
ORGANIC CARBON, MG/L	4	6.7	9.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02136000 NAME: BLACK RIVER AT KINGSTREE S. C.

LAT 33D39M40S LONG 079D50M10S
DRAINAGE AREA: 1260 SQ MI (3263 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.63	6.22	9.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	65.3	19.2	42	110					
STREAMFLOW (CUBIC FT/SEC)	12	1239.1	1053.8	124	3010	12	-35.768	3572.917	-0.652	837.9
PH (STANDARD UNITS)	12	6.63	0.17	6.5	7.0	12	0.0066	6.2027	0.736	0.12
PHOSPHORUS, TOTAL	12	0.104	0.060	0.03	0.21	12	0.00217	-0.03737	0.692	0.046
NITRITE + NITRATE, TOTAL	12	0.077	0.049	0.01	0.16	12	0.00073	0.02997	0.287 *	0.049
NITROGEN, KJELDAHL, TOTAL	12	0.592	0.283	0.35	1.40	12	-0.00164	0.69894	-0.111 *	0.295
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	258.4	356.6	17	1200	12	1.477	162.046	0.080 *	372.9
SEDIMENT, SUSPENDED	12	6.6	3.8	1	14					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	107.3	79.1	10	280					
STREPTOCOCCI, FECAL (COL/100 ML)	3	259.3	141.4	100	370					
SILICA, DISSOLVED	12	6.96	3.54	1.2	11.0	12	0.1408	-2.2263	0.764	2.40
CALCIUM, DISSOLVED	12	3.76	0.92	2.5	5.3	12	0.0344	1.5161	0.720	0.67
MAGNESIUM, DISSOLVED	12	1.09	0.34	0.2	1.4	12	-0.0005	1.1218	-0.026 *	0.36
SODIUM, DISSOLVED	12	7.42	3.47	4.2	16.0	12	0.1786	-4.2279	0.989	0.55
POTASSIUM, DISSOLVED	12	1.68	0.62	1.0	2.6	12	0.0284	-0.1672	0.880	0.31
BICARBONATE, ION	12	15.2	8.1	6	35	12	0.324	-5.990	0.768	5.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	6.55	2.26	4.3	11.0	12	0.0787	1.4164	0.669	1.76
CHLORIDE, DISSOLVED	12	8.46	1.58	6.4	11.0	12	0.0724	3.7318	0.883	0.78
DISSOLVED SOLIDS, SUM OF CONST	12	43.7	13.7	27	74	12	0.691	-1.395	0.971	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	61.3	17.3	41	100	12	0.821	7.755	0.914	7.3
HARDNESS, TOTAL	12	13.9	2.9	9	19	12	0.084	8.449	0.554 *	2.5
HARDNESS, NONCARBONATE	12	2.8	3.6	0	11	12	-0.045	5.798	-0.240 *	3.7
TURBIDITY (JTU)	12	2.9	2.1	0	7	12	0.030	0.968	0.278 *	2.1
FLOURIDE, DISSOLVED	12	0.21	0.09	0.0	0.3	12	0.0007	0.1621	0.151 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 114

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	110	75	72	68	66	62	58	54	53	48

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
125	18.49	7.17	2.61	79	1.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02136000 -- BLACK RIVER AT KINGSTREE S. C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	1	10	4	0	1
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	14	4	0	6
IRON (FE), UG/L	4	290	1400	4	200	610
LEAD (PB), UG/L	3	4	25	4	1	48
MANGANESE (MN), UG/L	4	10	40	4	10	40
MERCURY (HG), UG/L	3	0.1	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	10	80	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	2.7	19.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02170500 NAME: LAKES M-M DIV CANAL NR PINEVILLE S. C.

LAT 33D23M15S LONG 080D08M25S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.83	7.44	10.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	70.8	10.5	57	85					
STREAMFLOW (CUBIC FT/SEC)	12	18758.3	5575.3	10900	28700	12	-116.967	27033.770	-0.219*	5705.0
PH (STANDARD UNITS)	12	7.21	0.22	7.0	7.5	12	0.0047	6.8779	0.223*	0.22
PHOSPHORUS, TOTAL	12	0.030	0.015	0.01	0.05	12	-0.00032	0.05236	-0.224*	0.015
NITRITE + NITRATE, TOTAL	12	0.142	0.125	0.01	0.35	12	0.00060	0.09899	0.051*	0.130
NITROGEN, KJELDAHL, TOTAL	12	0.302	0.052	0.23	0.38	12	-0.00153	0.41023	-0.308*	0.052
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8383.3	10024.3	1200	31000	12	345.311	-16047.438	0.360*	9808.0
SEDIMENT, SUSPENDED	12	11.8	5.5	6	25					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	2.3	1.7	0	5					
STREPTOCOCCI, FECAL (COL/100 ML)	3	60.3	62.8	4	128					
SILICA, DISSOLVED	12	9.54	1.34	6.2	11.0	12	0.0257	7.7220	0.201*	1.37
CALCIUM, DISSOLVED	12	4.91	1.20	3.8	7.7	12	0.0975	-1.9903	0.846	0.67
MAGNESIUM, DISSOLVED	12	1.71	0.21	1.4	2.1	12	0.0136	0.7477	0.687	0.16
SODIUM, DISSOLVED	12	6.51	1.80	4.7	9.7	12	0.1678	-5.3624	0.972	0.45
POTASSIUM, DISSOLVED	12	1.73	0.20	1.4	2.1	12	0.0150	0.6740	0.777	0.13
BICARBONATE, ION	12	22.5	2.6	17	27	12	0.059	18.292	0.238*	2.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.53	1.23	4.8	8.4	12	0.1012	-0.6283	0.858	0.67
CHLORIDE, DISSOLVED	12	5.84	1.87	3.7	9.2	12	0.1722	-6.3411	0.961	0.54
DISSOLVED SOLIDS, SUM OF CONST	12	48.0	6.7	40	59	12	0.612	4.688	0.957	2.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	52.1	7.9	40	68	12	0.234	35.532	0.311*	7.8
HARDNESS, TOTAL	12	19.3	3.7	16	28	12	0.294	-1.499	0.826	2.2
HARDNESS, NONCARBONATE	12	1.9	2.7	0	8	12	0.192	-11.663	0.740	1.9
TURBIDITY (JTU)	12	8.0	7.4	1	25	12	-0.301	29.303	-0.423*	7.1
FLOURIDE, DISSOLVED	12	0.17	0.09	0.0	0.3	12	-0.0025	0.3432	-0.294*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 335

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	100	94	92	87	83	70	65	60	58	57

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
349	19.51	9.83	2.80	96	1.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02170500 -- LAKES M-M DIV CANAL NR PINEVILLE S. C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	0	9	4	0	4
IRON (FE), UG/L	4	160	1000	4	10	170
LEAD (PB), UG/L	4	8	10	4	2	10
MANGANESE (MN), UG/L	4	13	50	4	0	20
MERCURY (HG), UG/L	3	0.2	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	4	0	0
ZINC (ZN), UG/L	4	0	60	4	0	7
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.50				
BIOMASS, ASH WT., G/SQ M	2	1.19	1.50			
CHLOROPHYLL A, MG/SQ M	1	5.1				
CHLOROPHYLL B, MG/SQ M	1	.5				
ORGANIC CARBON, MG/L	4	2.0	15.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02171500 NAME: SANTEE RIVER NR. PINEVILLE S. C.

LAT 33D27M15S LONG 080D09M25S
DRAINAGE AREA: 14700 SQ MI (38073 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	26	16.96	5.81	11.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	26	73.5	9.2	52	90					
STREAMFLOW (CUBIC FT/SEC)	12	1640.6	2444.8	391	8010	12	-76.391	7408.082	-0.302*	2444.4
PH (STANDARD UNITS)	26	7.06	0.25	6.7	7.6	26	0.0034	6.8108	0.129*	0.25
PHOSPHORUS, TOTAL	26	0.034	0.017	0.01	0.08	26	-0.00103	0.10989	-0.575	0.014
NITRITE + NITRATE, TOTAL	26	0.125	0.091	0.01	0.28	26	-0.00493	0.48705	-0.503	0.080
NITROGEN, KJELDAHL, TOTAL	26	0.338	0.075	0.20	0.52	26	-0.00312	0.56717	-0.383*	0.071
PHYTOPLANKTON, TOTAL (CELLS/ML)	14	6014.3	4341.7	1500	14000	14	168.679	-6660.754	0.363*	4210.5
SEDIMENT, SUSPENDED	12	9.4	5.9	4	26					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	11	29.5	39.5	0	97					
STREPTOCOCCI, FECAL (COL/100 ML)	1	66.0	0.0	66						
SILICA, DISSOLVED	4	9.75	0.92	8.8	11.0	4	0.0198	8.1973	0.165*	1.11
CALCIUM, DISSOLVED	4	5.17	0.78	4.3	6.2	4	0.0607	0.4078	0.598*	0.77
MAGNESIUM, DISSOLVED	4	1.82	0.19	1.7	2.1	4	0.0184	0.3838	0.745*	0.15
SODIUM, DISSOLVED	4	6.87	1.82	5.8	9.6	4	0.1393	-4.0580	0.587*	1.80
POTASSIUM, DISSOLVED	4	1.80	0.16	1.6	2.0	4	0.0169	0.4698	0.797*	0.12
BICARBONATE, ION	4	21.3	1.9	20	24	4	0.099	13.489	0.401*	2.1
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	7.10	1.39	5.8	8.4	4	-0.0248	9.0507	-0.137*	1.69
CHLORIDE, DISSOLVED	4	6.37	1.50	5.4	8.6	4	0.1122	-2.4288	0.575*	1.50
DISSOLVED SOLIDS, SUM OF CONST	4	49.8	5.6	46	58	4	0.381	19.814	0.527*	5.8
DISSOLVED SOLIDS, ROE 180 DEG C	4	57.8	8.2	50	69	4	-0.720	114.297	-0.676*	7.4
HARDNESS, TOTAL	4	20.5	2.5	18	24	4	0.198	4.977	0.604*	2.5
HARDNESS, NONCARBONATE	4	3.0	1.4	1	4	4	0.124	-6.757	0.675*	1.3
TURBIDITY (JTU)	18	10.4	8.1	1	20	18	-0.797	68.810	-0.874	4.0
FLOURIDE, DISSOLVED	4	0.20	0.14	0.1	0.4	4	-0.0124	1.1757	-0.675*	0.13

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
20	19.65	9.33	2.72	96	1.34

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02171500 -- SANTEE RIVER NR. PINEVILLE S. C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	1	3	0	0
CADMIUM (CD), UG/L	4	0	4	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	12	4	0	3
IRON (FE), UG/L	4	190	920	4	10	180
LEAD (PB), UG/L	4	2	45	4	0	25
MANGANESE (MN), UG/L	4	25	73	4	0	20
MERCURY (HG), UG/L	3	0.2	0.3	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	4	0	100	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.29	13.00			
BIOMASS, ASH WT., G/SQ M	4	.19	8.79			
CHLOROPHYLL A, MG/SQ M	4	.5	26.0			
CHLOROPHYLL B, MG/SQ M	4	.0	12.0			
ORGANIC CARBON, MG/L	4	3.5	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02175000 NAME: EDISTO RIVER NR GIVHANS S.C.

LAT 33D01M40S LONG 080D23M30S
DRAINAGE AREA: 2730 SQ MI (7071 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.46	7.09	9.5	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	51.3	5.4	44	60					
STREAMFLOW (CUBIC FT/SEC)	12	3044.8	1579.5	964	5920	12	116.156	-2917.843	0.400 *	1518.7
PH (STANDARD UNITS)	12	6.73	0.16	6.5	7.0	12	-0.0035	6.9125	-0.122 *	0.16
PHOSPHORUS, TOTAL	12	0.052	0.020	0.02	0.08	12	-0.00138	0.12229	-0.367 *	0.020
NITRITE + NITRATE, TOTAL	12	0.104	0.046	0.04	0.19	12	-0.00319	0.26808	-0.374 *	0.045
NITROGEN, KJELDAHL, TOTAL	12	0.370	0.141	0.01	0.51	12	0.01654	-0.47907	0.636	0.114
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	66.1	73.2	4	250	12	-1.215	128.432	-0.090 *	76.5
SEDIMENT, SUSPENDED	12	6.4	3.7	4	17					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	58.8	47.9	1	170					
STREPTOCOCCI, FECAL (COL/100 ML)	2	170.0	28.3	150	190					
SILICA, DISSOLVED	4	7.70	1.33	6.5	9.6	4	0.0556	4.6848	0.281 *	1.57
CALCIUM, DISSOLVED	4	4.05	0.24	3.8	4.3	4	-0.0325	5.8155	-0.923 *	0.11
MAGNESIUM, DISSOLVED	4	1.10	0.35	0.8	1.6	4	0.0358	-0.8439	0.698 *	0.30
SODIUM, DISSOLVED	4	4.57	0.45	4.2	5.2	4	0.0243	3.2560	0.365 *	0.51
POTASSIUM, DISSOLVED	4	1.10	0.34	0.9	1.6	4	0.0241	-0.2091	0.484 *	0.36
BICARBONATE, ION	4	17.5	10.0	10	32	4	1.071	-40.618	0.724 *	8.4
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	5.42	1.82	3.8	7.1	4	0.0371	3.4116	0.138 *	2.21
CHLORIDE, DISSOLVED	4	4.97	0.49	4.5	5.6	4	-0.0393	7.1073	-0.546 *	0.50
DISSOLVED SOLIDS, SUM OF CONST	4	38.5	4.7	34	43	4	0.684	1.408	0.992 *	0.7
DISSOLVED SOLIDS, ROE 180 DEG C	4	50.8	7.4	43	58	4	0.353	31.609	0.323 *	8.5
HARDNESS, TOTAL	4	14.8	1.0	14	16	4	0.053	11.874	0.374 *	1.1
HARDNESS, NONCARBONATE	4	3.5	2.9	0	7	4	-0.303	19.963	-0.710 *	2.5
TURBIDITY (JTU)	4	2.3	1.3	1	4	4	0.115	-3.998	0.618 *	1.2
FLOURIDE, DISSOLVED	4	0.35	0.44	0.1	1.0	4	0.0420	-1.9311	0.651 *	0.41

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	18.69	9.03	2.80	91	2.42

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02175000 -- EDISTO RIVER NR GIVHANS S.C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	1	<10	4	0	2
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	0	11	4	0	3
IRON (FE), UG/L	4	410	1100	4	160	580
LEAD (PB), UG/L	4	0	68	4	0	68
MANGANESE (MN), UG/L	4	0	50	4	0	30
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	3	4	0	0
ZINC (ZN), UG/L	4	4	20	3	1	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.89				
BIOMASS, ASH WT., G/SQ M	1	1.50				
CHLOROPHYLL A, MG/SQ M	1	.3				
CHLOROPHYLL B, MG/SQ M	1	.1				
ORGANIC CARBON, MG/L	4	8.1	19.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02176500 NAME: COOSAWHATCHIE RIVER NR HAMPTON S.C.

LAT 32D50M10S LONG 081D07M55S
DRAINAGE AREA: 203 SQ MI (526 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	15.92	6.74	5.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	69.3	29.1	40	142					
STREAMFLOW (CUBIC FT/SEC)	12	495.6	543.6	11	1860	12	-10.826	1246.158	-0.579	464.9
PH (STANDARD UNITS)	12	6.60	0.18	6.3	7.0	12	0.0000	6.5993	0.002*	0.18
PHOSPHORUS, TOTAL	12	0.083	0.033	0.04	0.14	12	-0.00038	0.10962	-0.330*	0.033
NITRITE + NITRATE, TOTAL	12	0.081	0.065	0.00	0.20	12	-0.00150	0.18455	-0.669	0.051
NITROGEN, KJELDAHL, TOTAL	12	0.565	0.127	0.33	0.79	12	-0.00271	0.75261	-0.621	0.104
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	222.1	244.6	29	920	12	-3.010	430.742	-0.358*	239.6
SEDIMENT, SUSPENDED	10	5.4	3.5	1	14					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	182.3	266.1	37	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	3	391.0	176.8	220	573					
SILICA, DISSOLVED	12	8.26	3.45	2.7	14.0	12	0.0873	2.2053	0.735	2.46
CALCIUM, DISSOLVED	12	8.02	3.98	4.5	18.0	12	0.1304	-1.0259	0.952	1.28
MAGNESIUM, DISSOLVED	12	1.47	0.61	0.6	3.0	12	0.0195	0.1163	0.931	0.23
SODIUM, DISSOLVED	12	3.96	1.23	2.1	6.2	12	0.0392	1.2381	0.929	0.48
POTASSIUM, DISSOLVED	12	1.31	0.47	0.8	2.2	12	0.0146	0.2978	0.902	0.21
BICARBONATE, ION	12	19.8	10.1	9	48	12	0.110	12.156	0.315*	10.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.68	8.74	3.6	35.0	12	0.2340	-8.5414	0.778	5.75
CHLORIDE, DISSOLVED	12	7.27	1.89	4.8	12.0	12	0.0555	3.4268	0.854	1.03
DISSOLVED SOLIDS, SUM OF CONST	12	48.1	18.7	31	95	12	0.632	4.276	0.984	3.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	67.1	21.4	47	126	12	0.588	26.283	0.800	13.5
HARDNESS, TOTAL	12	26.0	12.1	16	57	12	0.403	-1.921	0.967	3.2
HARDNESS, NONCARBONATE	12	10.2	12.6	0	48	12	0.309	-11.267	0.712	9.3
TURBIDITY (JTU)	12	3.6	1.3	1	6	12	-0.003	3.810	-0.072*	1.4
FLOURIDE, DISSOLVED	12	0.25	0.19	0.0	0.8	12	-0.0011	0.3283	-0.170*	0.20

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 116

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	142	81	79	70	66	61	56	44	42	39

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
118	17.46	7.02	2.74	78	1.75

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02176500 -- COOSAWHATCHIE RIVER NR HAMPTON S.C.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	5	10	4	0	2
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	1	20	4	1	3
IRON (FE), UG/L	4	280	920	4	190	590
LEAD (PB), UG/L	3	5	27	4	2	73
MANGANESE (MN), UG/L	4	30	210	4	20	210
MERCURY (HG), UG/L	3	0.1	0.3	4	0.1	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	20	4	1	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	5.09	9.29			
BIOMASS, ASH WT., G/SQ M	3	.79	5.09			
CHLOROPHYLL A, MG/SQ M	3	.2	5.5			
CHLOROPHYLL B, MG/SQ M	3	.0	1.0			
ORGANIC CARBON, MG/L	4	12.0	33.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02198500 NAME: SAVANNAH RIVER NR CLYO GA.

LAT 32D31M30S LONG 081D15M45S
DRAINAGE AREA: 9850 SQ MI (25512 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	17.79	6.41	9.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	62.1	6.7	52	71					
STREAMFLOW (CUBIC FT/SEC)	17	14808.2	8604.5	7500	39200	16	-1066.375	81441.063	-0.816	5229.2
PH (STANDARD UNITS)	15	7.01	0.21	6.7	7.5	15	0.0140	6.1470	0.453 *	0.19
PHOSPHORUS, TOTAL	16	0.079	0.032	0.03	0.16	16	0.00215	-0.05505	0.447 *	0.030
NITRITE + NITRATE, TOTAL	16	0.231	0.094	0.08	0.45	16	0.00763	-0.24254	0.542	0.082
NITROGEN, KJELDAHL, TOTAL	12	0.302	0.075	0.21	0.46	12	-0.00731	0.75551	-0.588	0.063
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	304.1	253.9	4	880	12	-15.787	1284.186	-0.373 *	247.0
SEDIMENT, SUSPENDED	12	27.8	19.7	8	81					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	111.0	79.1	43	320					
STREPTOCOCCI, FECAL (COL/100 ML)	2	64.5	21.9	49	80					
SILICA, DISSOLVED	4	8.87	1.79	6.2	10.0	4	0.5265	-24.2934	0.989 *	0.32
CALCIUM, DISSOLVED	4	4.90	0.88	4.0	6.1	4	0.1853	-6.7732	0.706 *	0.77
MAGNESIUM, DISSOLVED	4	1.25	0.13	1.1	1.4	4	-0.0088	1.8062	-0.230 *	0.15
SODIUM, DISSOLVED	4	5.82	0.92	4.5	6.6	4	0.2618	-10.6669	0.960 *	0.31
POTASSIUM, DISSOLVED	4	1.37	0.10	1.3	1.5	4	0.0176	0.2633	0.620 *	0.09
BICARBONATE, ION	4	25.0	3.5	22	30	4	0.471	-4.647	0.457 *	3.8
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	4.62	0.48	4.2	5.3	4	0.0588	0.9191	0.414 *	0.53
CHLORIDE, DISSOLVED	4	4.80	0.84	3.7	5.6	4	0.2323	-9.8371	0.926 *	0.39
DISSOLVED SOLIDS, SUM OF CONST	4	44.8	5.3	37	48	4	1.500	-49.750	0.961 *	1.8
DISSOLVED SOLIDS, ROE 180 DEG C	4	49.8	5.4	44	57	4	0.353	27.515	0.218 *	6.5
HARDNESS, TOTAL	8	16.0	2.3	14	21	8	0.094	10.101	0.275 *	2.4
HARDNESS, NONCARBONATE	4	0.3	0.5	0	1	4	0.059	-3.456	0.396 *	0.6
TURBIDITY (JTU)	8	15.8	7.7	7	25	8	-0.561	50.889	-0.482 *	7.3
FLOURIDE, DISSOLVED	4	0.32	0.19	0.2	0.6	4	0.0176	-0.7868	0.314 *	0.22

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	76	73	71	70	68	65	58	47	46	44

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
336	16.82	7.43	2.71	91	1.58

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02198500 -- SAVANNAH RIVER NR CLYO GA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	5	<10	4	0	5
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	5	4	0	4
IRON (FE), UG/L	4	700	2000	4	110	400
LEAD (PB), UG/L	4	0	20	4	0	32
MANGANESE (MN), UG/L	4	40	100	4	20	30
MERCURY (HG), UG/L	3	0.1	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.89				
BIOMASS, ASH WT., G/SQ M	3	.50	23.00			
CHLOROPHYLL A, MG/SQ M	2	4.2	6.0			
CHLOROPHYLL B, MG/SQ M	2	.5	1.3			
ORGANIC CARBON, MG/L	8	3.7	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02202500 NAME: OGEECHEE RIVER NEAR EDEN, GA.

LAT 32D11M29S LONG 081D24M58S
DRAINAGE AREA: 2650 SQ MI (6864 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	18.26	6.65	7.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	53.7	19.5	27	83					
STREAMFLOW (CUBIC FT/SEC)	22	3538.5	3610.8	402	11600	11	-93.508	8500.469	-0.530*	3084.7
PH (STANDARD UNITS)	9	6.93	1.22	5.6	8.9	9	0.0032	6.7670	0.055*	1.30
PHOSPHORUS, TOTAL	10	0.039	0.015	0.01	0.06	10	0.00022	0.02694	0.280*	0.016
NITRITE + NITRATE, TOTAL	10	0.074	0.080	0.00	0.23	10	0.00320	-0.10378	0.782	0.053
NITROGEN, KJELDAHL, TOTAL	10	0.484	0.328	0.22	1.30	10	0.00236	0.35286	0.141*	0.345
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	164.8	377.8	7	1300	11	-5.543	462.618	-0.287*	381.5
SEDIMENT, SUSPENDED	18	13.9	13.6	3	50					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	95.3	191.0	10	566					
STREPTOCOCCI, FECAL (COL/100 ML)	9	261.7	260.9	50	900					
SILICA, DISSOLVED	8	10.96	1.97	8.2	13.0	8	0.0153	10.1786	0.151*	2.10
CALCIUM, DISSOLVED	8	6.82	2.20	4.4	10.0	8	0.0898	2.2242	0.793	1.45
MAGNESIUM, DISSOLVED	8	1.00	0.22	0.7	1.3	8	0.0104	0.4660	0.918	0.09
SODIUM, DISSOLVED	8	3.89	0.73	2.8	5.0	8	0.0240	2.6560	0.643*	0.60
POTASSIUM, DISSOLVED	8	0.99	0.11	0.9	1.2	8	0.0051	0.7268	0.877	0.06
BICARBONATE, ION	8	23.0	10.7	10	36	8	0.465	-0.824	0.845	6.2
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	4.71	0.97	3.2	6.3	8	-0.0324	6.3711	-0.648*	0.80
CHLORIDE, DISSOLVED	8	5.19	1.01	3.9	7.3	8	-0.0033	5.3579	-0.064*	1.09
DISSOLVED SOLIDS, SUM OF CONST	8	45.3	9.2	35	58	8	0.340	27.824	0.715	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	8	55.5	19.4	28	86	8	0.676	20.841	0.675*	15.5
HARDNESS, TOTAL	8	21.3	6.0	14	30	8	0.263	7.785	0.844	3.5
HARDNESS, NONCARBONATE	8	2.9	2.8	0	8	8	-0.097	7.821	-0.669*	2.2
TURBIDITY (JTU)	8	6.4	2.8	3	10	8	-0.035	8.156	-0.239*	3.0
FLOURIDE, DISSOLVED	8	0.25	0.12	0.1	0.5	8	0.0027	0.1121	0.437*	0.12

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
17	17.17	9.10	2.79	95	1.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02202500 -- OGEECHEE RIVER NEAR EDEN, GA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	1	5	0	1
CADMIUM (CD), UG/L	4	0	4	4	0	1
CHROMIUM (CR), UG/L	4	<10	30	6	0	1
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	4	18	4	0	3
IRON (FE), UG/L	4	510	1400	6	300	1100
LEAD (PB), UG/L	4	10	58	4	0	3
MANGANESE (MN), UG/L	4	20	100	6	10	60
MERCURY (HG), UG/L	2	0.1	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	10	160	6	7	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	7.09				
BIOMASS, ASH WT., G/SQ M	1	4.79				
CHLOROPHYLL A, MG/SQ M	1	22.0				
CHLOROPHYLL B, MG/SQ M	1	2.3				
ORGANIC CARBON, MG/L	4	5.7	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02226000 NAME: ALTAMAHA RIVER AT DOCTORTOWN, GA.

LAT 31D39M16S LONG 081D49M41S
DRAINAGE AREA: 13600 SQ MI (35224 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	18.11	6.31	9.5	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	66.4	15.8	42	89					
STREAMFLOW (CUBIC FT/SEC)	20	29298.0	27313.0	3110	103000	11	-980.325	87722.438	-0.799	12316.2
PH (STANDARD UNITS)	9	6.88	1.16	5.5	8.7	9	0.0276	5.0402	0.415 *	1.13
PHOSPHORUS, TOTAL	10	0.063	0.020	0.04	0.11	10	0.00031	0.04210	0.236 *	0.021
NITRITE + NITRATE, TOTAL	10	0.211	0.094	0.07	0.36	10	0.00490	-0.12297	0.803	0.059
NITROGEN, KJELDAHL, TOTAL	10	0.393	0.310	0.03	1.20	10	-0.00330	0.61791	-0.164 *	0.324
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	241.8	182.7	16	470	11	-0.011	242.567	-0.001 *	192.6
SEDIMENT, SUSPENDED	17	77.5	118.5	11	512					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	123.4	111.0	26	330					
STREPTOCOCCI, FECAL (COL/100 ML)	10	228.0	153.8	100	590					
SILICA, DISSOLVED	8	11.47	1.62	9.3	14.0	8	0.0531	7.9971	0.532 *	1.48
CALCIUM, DISSOLVED	8	6.54	2.40	4.3	11.0	8	0.1337	-2.2179	0.904	1.10
MAGNESIUM, DISSOLVED	8	1.30	0.32	0.7	1.8	8	0.0108	0.5916	0.547 *	0.29
SODIUM, DISSOLVED	8	6.74	2.41	4.8	11.0	8	0.0893	0.8905	0.601 *	2.08
POTASSIUM, DISSOLVED	8	1.75	0.39	1.3	2.3	8	0.0130	0.8957	0.549 *	0.35
BICARBONATE, ION	8	26.5	11.2	14	46	8	0.637	-15.221	0.923	4.6
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	8	7.31	2.08	4.6	10.0	8	0.0461	4.2920	0.359 *	2.10
CHLORIDE, DISSOLVED	8	5.72	1.70	4.0	9.0	8	0.0381	3.2295	0.363 *	1.71
DISSOLVED SOLIDS, SUM OF CONST	8	54.3	14.5	39	80	8	0.698	8.542	0.780	9.8
DISSOLVED SOLIDS, ROE 180 DEG C	8	66.8	16.8	44	92	8	0.704	20.615	0.681 *	13.2
HARDNESS, TOTAL	8	21.9	6.7	16	34	8	0.368	-2.243	0.887	3.4
HARDNESS, NONCARBONATE	8	1.4	1.7	0	4	8	-0.069	5.878	-0.661 *	1.4
TURBIDITY (JTU)	8	20.0	6.0	10	30	8	-0.318	40.825	-0.863	3.3
FLOURIDE, DISSOLVED	8	0.22	0.10	0.1	0.4	8	0.0032	0.0185	0.494 *	0.10

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
15	18.15	8.37	2.75	93	1.79

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02226000 -- ALTAMAHA RIVER AT DOCTORTOWN, GA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	1	5	0	1
CADMIUM (CD), UG/L	4	1	2	4	0	1
CHROMIUM (CR), UG/L	4	< 10	30	6	0	1
COBALT (CO), UG/L	4	0	3	4	0	3
COPPER (CU), UG/L	4	6	18	4	1	5
IRON (FE), UG/L	4	680	1700	6	170	770
LEAD (PB), UG/L	4	9	38	4	1	6
MANGANESE (MN), UG/L	4	40	110	6	19	40
MERCURY (HG), UG/L	2	0.1	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	30	70	6	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.09	8.09			
BIOMASS, ASH WT., G/SQ M	3	.09	4.19			
CHLOROPHYLL A, MG/SQ M	3	.1	3.7			
CHLOROPHYLL B, MG/SQ M	3	.0	.5			
ORGANIC CARBON, MG/L	4	3.5	23.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02228000 NAME: SATILLA RIVER AT ATKINSON, GA.

LAT 31D13M16S LONG 081D52M03S
DRAINAGE AREA: 2790 SQ MI (7226 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	19.25	6.69	7.5	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	44.9	8.8	28	63					
STREAMFLOW (CUBIC FT/SEC)	23	2614.4	3596.9	134	16800	14	-187.970	11337.355	-0.386 *	4135.7
PH (STANDARD UNITS)	12	6.04	1.49	4.6	8.9	12	0.0651	3.0885	0.414 *	1.42
PHOSPHORUS, TOTAL	13	0.072	0.046	0.01	0.16	13	0.00338	-0.08200	0.665	0.036
NITRITE + NITRATE, TOTAL	13	0.105	0.096	0.00	0.28	13	0.00700	-0.21229	0.659	0.075
NITROGEN, KJELDAHL, TOTAL	10	0.699	0.274	0.34	1.30	10	-0.00661	0.98472	-0.189 *	0.285
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	520.6	806.9	6	2700	11	17.431	-225.712	0.163 *	839.2
SEDIMENT, SUSPENDED	16	26.1	31.0	5	126					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	144.5	204.5	20	630					
STREPTOCOCCI, FECAL (COL/100 ML)	10	516.8	495.7	50	1600					
SILICA, DISSOLVED	8	8.20	2.08	6.1	11.0	8	0.1560	1.5297	0.631 *	1.74
CALCIUM, DISSOLVED	8	2.66	1.22	1.3	4.9	8	0.0388	1.0057	0.267 *	1.27
MAGNESIUM, DISSOLVED	8	1.02	0.29	0.8	1.5	8	0.0165	0.3190	0.476 *	0.28
SODIUM, DISSOLVED	8	4.60	1.63	3.0	7.5	8	0.1090	-0.0605	0.563 *	1.45
POTASSIUM, DISSOLVED	8	1.27	0.33	1.0	2.0	8	0.0025	1.1668	0.064 *	0.36
BICARBONATE, ION	8	3.9	3.6	0	11	8	0.247	-6.672	0.569 *	3.2
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	8	6.50	0.80	4.8	7.4	8	0.0744	3.3208	0.782	0.54
CHLORIDE, DISSOLVED	8	7.75	1.88	5.7	11.0	8	0.0859	4.0769	0.384 *	1.87
DISSOLVED SOLIDS, SUM OF CONST	8	34.3	8.7	26	48	8	0.635	7.093	0.616 *	7.4
DISSOLVED SOLIDS, ROE 180 DEG C	8	56.8	11.0	42	74	8	0.339	42.240	0.259 *	11.5
HARDNESS, TOTAL	11	11.4	4.4	7	20	11	0.252	-0.098	0.554 *	3.9
HARDNESS, NONCARBONATE	8	7.8	3.8	3	13	8	-0.062	10.392	-0.136 *	4.1
TURBIDITY (JTU)	11	4.7	1.3	2	7	11	-0.047	6.863	-0.336 *	1.3
FLOURIDE, DISSOLVED	8	0.19	0.08	0.1	0.3	8	-0.0041	0.3629	-0.413 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 141

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	58	48	44	42	40	38	35	33	32	27

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
335	19.98	8.22	2.83	92	1.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02228000 -- SATILLA RIVER AT ATKINSON, GA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	0
CHROMIUM (CR), UG/L	4	<10	30	5	0	3
COBALT (CO), UG/L	4	0	1	4	0	3
COPPER (CU), UG/L	4	6	16	4	1	6
IRON (FE), UG/L	4	890	1800	5	420	1100
LEAD (PB), UG/L	4	8	42	4	1	3
MANGANESE (MN), UG/L	4	24	40	5	10	40
MERCURY (HG), UG/L	2	0.1	1.8	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	4	0	0
ZINC (ZN), UG/L	4	20	50	5	8	100
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	5.39				
CHLOROPHYLL A, MG/SQ M	1	30.0				
CHLOROPHYLL B, MG/SQ M	1	11.0				
ORGANIC CARBON, MG/L	7	10.0	25.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02231000 NAME: ST MARYS RIVER NR MACCLENNY, FLA.

LAT 30D21M31S LONG 082D04M54S
DRAINAGE AREA: 700 SQ MI (1813 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	20.08	4.89	10.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	47.1	9.6	36	64					
STREAMFLOW (CUBIC FT/SEC)	12	546.3	565.5	80	1850	12	-18.870	1417.479	-0.315 *	562.9
PH (STANDARD UNITS)	13	5.06	0.99	3.8	6.8	13	0.0702	1.7587	0.681	0.76
PHOSPHORUS, TOTAL	13	0.045	0.021	0.02	0.10	13	0.00186	-0.04291	0.834	0.012
NITRITE + NITRATE, TOTAL	12	0.062	0.038	0.02	0.14	12	0.00130	0.00254	0.321 *	0.038
NITROGEN, KJELDAHL, TOTAL	12	0.657	0.140	0.35	0.89	12	-0.00812	1.03255	-0.547 *	0.123
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	887.8	2739.3	4	10000	13	153.841	-6354.496	0.540 *	2407.4
SEDIMENT, SUSPENDED	13	4.7	3.4	1	15					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	65.4	63.1	10	180					
STREPTOCOCCI, FECAL (COL/100 ML)	10	34.5	34.6	5	100					
SILICA, DISSOLVED	13	4.91	1.45	3.2	7.8	13	0.1293	-1.1773	0.859	0.78
CALCIUM, DISSOLVED	13	3.33	1.32	1.5	6.0	13	0.1090	-1.7998	0.795	0.84
MAGNESIUM, DISSOLVED	13	1.20	0.61	0.5	2.2	13	0.0444	-0.8891	0.704	0.45
SODIUM, DISSOLVED	13	3.42	0.83	2.5	5.0	13	0.0686	0.1949	0.794	0.53
POTASSIUM, DISSOLVED	13	0.37	0.17	0.2	0.7	13	0.0145	-0.3143	0.845	0.09
BICARBONATE, ION	13	7.5	9.8	0	30	13	0.800	-30.111	0.786	6.3
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	13	5.92	1.61	2.4	8.2	13	-0.1023	10.7379	-0.610	1.33
CHLORIDE, DISSOLVED	13	6.61	1.28	4.8	9.3	13	0.1038	1.7220	0.778	0.84
DISSOLVED SOLIDS, SUM OF CONST	13	30.1	9.1	21	48	13	0.769	-6.109	0.817	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	13	60.8	8.2	49	75	13	0.175	52.538	0.205 *	8.4
HARDNESS, TOTAL	13	13.4	5.8	6	24	13	0.463	-8.423	0.771	3.8
HARDNESS, NONCARBONATE	13	7.3	3.3	0	12	13	-0.184	15.966	-0.536 *	2.9
TURBIDITY (JTU)	13	3.9	2.4	1	9	13	0.001	3.877	0.004 *	2.5
FLOURIDE, DISSOLVED	13	0.26	0.17	0.1	0.7	13	-0.0059	0.5396	-0.342 *	0.16

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 359

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	69	66	62	50	47	42	39	37	36	33

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
359	19.78	5.96	2.55	75	2.46

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02231000 -- ST MARYS RIVER NR MACCLENNY, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	2	5	0	1
CADMIUM (CD), UG/L	4	1	1	5	0	2
CHROMIUM (CR), UG/L	4	<10	<10	5	0	1
COBALT (CO), UG/L	4	0	3	5	0	0
COPPER (CU), UG/L	4	0	8	5	0	2
IRON (FE), UG/L	4	400	880	5	250	800
LEAD (PB), UG/L	4	4	15	5	0	8
MANGANESE (MN), UG/L	4	0	20	5	0	30
MERCURY (HG), UG/L	5	0.0	0.2	5	0.0	0.2
SELENIUM (SE), UG/L	5	0	0	5	0	0
ZINC (ZN), UG/L	4	7	50	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	3.09	57.00			
BIOMASS, ASH WT., G/SQ M	5	1.50	43.00			
CHLOROPHYLL A, MG/SQ M	4	5.5	40.0			
CHLOROPHYLL B, MG/SQ M	4	.8	4.7			
ORGANIC CARBON, MG/L	6	10.0	32.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02244450 NAME: ST. JOHNS RIVER AT PALATKA, FLA.

LAT 29D38M48S LONG 081D37M32S
DRAINAGE AREA: 7065 SQ MI (18298 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	23.97	5.43	12.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	968.3	243.3	614	1380					
STREAMFLOW (CUBIC FT/SEC)	12	11946.7	12983.1	-26000	27700	12	-27.482	38982.449	-0.576	11132.9
PH (STANDARD UNITS)	14	7.61	0.81	5.4	8.7	14	0.0016	6.0766	0.473*	0.74
PHOSPHORUS, TOTAL	12	0.073	0.035	0.03	0.16	12	-0.00007	0.14329	-0.553*	0.031
NITRITE + NITRATE, TOTAL	12	0.069	0.068	0.01	0.20	12	-0.00011	0.17648	-0.435*	0.065
NITROGEN, KJELDAHL, TOTAL	12	1.047	0.281	0.73	1.61	12	0.00063	0.42898	0.609	0.234
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	104516.6	192911.1	2900	670000	11	600.969	-467354.750	0.754	140062.5
SEDIMENT, SUSPENDED	12	10.3	6.0	4	26					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	11.6	9.4	0	30					
STREPTOCOCCI, FECAL (COL/100 ML)	10	53.5	50.1	0	140					
SILICA, DISSOLVED	12	6.17	5.34	0.3	14.0	12	0.0079	-1.5561	0.400*	5.14
CALCIUM, DISSOLVED	12	47.58	9.02	32.0	59.0	12	0.0285	19.5460	0.860	4.84
MAGNESIUM, DISSOLVED	12	17.33	4.16	12.0	23.0	12	0.0144	3.1798	0.940	1.49
SODIUM, DISSOLVED	12	122.75	35.31	76.0	180.0	12	0.1243	0.4918	0.957	10.69
POTASSIUM, DISSOLVED	12	4.57	0.84	3.5	6.0	12	0.0027	1.8738	0.891	0.40
BICARBONATE, ION	12	87.6	14.5	62	116	12	0.019	69.348	0.347*	14.3
CARBONATE, ION	11	0.3	0.9	0	3	11	0.001	-1.174	0.465*	0.8
SULFATE, DISSOLVED	12	64.83	17.45	37.0	89.0	12	0.0616	4.2346	0.960	5.09
CHLORIDE, DISSOLVED	12	225.00	66.54	140.0	330.0	12	0.2351	-6.3226	0.961	19.23
DISSOLVED SOLIDS, SUM OF CONST	12	533.4	136.0	340	728	12	0.485	56.114	0.970	34.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	592.6	162.4	403	935	12	0.562	39.500	0.942	57.4
HARDNESS, TOTAL	12	191.2	51.3	94	280	12	0.168	26.028	0.891	24.4
HARDNESS, NONCARBONATE	12	122.9	40.0	76	200	12	0.139	-14.184	0.947	13.5
TURBIDITY (JTU)	12	4.4	1.6	2	7	12	0.005	-0.046	0.789	1.0
FLOURIDE, DISSOLVED	12	0.30	0.10	0.2	0.5	12	0.0001	0.2226	0.224*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1360	1230	1200	1150	1100	1000	890	720	680	650

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	24.37	6.62	2.94	90	1.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02244450 -- ST. JOHNS RIVER AT PALATKA, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	0	1	4	0	2
CHROMIUM (CR), UG/L	4	<10	10	4	0	1
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	1	7	4	0	10
IRON (FE), UG/L	4	90	560	6	0	380
LEAD (PB), UG/L	4	4	26	4	0	9
MANGANESE (MN), UG/L	4	10	30	4	0	10
MERCURY (HG), UG/L	4	0.1	0.2	4	0.1	0.4
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	4	0	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.29	6.69			
BIOMASS, ASH WT., G/SQ M	4	.79	3.50			
CHLOROPHYLL A, MG/SQ M	4	.3	8.8			
CHLOROPHYLL B, MG/SQ M	4	.0	1.1			
ORGANIC CARBON, MG/L	8	9.0	26.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02248000 NAME: SPRUCE CREEK NEAR SAMSULA, FLA.

LAT 29D03M01S LONG 081D02M49S
DRAINAGE AREA: 33 SQ MI (87 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.67	3.63	13.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	405.9	209.6	80	690					
STREAMFLOW (CUBIC FT/SEC)	12	15.2	34.2	1	120	12	-0.103	56.954	-0.630	27.9
PH (STANDARD UNITS)	12	7.03	0.76	4.9	7.7	12	0.0027	5.9382	0.740	0.54
PHOSPHORUS, TOTAL	12	0.123	0.051	0.05	0.22	12	0.00010	0.08473	0.395*	0.049
NITRITE + NITRATE, TOTAL	12	0.079	0.042	0.04	0.17	12	-0.00003	0.09295	-0.169*	0.044
NITROGEN, KJELDAHL, TOTAL	12	1.017	0.399	0.55	1.69	12	-0.00163	1.68037	-0.859	0.214
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	633.8	836.9	9	3200	11	1.962	-148.391	0.470*	850.8
SEDIMENT, SUSPENDED	12	7.6	4.5	3	19					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	343.6	238.2	75	835					
STREPTOCOCCI, FECAL (COL/100 ML)	11	376.5	243.7	22	880					
SILICA, DISSOLVED	10	10.96	3.83	5.0	16.0	8	0.0167	4.4173	0.979	0.94
CALCIUM, DISSOLVED	10	58.60	37.11	10.0	110.0	8	0.1659	-7.7873	0.989	6.52
MAGNESIUM, DISSOLVED	10	4.96	2.04	2.2	7.7	8	0.0091	1.3094	0.982	0.46
SODIUM, DISSOLVED	10	23.38	9.71	7.8	35.0	8	0.0442	5.1663	0.997	0.88
POTASSIUM, DISSOLVED	10	1.15	0.56	0.7	2.5	8	0.0010	0.8598	0.421*	0.56
BICARBONATE, ION	10	180.6	124.7	14	351	8	0.559	-42.870	0.993	17.7
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	10	12.19	4.24	5.5	20.0	8	-0.0062	14.5462	-0.321*	4.90
CHLORIDE, DISSOLVED	10	37.10	13.65	14.0	52.0	8	0.0611	12.3071	0.984	2.97
DISSOLVED SOLIDS, SUM OF CONST	10	238.1	126.0	61	414	8	0.567	10.741	0.995	15.4
DISSOLVED SOLIDS, ROE 180 DEG C	10	288.5	104.2	160	436	8	0.456	109.920	0.981	24.1
HARDNESS, TOTAL	10	142.2	118.6	20	310	8	0.449	-13.406	0.988	18.9
HARDNESS, NONCARBONATE	10	42.6	51.4	13	140	8	-0.008	21.595	-0.543*	3.4
TURBIDITY (JTU)	14	5.6	2.9	1	10	12	0.008	2.984	0.545*	2.6
FLOURIDE, DISSOLVED	10	0.43	0.28	0.1	1.0	8	-0.0011	0.9101	-0.875	0.16

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 156

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	752	733	722	710	688	593	354	173	125	114

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
156	22.97	3.93	2.50	78	1.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02248000 -- SPRUCE CREEK NEAR SAMSULA, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	0	3
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	0	< 10	4	0	2
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	2	4	0	2
IRON (FE), UG/L	4	1400	1900	4	370	1600
LEAD (PB), UG/L	4	2	14	4	0	9
MANGANESE (MN), UG/L	4	0	40	4	0	44
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	8	30	4	2	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	8.29	52.00			
BIOMASS, ASH WT., G/SQ M	4	5.09	42.00			
CHLOROPHYLL A, MG/SQ M	4	3.8	16.0			
CHLOROPHYLL B, MG/SQ M	4	.8	3.5			
ORGANIC CARBON, MG/L	4	12.0	35.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02253000 NAME: MAIN CANAL AT VERO BEACH, FLA.

LAT 27D38M54S LONG 080D24M10S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	24.88	3.38	19.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1474.2	230.1	1200	1900					
STREAMFLOW (CUBIC FT/SEC)	12	66.3	62.4	1	202	12	0.022	33.497	0.082 *	65.2
PH (STANDARD UNITS)	12	7.47	0.19	7.2	7.7	12	0.0003	7.0734	0.327 *	0.19
PHOSPHORUS, TOTAL	12	0.123	0.052	0.07	0.23	12	0.00002	0.10046	0.069 *	0.054
NITRITE + NITRATE, TOTAL	12	0.169	0.133	0.02	0.44	12	-0.00015	0.38703	-0.257 *	0.134
NITROGEN, KJELDAHL, TOTAL	12	0.854	0.316	0.47	1.42	12	-0.00072	1.91394	-0.523 *	0.283
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4812.5	4135.1	310	14000	12	-11.852	22283.813	-0.659	3260.3
SEDIMENT, SUSPENDED	12	7.3	7.8	2	31					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	262.4	414.5	10	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	11	664.7	1173.1	12	3060					
SILICA, DISSOLVED	9	9.98	2.35	6.0	12.0	9	-0.0058	18.2868	-0.521 *	2.14
CALCIUM, DISSOLVED	9	95.33	7.94	85.0	110.0	9	0.0152	73.4071	0.407 *	7.75
MAGNESIUM, DISSOLVED	9	31.33	7.14	22.0	43.0	9	0.0328	-16.0737	0.978	1.61
SODIUM, DISSOLVED	9	145.56	31.67	110.0	200.0	9	0.1454	-64.2549	0.976	7.42
POTASSIUM, DISSOLVED	9	8.13	2.95	5.5	15.0	9	0.0109	-7.6660	0.789	1.94
BICARBONATE, ION	9	198.0	13.0	174	214	9	0.005	190.772	0.082 *	13.9
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	92.56	13.34	74.0	110.0	9	0.0598	6.2350	0.953	4.34
CHLORIDE, DISSOLVED	9	297.78	65.53	220.0	400.0	9	0.3007	-136.2212	0.975	15.49
DISSOLVED SOLIDS, SUM OF CONST	9	780.7	119.8	632	975	9	0.558	-25.297	0.991	17.2
DISSOLVED SOLIDS, ROE 180 DEG C	9	898.0	135.2	766	1180	9	0.602	29.491	0.946	46.7
HARDNESS, TOTAL	9	370.0	39.4	320	430	9	0.170	125.171	0.916	16.9
HARDNESS, NONCARBONATE	9	205.6	38.1	150	260	9	0.173	-43.796	0.963	10.9
TURBIDITY (JTU)	12	5.4	4.8	1	19	12	-0.001	6.507	-0.035 *	5.0
FLOURIDE, DISSOLVED	9	0.63	0.17	0.3	0.9	9	-0.0003	1.0807	-0.380 *	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 208

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2140	2010	1920	1670	1570	1450	1270	1160	1050	925

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
207	26.06	3.74	2.85	74	1.10

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02253000 -- MAIN CANAL AT VERO BEACH, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	0	<10	4	0	0
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	3	9	4	0	7
IRON (FE), UG/L	4	520	1300	4	50	220
LEAD (PB), UG/L	4	1	8	4	0	5
MANGANESE (MN), UG/L	4	30	60	4	10	30
MERCURY (HG), UG/L	4	0.1	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	9	30	4	4	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.89	8.50			
BIOMASS, ASH WT., G/SQ M	2	.29	2.69			
CHLOROPHYLL A, MG/SQ M	2	.8	23.0			
CHLOROPHYLL B, MG/SQ M	2	.0	3.5			
ORGANIC CARBON, MG/L	4	9.0	14.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02273000 NAME: KISSIMMEE RIVER AT S-65 E

LAT 27D13M32S LONG 080D57M46S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	25	24.44	3.89	17.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	25	177.7	67.7	0	320					
STREAMFLOW (CUBIC FT/SEC)	25	610.5	797.5	0	3200	25	-5.709	1625.109	-0.485	712.6
PH (STANDARD UNITS)	24	6.95	0.45	6.1	7.8	24	0.0034	6.3486	0.516	0.39
PHOSPHORUS, TOTAL	25	0.074	0.058	0.03	0.25	25	-0.00035	0.13552	-0.410*	0.054
NITRITE + NITRATE, TOTAL	25	0.199	0.141	0.01	0.41	25	0.00132	-0.03598	0.634	0.112
NITROGEN, KJELDAHL, TOTAL	25	0.946	0.149	0.63	1.33	25	-0.00178	1.26195	-0.805	0.090
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	4328.5	5903.7	83	16000	11	-63.088	15512.289	-0.571	5108.9
SEDIMENT, SUSPENDED	12	3.2	1.9	1	7					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	25	4.4	5.8	0	21					
STREPTOCOCCI, FECAL (COL/100 ML)	11	12.2	20.7	0	70					
SILICA, DISSOLVED	25	3.55	1.08	1.5	5.3	25	0.0021	3.1819	0.130*	1.09
CALCIUM, DISSOLVED	4	17.00	7.35	11.0	26.0	4	0.1127	-4.0431	0.986*	1.50
MAGNESIUM, DISSOLVED	4	4.07	1.24	2.8	5.7	4	0.0192	0.4944	0.991*	0.21
SODIUM, DISSOLVED	4	13.00	4.97	9.0	20.0	4	0.0765	-1.2846	0.990*	0.84
POTASSIUM, DISSOLVED	4	1.45	0.40	1.1	2.0	4	0.0063	0.2782	0.998*	0.03
BICARBONATE, ION	4	40.5	14.6	27	58	4	0.224	-1.383	0.987*	2.9
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	18.47	10.31	9.9	32.0	4	0.1600	-11.4064	0.998*	0.73
CHLORIDE, DISSOLVED	4	21.50	9.47	14.0	35.0	4	0.1450	-5.5866	0.985*	2.00
DISSOLVED SOLIDS, SUM OF CONST	4	99.8	41.0	66	154	4	0.637	-19.235	0.998*	2.9
DISSOLVED SOLIDS, RUE 180 DEG C	25	141.2	45.4	55	252	25	0.505	51.439	0.752	30.6
HARDNESS, TOTAL	4	59.5	23.6	39	89	4	0.364	-8.559	0.994*	3.3
HARDNESS, NONCARBONATE	4	26.0	11.5	17	41	4	0.178	-7.190	0.995*	1.4
TURBIDITY (JTU)	25	3.2	1.2	1	5	25	-0.002	3.598	-0.131*	1.2
FLOURIDE, DISSOLVED	6	0.83	0.66	0.3	2.0	6	-0.0027	1.3668	-0.230*	0.72

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 361

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	320	299	289	265	229	164	140	117	113	110

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	23.63	5.82	2.81	87	1.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02273000 -- KISSIMMEE RIVER AT S-65 E

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	0	<10	4	0	1
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	2	4	1	2
IRON (FE), UG/L	25	190	1900	4	20	240
LEAD (PB), UG/L	4	1	6	4	0	6
MANGANESE (MN), UG/L	4	0	24	4	0	10
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	20	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	5.39	21.00			
BIOMASS, ASH WT., G/SQ M	4	2.29	8.89			
CHLOROPHYLL A, MG/SQ M	4	35.0	130.0			
CHLOROPHYLL B, MG/SQ M	4	9.5	42.0			
ORGANIC CARBON, MG/L	25	11.0	23.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02279000 NAME: WEST PALM BEACH CANAL AT WEST PALM BEACH FLA

LAT 26D38M40S LONG 080D03M32S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	25.04	4.16	16.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	699.6	79.1	590	900					
STREAMFLOW (CUBIC FT/SEC)	11	39.6	81.0	0	232	10	-0.205	184.689	-0.116*	88.7
PH (STANDARD UNITS)	13	7.80	0.44	7.1	8.8	13	0.0011	7.0556	0.192*	0.45
PHOSPHORUS, TOTAL	11	0.112	0.045	0.07	0.22	11	-0.00035	0.35713	-0.660	0.036
NITRITE + NITRATE, TOTAL	11	0.326	0.101	0.18	0.44	11	0.00022	0.17093	0.186*	0.105
NITROGEN, KJELDAHL, TOTAL	11	1.238	0.167	1.07	1.62	11	0.00132	0.32263	0.662	0.133
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	31438.2	72833.8	520	250000	11	-310.999	246592.500	-0.357*	71723.9
SEDIMENT, SUSPENDED	11	6.1	4.7	1	16					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	142.0	198.2	20	700					
STREPTOCOCCI, FECAL (COL/100 ML)	11	40.7	26.7	10	100					
SILICA, DISSOLVED	13	8.20	1.89	5.2	13.0	13	0.0152	-2.4581	0.639	1.51
CALCIUM, DISSOLVED	13	81.15	13.86	60.0	100.0	13	0.0551	42.6374	0.314*	13.74
MAGNESIUM, DISSOLVED	13	9.62	3.97	5.9	16.0	13	0.0181	-3.0598	0.361*	3.87
SODIUM, DISSOLVED	13	49.46	12.31	30.0	70.0	13	0.1107	-27.9509	0.711	9.03
POTASSIUM, DISSOLVED	13	3.75	0.66	2.8	4.7	13	0.0001	3.6928	0.009*	0.69
BICARBONATE, ION	13	234.2	30.8	188	284	13	0.149	129.745	0.384*	29.7
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	44.46	6.17	34.0	55.0	13	0.0363	19.0621	0.465*	5.71
CHLORIDE, DISSOLVED	13	78.69	17.89	50.0	110.0	13	0.1760	-44.4111	0.778	11.73
DISSOLVED SOLIDS, SUM OF CONST	13	392.2	43.2	303	497	13	0.486	51.874	0.890	20.6
DISSOLVED SOLIDS, ROE 180 DEG C	13	434.4	59.1	335	578	13	0.630	-6.323	0.843	33.3
HARDNESS, TOTAL	13	243.8	26.6	200	300	13	0.228	84.408	0.677	20.5
HARDNESS, NONCARBONATE	13	51.0	10.3	36	64	13	0.089	-11.583	0.686	7.8
TURBIDITY (JTU)	11	6.2	5.5	0	20	11	-0.035	30.117	-0.526*	4.9
FLOURIDE, DISSOLVED	13	0.32	0.14	0.0	0.5	13	0.0005	-0.0598	0.304*	0.14

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	25.11	4.81	3.19	72	2.39

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02279000 -- WEST PALM BEACH CANAL AT WEST PALM BEACH FLA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	1	3
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	0	40	4	0	1
COBALT (CO), UG/L	4	0	3	4	0	1
COPPER (CU), UG/L	4	5	10	4	1	4
IRON (FE), UG/L	4	150	350	6	20	140
LEAD (PB), UG/L	4	6	15	4	0	2
MANGANESE (MN), UG/L	4	10	20	4	0	20
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	1.50				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	5	16.0	21.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02288600 NAME: MIAMI CANAL AT N.W. 36TH STREET, MIAMI, FLA

AT 25D48M29S LONG 080D15M44S
RAINAGE AREA: 0 SQ MI (0 SQ KM)
ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	26.05	3.41	20.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	659.4	92.0	570	1040					
STREAMFLOW (CUBIC FT/SEC)	9	37.7	59.7	0	138	9	0.321	-169.545	0.190 *	62.7
PH (STANDARD UNITS)	11	7.66	0.37	6.7	8.0	11	0.0009	7.1174	0.083 *	0.39
PHOSPHORUS, TOTAL	11	0.011	0.007	0.00	0.02	10	-0.00011	0.07933	-0.534 *	0.007
NITRITE + NITRATE, TOTAL	11	0.229	0.111	0.07	0.43	10	0.00127	-0.60521	0.502 *	0.086
NITROGEN, KJELDAHL, TOTAL	11	1.304	0.162	1.11	1.63	10	-0.00130	2.13757	-0.280 *	0.174
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2445.5	4237.1	210	15000	11	-67.010	45209.824	-0.574 *	3657.9
SEDIMENT, SUSPENDED	11	4.2	8.0	0	28					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	154.2	158.6	20	430					
STREPTOCOCCI, FECAL (COL/100 ML)	11	77.5	59.8	2	180					
SILICA, DISSOLVED	11	6.36	1.36	4.1	8.8	11	-0.0025	7.9503	-0.066 *	1.43
CALCIUM, DISSOLVED	11	81.00	6.34	64.0	88.0	11	0.0942	20.8840	0.539 *	5.63
MAGNESIUM, DISSOLVED	11	9.71	1.02	8.6	12.0	11	-0.0019	10.9142	-0.067 *	1.07
SODIUM, DISSOLVED	11	42.36	5.43	34.0	52.0	11	0.1023	-22.9530	0.684	4.17
POTASSIUM, DISSOLVED	11	1.73	0.29	1.4	2.4	11	-0.0053	5.0953	-0.652	0.23
BICARBONATE, ION	11	278.0	20.7	219	298	11	0.420	9.893	0.736	14.8
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	6.10	5.33	2.0	21.0	11	-0.0842	59.8645	-0.574 *	4.60
CHLORIDE, DISSOLVED	23	80.22	29.17	55.0	200.0	23	0.3042	-120.3915	0.960	8.38
DISSOLVED SOLIDS, SUM OF CONST	11	353.5	19.8	328	386	11	0.460	59.750	0.843	11.2
DISSOLVED SOLIDS, ROE 180 DEG C	11	387.5	26.3	333	428	11	0.220	247.428	0.303 *	26.4
HARDNESS, TOTAL	11	243.6	14.3	210	260	11	0.226	99.570	0.571 *	12.4
HARDNESS, NONCARBONATE	11	15.6	8.2	0	31	11	-0.103	81.438	-0.459 *	7.6
TURBIDITY (JTU)	12	1.4	1.2	0	3	11	0.016	-8.688	0.513 *	1.0
FLOURIDE, DISSOLVED	11	0.29	0.14	0.0	0.5	11	-0.0012	1.0269	-0.289 *	0.15

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02288600 -- MIAMI CANAL AT N.W. 36TH STREET, MIAMI, FLA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	50	4	0	1
COBALT (CO), UG/L	4	0	2	4	0	2
COPPER (CU), UG/L	4	2	6	4	1	2
IRON (FE), UG/L	4	210	440	4	60	140
LEAD (PB), UG/L	4	4	17	4	0	3
MANGANESE (MN), UG/L	4	0	30	4	0	100
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	8	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.29	2.50			
BIOMASS, ASH WT., G/SQ M	3	1.59	8.50			
CHLOROPHYLL A, MG/SQ M	2	6.1	12.0			
CHLOROPHYLL B, MG/SQ M	2	1.0	1.5			
ORGANIC CARBON, MG/L	5	19.0	24.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02292480 NAME: CALOOSAHATCHEE CANAL AT ORTONA LOCK NR LA BELLE

LAT 26D47M22S LONG 081D18M11S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	28.22	3.34	23.0	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	560.0	71.8	420	640					
STREAMFLOW (CUBIC FT/SEC)	7	535.3	719.9	8	2070	7	-11.317	7163.543	-0.796	477.8
PH (STANDARD UNITS)	9	7.74	0.32	7.1	8.2	9	0.0028	6.1814	0.625*	0.27
PHOSPHORUS, TOTAL	9	0.134	0.065	0.05	0.22	9	-0.00078	0.57348	-0.870	0.034
NITRITE + NITRATE, TOTAL	9	0.181	0.212	0.02	0.68	9	-0.00078	0.62013	-0.266*	0.218
NITROGEN, KJELDAHL, TOTAL	9	1.387	0.129	1.23	1.64	9	-0.00020	1.49689	-0.109*	0.137
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	21063.3	41387.3	140	120000	9	279.179	-135277.063	0.484*	38715.2
SEDIMENT, SUSPENDED	9	2.9	1.1	2	5					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	49.5	46.6	8	150					
STREPTOCOCCI, FECAL (COL/100 ML)	9	48.0	46.9	6	160					
SILICA, DISSOLVED	9	6.44	2.45	2.2	9.7	9	-0.0202	17.7533	-0.591*	2.12
CALCIUM, DISSOLVED	9	56.67	7.97	45.0	68.0	9	-0.0228	69.4433	-0.205*	8.34
MAGNESIUM, DISSOLVED	9	12.68	4.06	7.3	18.0	9	0.0524	-16.6400	0.924	1.66
SODIUM, DISSOLVED	9	40.67	12.77	22.0	59.0	9	0.1670	-52.8479	0.939	4.71
POTASSIUM, DISSOLVED	9	4.36	0.63	3.1	5.4	9	0.0072	0.3052	0.826	0.38
BICARBONATE, ION	9	182.4	18.9	153	211	9	0.051	154.037	0.192*	19.9
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	37.00	13.44	19.0	56.0	9	0.1728	-59.7767	0.923	5.52
CHLORIDE, DISSOLVED	9	63.78	17.54	36.0	90.0	9	0.2306	-65.3484	0.943	6.22
DISSOLVED SOLIDS, SUM OF CONST	9	312.9	44.9	219	356	9	0.615	-31.674	0.984	8.5
DISSOLVED SOLIDS, ROE 180 DEG C	9	348.1	44.3	263	405	9	0.505	65.393	0.818	27.2
HARDNESS, TOTAL	9	195.6	18.8	150	210	9	0.172	99.051	0.658*	15.1
HARDNESS, NONCARBONATE	9	45.9	13.7	25	61	9	0.130	-26.830	0.682	10.7
TURBIDITY (JTU)	9	3.3	2.4	0	6	9	-0.008	7.683	-0.232*	2.5
FLOURIDE, DISSOLVED	9	0.43	0.19	0.1	0.8	9	0.0011	-0.1783	0.419*	0.18

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02292480 -- CALOOSAHATCHEE CANAL AT ORTONA LOCK NR LA BELLE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	3	1	2
CADMIUM (CD), UG/L	3	0	1	3	0	1
CHROMIUM (CR), UG/L	3	<10	<10	3	0	0
COBALT (CO), UG/L	3	0	1	3	0	2
COPPER (CU), UG/L	3	4	30	3	1	3
IRON (FE), UG/L	3	130	530	3	30	250
LEAD (PB), UG/L	3	4	7	3	1	4
MANGANESE (MN), UG/L	3	0	32	3	0	20
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	50	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	7.39	21.00			
BIOMASS, ASH WT., G/SQ M	2	4.89	12.00			
CHLOROPHYLL A, MG/SQ M	2	68.0	84.0			
CHLOROPHYLL B, MG/SQ M	2	11.0	13.0			
ORGANIC CARBON, MG/L	3	21.0	26.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02296750 NAME: PEACE R AT ARCADIA

LAT 27D13M19S LONG 081D52M34S
DRAINAGE AREA: 1367 SQ MI (3541 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	24.43	3.48	14.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	405.4	132.3	170	590					
STREAMFLOW (CUBIC FT/SEC)	16	536.7	607.9	49	2065	13	-3.338	1927.726	-0.733	438.9
PH (STANDARD UNITS)	14	6.90	0.94	4.6	8.2	13	-0.0005	6.9919	-0.071*	0.93
PHOSPHORUS, TOTAL	11	2.776	1.435	0.14	4.50	7	0.01264	-1.61654	0.972	0.419
NITRITE + NITRATE, TOTAL	4	0.732	0.833	0.01	1.92	3	0.00786	-1.27246	0.879*	0.562
NITROGEN, KJELDAHL, TOTAL	4	1.075	0.607	0.45	1.84	3	-0.00187	1.81690	-0.321*	0.724
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	790.0	442.5	280	1600	5	1.182	203.737	0.531*	300.0
SEDIMENT, SUSPENDED	11	6.1	3.0	3	13					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	27.1	27.8	2	86					
STREPTOCOCCI, FECAL (COL/100 ML)	11	68.9	61.9	5	180					
SILICA, DISSOLVED	8	7.16	2.64	3.3	11.0	7	-0.0037	8.7638	-0.174*	3.05
CALCIUM, DISSOLVED	8	38.50	14.36	17.0	60.0	7	0.0565	12.9119	0.600*	10.82
MAGNESIUM, DISSOLVED	8	14.15	5.15	6.2	23.0	7	0.0183	5.6072	0.599*	3.51
SODIUM, DISSOLVED	8	15.30	4.61	7.4	22.0	7	0.0155	8.1571	0.505*	3.82
POTASSIUM, DISSOLVED	8	2.12	0.54	1.0	2.6	7	-0.0003	2.4123	-0.133*	0.34
BICARBONATE, ION	8	67.9	20.5	32	95	7	0.059	40.609	0.413*	18.6
CARBONATE, ION	0									
SULFATE, DISSOLVED	8	94.50	46.93	30.0	170.0	7	0.1606	19.7216	0.547*	35.32
CHLORIDE, DISSOLVED	8	17.25	2.12	13.0	19.0	7	0.0072	14.2882	0.415*	2.26
DISSOLVED SOLIDS, SUM OF CONST	8	224.8	80.3	100	351	7	0.284	93.411	0.557*	60.9
DISSOLVED SOLIDS, ROE 180 DEG C	8	256.5	80.5	132	385	7	0.327	107.851	0.646*	55.6
HARDNESS, TOTAL	8	156.0	57.5	68	250	7	0.215	56.728	0.606*	40.6
HARDNESS, NONCARBONATE	8	100.0	43.8	42	170	7	0.170	22.434	0.616*	31.2
TURBIDITY (JTU)	10	4.2	3.0	1	9	9	-0.011	8.613	-0.503*	2.9
FLOURIDE, DISSOLVED	8	1.44	0.47	0.7	2.2	7	0.0014	0.7873	0.467*	0.37

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 291

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	585	565	555	525	500	468	430	208	171	143

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
291	24.15	5.37	3.06	78	1.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02296750 -- PEACE R AT ARCADIA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	6	1	3	5	0	2
CADMIUM (CD), UG/L	6	0	1	5	0	0
CHROMIUM (CR), UG/L	5	1	<10	5	0	0
COBALT (CO), UG/L	5	0	2	5	0	1
COPPER (CU), UG/L	5	0	9	6	0	1
IRON (FE), UG/L	6	60	600	8	0	620
LEAD (PB), UG/L	6	3	8	6	0	6
MANGANESE (MN), UG/L	6	0	40	6	0	30
MERCURY (HG), UG/L	6	0.0	0.8	5	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	5	0	0
ZINC (ZN), UG/L	5	20	40	6	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	5.69				
BIOMASS, ASH WT., G/SQ M	1	3.09				
CHLOROPHYLL A, MG/SQ M	1	44.0				
CHLOROPHYLL B, MG/SQ M	1	9.6				
ORGANIC CARBON, MG/L	3	6.0	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02303000 NAME: HILLSBOROUGH RIVER NEAR ZEPHYRHILLS, FLA.

LAT 28D08M59S LONG 082D13M57S
DRAINAGE AREA: 220 SQ MI (570 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	23.46	2.43	20.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	323.1	35.4	215	362					
STREAMFLOW (CUBIC FT/SEC)	13	107.2	81.9	46	332	13	-1.976	743.030	-0.882	40.3
PH (STANDARD UNITS)	13	6.67	0.98	5.5	8.0	13	0.0068	4.4815	0.254*	0.99
PHOSPHORUS, TOTAL	13	0.788	0.721	0.14	2.90	13	0.00000	0.78731	0.000*	0.753
NITRITE + NITRATE, TOTAL	4	1.322	0.615	0.87	2.22	4	0.01379	-3.24404	0.371*	0.699
NITROGEN, KJELDAHL, TOTAL	4	0.235	0.117	0.17	0.41	4	0.00156	-0.28073	0.220*	0.140
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1906.1	5672.9	48	19000	8	27.456	-6148.219	0.187*	7068.7
SEDIMENT, SUSPENDED	8	5.5	5.7	2	19					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	48.3	46.0	1	160					
STREPTOCOCCI, FECAL (COL/100 ML)	9	68.6	95.7	18	320					
SILICA, DISSOLVED	8	10.05	0.97	8.2	11.0	8	0.0131	5.9773	0.567*	0.86
CALCIUM, DISSOLVED	8	51.38	8.80	32.0	60.0	8	0.1998	-10.9208	0.955	2.83
MAGNESIUM, DISSOLVED	8	4.22	0.62	3.0	5.1	8	0.0132	0.1005	0.893	0.30
SODIUM, DISSOLVED	8	6.90	1.17	5.2	8.3	8	0.0024	6.1591	0.085*	1.26
POTASSIUM, DISSOLVED	8	1.59	0.71	0.7	2.6	8	-0.0073	3.8741	-0.434*	0.69
BICARBONATE, ION	8	150.1	40.2	72	176	8	0.890	-127.267	0.931	15.8
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	16.22	8.35	8.9	33.0	8	-0.1212	54.0007	-0.610*	7.15
CHLORIDE, DISSOLVED	8	9.46	1.36	7.9	12.0	8	-0.0084	12.0805	-0.259*	1.42
DISSOLVED SOLIDS, SUM OF CONST	8	174.8	23.3	120	191	8	0.529	9.808	0.954	7.8
DISSOLVED SOLIDS, ROE 180 DEG C	8	193.0	14.9	160	208	8	0.274	107.612	0.775	10.1
HARDNESS, TOTAL	8	146.5	25.0	92	170	8	0.565	-29.645	0.951	8.3
HARDNESS, NONCARBONATE	8	23.0	13.2	4	47	8	-0.171	76.305	-0.545*	11.9
TURBIDITY (JTU)	11	1.0	0.6	0	2	11	0.001	0.729	0.051*	0.7
FLOURIDE, DISSOLVED	8	0.50	0.32	0.1	0.9	8	-0.0056	2.2592	-0.750	0.23

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 300

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	389	352	350	338	330	325	319	265	208	125

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
292	22.05	1.35	3.35	16	2.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02303000 -- HILLSBOROUGH RIVER NEAR ZEPHYRHILLS, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	2	4	0	1
CADMIUM (CD), UG/L	5	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	1
COBALT (CO), UG/L	4	0	10	4	0	1
COPPER (CU), UG/L	4	4	9	5	0	2
IRON (FE), UG/L	5	90	180	5	0	40
LEAD (PB), UG/L	5	0	67	5	0	3
MANGANESE (MN), UG/L	5	0	70	5	0	80
MERCURY (HG), UG/L	5	0.0	0.5	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	30	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.19	39.00			
BIOMASS, ASH WT., G/SQ M	2	1.19	25.00			
CHLOROPHYLL A, MG/SQ M	1	42.0				
CHLOROPHYLL B, MG/SQ M	1	2.0				
ORGANIC CARBON, MG/L	4	2.0	7.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02313000 NAME: WITHLACOOCHEE RIVER NEAR HOLDER, FLA.

LAT 28D59M19S LONG 082D20M59S
DRAINAGE AREA: 1825 SQ MI (4727 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.38	5.14	13.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	311.3	47.3	242	402					
STREAMFLOW (CUBIC FT/SEC)	12	521.3	284.6	175	1270	12	-1.781	1075.439	-0.296 *	285.2
PH (STANDARD UNITS)	12	7.76	0.37	7.2	8.4	12	-0.0000	7.7718	-0.006 *	0.38
PHOSPHORUS, TOTAL	12	0.027	0.013	0.01	0.05	12	-0.00011	0.06074	-0.397 *	0.013
NITRITE + NITRATE, TOTAL	12	0.080	0.053	0.02	0.18	12	0.00048	-0.06842	0.429 *	0.050
NITROGEN, KJELDAHL, TOTAL	12	0.437	0.183	0.27	0.85	12	-0.00063	0.63183	-0.162 *	0.189
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1101.1	2204.6	87	7000	12	-9.179	3957.894	-0.197 *	2267.0
SEDIMENT, SUSPENDED	12	1.8	1.5	0	5					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	29.6	33.5	0	110					
STREPTOCOCCI, FECAL (COL/100 ML)	11	94.1	116.0	0	330					
SILICA, DISSOLVED	11	12.35	18.61	3.7	68.0	11	0.0568	-5.3926	0.151 *	19.39
CALCIUM, DISSOLVED	11	51.27	8.76	39.0	64.0	11	0.1629	0.3882	0.919	3.64
MAGNESIUM, DISSOLVED	11	4.69	0.64	3.4	5.7	11	0.0100	1.5752	0.775	0.42
SODIUM, DISSOLVED	11	4.95	0.58	4.2	6.0	11	0.0002	4.8846	0.017 *	0.61
POTASSIUM, DISSOLVED	11	0.38	0.16	0.2	0.7	11	0.0011	0.0412	0.337 *	0.16
BICARBONATE, ION	11	134.5	23.8	100	173	11	0.045	120.780	0.084 *	25.0
CARBONATE, ION	4	0.3	0.5	0	1	4	-0.002	0.821	-0.113 *	0.6
SULFATE, DISSOLVED	11	30.36	18.92	11.0	83.0	11	0.2401	-44.6169	0.627	15.53
CHLORIDE, DISSOLVED	12	8.11	1.70	4.3	11.0	12	0.0191	2.1575	0.531 *	1.51
DISSOLVED SOLIDS, SUM OF CONST	11	181.0	34.8	140	252	11	0.550	9.109	0.782	22.9
DISSOLVED SOLIDS, RUE 180 DEG C	11	195.4	33.3	158	270	11	0.575	15.897	0.854	18.3
HARDNESS, TOTAL	12	146.3	24.3	110	190	12	0.473	-0.893	0.921	9.9
HARDNESS, NONCARBONATE	12	33.8	26.5	2	110	12	0.390	-87.688	0.697	19.9
TURBIDITY (JTU)	12	1.5	0.8	0	3	12	-0.007	3.685	-0.416 *	0.8
FLOURIDE, DISSOLVED	11	0.23	0.08	0.1	0.4	11	0.0007	0.0124	0.433 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 363

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	370	352	350	337	329	310	283	249	241	239

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	23.05	5.98	3.04	80	2.12

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02313000 -- WITHLACOOCHEE RIVER NEAR HOLDER, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	2	4	0	1
CADMIUM (CD), UG/L	5	0	1	4	0	1
CHROMIUM (CR), UG/L	4	< 10	10	4	0	0
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	1	8	5	0	2
IRON (FE), UG/L	5	90	600	5	10	330
LEAD (PB), UG/L	5	0	17	5	0	1
MANGANESE (MN), UG/L	5	0	28	5	0	13
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	9	50	5	0	90
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	23.00	29.00			
BIOMASS, ASH WT., G/SQ M	4	3.09	21.00			
CHLOROPHYLL A, MG/SQ M	4	11.0	79.0			
CHLOROPHYLL B, MG/SQ M	4	2.0	13.0			
ORGANIC CARBON, MG/L	11	3.0	24.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02320500 NAME: SUWANNEE RIVER AT BRANFORD, FLA.

LAT 29D57M20S LONG 082D55M40S
DRAINAGE AREA: 7740 SQ MI (20047 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.33	4.86	11.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	152.7	93.2	42	320					
STREAMFLOW (CUBIC FT/SEC)	13	9159.2	5022.4	2800	20000	12	-38.605	15542.910	-0.733	3502.8
PH (STANDARD UNITS)	11	7.14	0.36	6.3	7.5	11	0.0024	6.7527	0.658	0.28
PHOSPHORUS, TOTAL	12	0.186	0.047	0.12	0.27	12	0.00011	0.16832	0.227 *	0.048
NITRITE + NITRATE, TOTAL	12	0.311	0.190	0.05	0.59	12	0.00179	0.03718	0.880	0.095
NITROGEN, KJELDAHL, TOTAL	12	0.490	0.195	0.12	0.72	12	-0.00189	0.77871	-0.902	0.088
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	255.2	197.0	5	530	12	-0.585	344.515	-0.277 *	198.5
SEDIMENT, SUSPENDED	10	6.4	3.9	2	14					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	64.8	93.9	10	300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	44.8	45.6	0	170					
SILICA, DISSOLVED	12	6.14	1.22	4.4	8.3	12	0.0112	4.4319	0.856	0.66
CALCIUM, DISSOLVED	12	25.22	14.95	5.0	49.0	12	0.1394	3.9432	0.869	7.75
MAGNESIUM, DISSOLVED	12	4.32	2.62	0.9	8.7	12	0.0265	0.2686	0.945	0.90
SODIUM, DISSOLVED	12	4.12	0.52	3.5	5.5	12	0.0035	3.5828	0.623	0.43
POTASSIUM, DISSOLVED	12	0.62	0.22	0.3	1.0	12	-0.0021	0.9356	-0.899	0.10
BICARBONATE, ION	12	80.2	53.7	6	163	12	0.537	-1.880	0.934	20.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	11.05	4.40	5.9	19.0	12	0.0418	4.6638	0.886	2.15
CHLORIDE, DISSOLVED	12	5.61	0.91	4.1	7.3	12	-0.0079	6.8140	-0.805	0.57
DISSOLVED SOLIDS, SUM OF CONST	12	97.0	48.3	34	175	12	0.476	24.297	0.920	19.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	122.8	49.1	24	190	12	0.441	55.459	0.838	28.1
HARDNESS, TOTAL	12	80.5	47.4	18	160	12	0.453	11.318	0.891	22.6
HARDNESS, NONCARBONATE	12	14.9	7.7	5	30	12	0.017	12.301	0.207 *	7.9
TURBIDITY (JTU)	12	5.8	3.8	2	15	12	-0.030	10.391	-0.731	2.7
FLOURIDE, DISSOLVED	12	0.30	0.06	0.2	0.4	12	-0.0003	0.3415	-0.420 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 333

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	310	304	298	233	220	165	115	56	49	37

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
318	21.04	5.79	2.64	88	1.48

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02320500 -- SUWANNEE RIVER AT BRANFORD, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	3	0	0	4	0	0
CHROMIUM (CR), UG/L	3	<10	20	4	0	0
COBALT (CO), UG/L	3	0	1	4	0	0
COPPER (CU), UG/L	3	3	9	4	1	12
IRON (FE), UG/L	3	220	650	4	100	390
LEAD (PB), UG/L	3	1	16	4	1	15
MANGANESE (MN), UG/L	3	20	56	4	10	70
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	1
ZINC (ZN), UG/L	3	4	100	4	0	4
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	5.09				
BIOMASS, ASH WT., G/SQ M	3	1.50	7.89			
CHLOROPHYLL A, MG/SQ M	3	16.0	140.0			
CHLOROPHYLL B, MG/SQ M	3	1.1	19.0			
ORGANIC CARBON, MG/L	11	5.0	26.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02329000 NAME: OCHLOCKONEE RIVER NR HAVANA FLA

LAT 30D33M14S LONG 084D23M03S
DRAINAGE AREA: 1140 SQ MI (2953 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	21.17	5.64	9.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	129.0	104.2	41	371					
STREAMFLOW (CUBIC FT/SEC)	9	1483.9	1243.5	119	3340	9	-5.127	2145.300	-0.429 *	1200.5
PH (STANDARD UNITS)	8	6.56	0.32	6.2	7.0	8	0.0011	6.4077	0.374 *	0.32
PHOSPHORUS, TOTAL	9	0.191	0.103	0.10	0.41	9	0.00032	0.14966	0.325 *	0.104
NITRITE + NITRATE, TOTAL	9	0.409	0.318	0.12	0.92	9	0.00094	0.28755	0.308 *	0.323
NITROGEN, KJELDAHL, TOTAL	9	0.567	0.158	0.35	0.81	9	-0.00049	0.63028	-0.325 *	0.160
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	217.1	160.9	54	490	8	-0.351	266.237	-0.230 *	169.1
SEDIMENT, SUSPENDED	8	14.5	8.4	3	30					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	7	51.0	40.4	0	130					
STREPTOCOCCI, FECAL (COL/100 ML)	8	106.5	79.6	10	220					
SILICA, DISSOLVED	8	7.22	1.82	4.9	9.6	8	0.0008	7.1169	0.045 *	1.96
CALCIUM, DISSOLVED	8	5.25	2.92	2.5	11.0	8	0.0086	4.0453	0.311 *	3.00
MAGNESIUM, DISSOLVED	8	1.96	1.08	0.9	4.0	8	0.0044	1.3507	0.429 *	1.05
SODIUM, DISSOLVED	8	10.39	6.97	4.7	22.0	8	0.0085	9.1963	0.129 *	7.47
POTASSIUM, DISSOLVED	8	1.75	0.38	1.3	2.4	8	0.0000	1.7462	0.008 *	0.41
BICARBONATE, ION	8	18.3	10.1	8	37	8	0.030	14.039	0.314 *	10.4
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	8	5.05	3.08	2.4	10.0	8	0.0061	4.1967	0.209 *	3.25
CHLORIDE, DISSOLVED	8	15.70	9.87	8.0	32.0	8	0.0128	13.9116	0.137 *	10.56
DISSOLVED SOLIDS, SUM OF CONST	8	56.9	30.0	35	110	8	0.057	48.871	0.202 *	31.7
DISSOLVED SOLIDS, ROE 180 DEG C	8	78.6	32.9	50	131	8	0.052	71.284	0.168 *	35.0
HARDNESS, TOTAL	8	21.1	11.7	10	44	8	0.039	15.699	0.350 *	11.8
HARDNESS, NONCARBONATE	8	6.3	4.4	0	14	8	0.016	4.041	0.376 *	4.4
TURBIDITY (JTU)	9	31.3	28.1	7	80	9	-0.117	46.472	-0.434 *	27.1
FLOURIDE, DISSOLVED	8	0.20	0.11	0.0	0.3	8	0.0003	0.1568	0.305 *	0.11

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02329000 -- OCHLOCKONEE RIVER NR HAVANA FLA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	3	1	1
CADMIUM (CD), UG/L	3	0	1	3	0	1
CHROMIUM (CR), UG/L	3	< 10	50	3	0	0
COBALT (CO), UG/L	3	0	0	3	0	2
COPPER (CU), UG/L	3	3	5	3	0	9
IRON (FE), UG/L	3	1300	2300	3	180	850
LEAD (PB), UG/L	3	3	12	3	1	11
MANGANESE (MN), UG/L	3	59	80	3	20	45
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	0	20	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	8.0	14.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02358000 NAME: APALACHICOLA RIVER AT CHATTAHOOCHEE FLA

LAT 30D42M03S LONG 084D51M33S
DRAINAGE AREA: 17100 SQ MI (44289 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	6	21.83	7.00	11.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	87.2	29.9	38	112					
STREAMFLOW (CUBIC FT/SEC)	6	30566.7	25820.8	10300	79800	6	-720.420	93363.250	-0.836	15858.1
PH (STANDARD UNITS)	5	7.40	0.32	7.1	7.9	5	0.0066	6.8534	0.643*	0.28
PHOSPHORUS, TOTAL	6	0.042	0.017	0.02	0.07	6	-0.00044	0.07999	-0.764*	0.012
NITRITE + NITRATE, TOTAL	6	0.237	0.083	0.12	0.34	6	-0.00150	0.36760	-0.544*	0.077
NITROGEN, KJELDAHL, TOTAL	6	0.368	0.042	0.32	0.42	6	-0.00011	0.37802	-0.079*	0.047
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	6625.0	3747.0	350	12000	6	94.814	-1639.598	0.758*	2733.2
SEDIMENT, SUSPENDED	6	16.8	7.6	9	30					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	4	21.8	19.6	7	50					
STREPTOCOCCI, FECAL (COL/100 ML)	5	29.2	15.6	6	50					
SILICA, DISSOLVED	6	6.98	0.63	6.3	7.9	6	0.0039	6.6409	0.186*	0.70
CALCIUM, DISSOLVED	6	11.58	3.42	6.1	16.0	6	0.1034	2.5745	0.905	1.63
MAGNESIUM, DISSOLVED	6	1.00	0.13	0.8	1.1	6	0.0017	0.8504	0.406*	0.13
SODIUM, DISSOLVED	6	4.43	1.87	2.9	7.7	6	0.0014	4.3076	0.023*	2.08
POTASSIUM, DISSOLVED	6	1.23	0.18	1.0	1.5	6	-0.0024	1.4420	-0.409*	0.18
BICARBONATE, ION	6	40.8	13.0	19	59	6	0.304	14.339	0.699*	10.4
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	6	4.78	1.57	2.8	7.2	6	0.0035	4.4778	0.067*	1.75
CHLORIDE, DISSOLVED	6	3.50	0.80	2.8	4.5	6	0.0010	3.4106	0.039*	0.89
DISSOLVED SOLIDS, SUM OF CONST	6	53.8	12.3	34	70	6	0.258	31.323	0.629*	10.7
DISSOLVED SOLIDS, ROE 180 DEG C	6	57.5	19.2	28	81	6	0.470	16.500	0.735*	14.5
HARDNESS, TOTAL	6	33.2	8.6	19	44	6	0.261	10.391	0.909	4.0
HARDNESS, NONCARBONATE	6	2.0	1.7	0	4	6	-0.008	2.739	-0.152*	1.8
TURBIDITY (JTU)	6	15.0	8.9	6	30	6	0.109	5.457	0.370*	9.2
FLOURIDE, DISSOLVED	6	0.12	0.04	0.1	0.2	6	-0.0004	0.1559	-0.330*	0.04

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02358000 -- APALACHICOLA RIVER AT CHATTAHOOCHEE FLA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	1
COBALT (CO), UG/L	4	0	4	4	0	9
COPPER (CU), UG/L	4	6	14	4	2	6
IRON (FE), UG/L	4	300	2800	4	0	100
LEAD (PB), UG/L	4	16	26	4	0	12
MANGANESE (MN), UG/L	4	50	150	4	0	30
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	70	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	2.0	10.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02359000 NAME: CHIPOLA RIVER NR ALTHA, FLA.

LAT 30D32M02S LONG 085D09M55S
DRAINAGE AREA: 781 SQ MI (2023 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	8	20.88	4.63	12.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	184.1	31.5	140	225					
STREAMFLOW (CUBIC FT/SEC)	8	1661.0	636.3	618	2400	8	-9.832	3471.396	-0.487 *	600.1
PH (STANDARD UNITS)	8	7.66	0.28	7.0	7.9	8	0.0041	6.9080	0.466 *	0.27
PHOSPHORUS, TOTAL	8	0.029	0.008	0.02	0.04	8	0.00004	0.02158	0.147 *	0.009
NITRITE + NITRATE, TOTAL	8	0.567	0.148	0.30	0.73	8	0.00375	-0.12274	0.800	0.096
NITROGEN, KJELDAHL, TOTAL	8	0.251	0.073	0.12	0.31	8	-0.00097	0.43005	-0.422 *	0.071
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	131.9	77.1	55	280	8	1.029	-57.572	0.421 *	75.6
SEDIMENT, SUSPENDED	8	9.5	3.4	4	14					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	6	38.3	22.3	0	60					
STREPTOCOCCI, FECAL (COL/100 ML)	7	60.0	18.3	40	90					
SILICA, DISSOLVED	8	6.10	0.57	4.9	6.6	8	0.0116	3.9607	0.639 *	0.48
CALCIUM, DISSOLVED	8	30.75	5.09	21.0	36.0	8	0.1477	3.5592	0.915	2.22
MAGNESIUM, DISSOLVED	8	3.39	0.77	2.0	4.6	8	0.0184	-0.0056	0.759	0.54
SODIUM, DISSOLVED	8	3.09	0.55	2.2	4.1	8	-0.0130	5.4803	-0.750	0.39
POTASSIUM, DISSOLVED	8	0.49	0.04	0.4	0.5	8	0.0001	0.4607	0.130 *	0.04
BICARBONATE, ION	8	103.9	15.1	71	117	8	0.393	31.574	0.819	9.4
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	8	1.71	0.90	0.4	3.0	8	0.0007	1.5806	0.025 *	0.98
CHLORIDE, DISSOLVED	8	5.27	0.85	4.1	6.8	8	-0.0184	8.6698	-0.686 *	0.67
DISSOLVED SOLIDS, SUM OF CONST	8	102.3	12.5	78	115	8	0.349	38.077	0.881	6.4
DISSOLVED SOLIDS, ROE 180 DEG C	8	112.0	8.9	97	123	8	0.020	108.351	0.070 *	9.6
HARDNESS, TOTAL	8	91.5	16.4	61	110	8	0.470	5.016	0.906	7.5
HARDNESS, NONCARBONATE	8	5.8	4.9	0	14	8	0.124	-17.157	0.802	3.2
TURBIDITY (JTU)	8	7.1	2.0	3	9	8	-0.000	7.208	-0.007 *	2.2
FLOURIDE, DISSOLVED	8	0.15	0.31	0.0	0.9	8	0.0054	-0.8483	0.549 *	0.28

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02359000 -- CHIPOLA RIVER NR ALTHA, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	0	4	0	4
CHROMIUM (CR), UG/L	4	< 10	< 10	4	0	0
COBALT (CO), UG/L	4	0	1	4	0	2
COPPER (CU), UG/L	4	4	31	4	2	3
IRON (FE), UG/L	4	150	650	4	0	200
LEAD (PB), UG/L	4	1	28	4	1	14
MANGANESE (MN), UG/L	4	20	40	4	0	20
MERCURY (HG), UG/L	4	0.1	0.5	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	.0	4.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02366500 NAME: CHOCTAWHATCHEE RIVER NR BRUCE FLA

.AT 30D27M03S LONG 085D53M54S
'RAINAGE AREA: 4384 SQ MI (11355 SQ KM)
'ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	20.22	5.64	10.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	77.7	21.6	46	110					
STREAMFLOW (CUBIC FT/SEC)	9	7113.3	2908.4	2110	12200	9	-117.935	16272.957	-0.876	1499.4
PH (STANDARD UNITS)	9	7.17	0.15	7.0	7.4	9	0.0043	6.8297	0.625*	0.13
PHOSPHORUS, TOTAL	9	0.037	0.014	0.02	0.06	9	-0.00057	0.08097	-0.871	0.007
NITRITE + NITRATE, TOTAL	9	0.174	0.080	0.04	0.29	9	0.00274	-0.03820	0.738	0.058
NITROGEN, KJELDAHL, TOTAL	9	0.306	0.080	0.15	0.44	9	-0.00132	0.40816	-0.357*	0.080
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	168.3	166.3	6	510	9	0.736	111.155	0.096*	176.9
SEDIMENT, SUSPENDED	9	9.7	4.0	2	16					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	6	68.3	36.6	20	130					
STREPTOCOCCI, FECAL (COL/100 ML)	5	274.0	182.7	130	520					
SILICA, DISSOLVED	9	6.40	0.39	5.8	7.0	9	0.0120	5.4681	0.669	0.31
CALCIUM, DISSOLVED	9	10.86	3.26	7.3	18.0	9	0.1357	0.3170	0.900	1.52
MAGNESIUM, DISSOLVED	9	1.52	0.39	1.1	2.1	9	0.0131	0.5037	0.727	0.29
SODIUM, DISSOLVED	9	2.98	0.50	2.5	4.2	9	0.0178	1.5939	0.775	0.34
POTASSIUM, DISSOLVED	9	0.83	0.10	0.7	1.0	9	0.0010	0.7585	0.208*	0.10
BICARBONATE, ION	9	37.6	13.5	19	66	9	0.559	-5.888	0.894	6.5
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	2.16	0.53	1.5	3.2	9	-0.0173	3.4999	-0.710	0.40
CHLORIDE, DISSOLVED	9	4.40	0.66	3.6	5.9	9	0.0189	2.9314	0.616*	0.56
DISSOLVED SOLIDS, SUM OF CONST	9	48.1	10.9	35	72	9	0.456	12.703	0.904	5.0
DISSOLVED SOLIDS, ROE 180 DEG C	9	55.8	15.0	25	82	9	0.587	10.157	0.847	8.5
HARDNESS, TOTAL	9	33.7	9.4	23	54	9	0.387	3.590	0.887	4.7
HARDNESS, NONCARBONATE	9	3.1	3.1	0	7	9	-0.040	6.245	-0.285*	3.1
TURBIDITY (JTU)	9	23.3	10.3	10	40	9	-0.123	32.901	-0.258*	10.6
FLOURIDE, DISSOLVED	9	0.12	0.19	0.0	0.6	9	-0.0050	0.5098	-0.561*	0.17

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
110	20.28	5.81	2.60	77	1.64

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02366500 -- CHOCTAWHATCHEE RIVER NR BRUCE FLA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	1	4	0	1
CADMIUM (CD), UG/L	3	1	2	4	0	1
CHROMIUM (CR), UG/L	3	<10	20	4	0	1
COBALT (CO), UG/L	3	0	10	4	0	3
COPPER (CU), UG/L	3	3	4	4	0	2
IRON (FE), UG/L	4	620	2600	4	60	490
LEAD (PB), UG/L	3	14	20	4	2	12
MANGANESE (MN), UG/L	4	50	220	4	0	50
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	3	0	30	4	4	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	2.0	4.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02368000 NAME: YELLOW RIVER AT MILLIGAN FLA

LAT 30D45M10S LONG 086D37M45S
DRAINAGE AREA: 624 SQ MI (1616 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	18.18	5.57	8.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	46.4	7.0	38	60					
STREAMFLOW (CUBIC FT/SEC)	11	982.7	674.6	272	2360	10	-38.859	2787.272	-0.385 *	696.2
PH (STANDARD UNITS)	11	6.86	0.28	6.3	7.2	10	0.0260	5.6441	0.620 *	0.25
PHOSPHORUS, TOTAL	11	0.047	0.038	0.02	0.14	10	0.00047	0.02638	0.081 *	0.043
NITRITE + NITRATE, TOTAL	11	0.128	0.073	0.02	0.30	10	0.00504	-0.10566	0.463 *	0.072
NITROGEN, KJELDAHL, TOTAL	11	0.398	0.282	0.15	1.17	10	0.00911	-0.01985	0.216 *	0.307
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	259.0	190.8	110	770	9	20.367	-661.252	0.737	143.3
SEDIMENT, SUSPENDED	10	22.1	11.5	8	41					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	374.4	452.7	0	1200					
STREPTOCOCCI, FECAL (COL/100 ML)	9	344.9	342.9	40	1100					
SILICA, DISSOLVED	10	6.09	0.67	4.9	7.3	9	0.0312	4.6847	0.317 *	0.72
CALCIUM, DISSOLVED	10	6.03	1.63	3.6	9.0	9	0.1015	1.4417	0.424 *	1.66
MAGNESIUM, DISSOLVED	10	1.07	0.30	0.7	1.5	9	0.0178	0.2510	0.399 *	0.31
SODIUM, DISSOLVED	10	2.20	0.26	1.8	2.7	9	-0.0018	2.3063	-0.050 *	0.28
POTASSIUM, DISSOLVED	10	0.47	0.08	0.4	0.6	9	-0.0069	0.7942	-0.595 *	0.07
BICARBONATE, ION	10	22.3	5.6	15	33	9	0.518	-1.149	0.637 *	4.8
CARBONATE, ION	10	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	2.19	0.62	1.2	2.9	9	-0.0227	3.2628	-0.253 *	0.67
CHLORIDE, DISSOLVED	10	3.49	0.77	2.4	5.1	9	0.0192	2.6668	0.174 *	0.83
DISSOLVED SOLIDS, SUM OF CONST	10	32.9	4.3	25	39	9	0.395	15.153	0.642 *	3.6
DISSOLVED SOLIDS, ROE 180 DEG C	10	39.8	6.4	28	45	9	-0.193	48.071	-0.212 *	6.8
HARDNESS, TOTAL	10	19.5	5.0	12	28	9	0.353	3.501	0.481 *	4.9
HARDNESS, NONCARBONATE	10	1.8	1.8	0	5	9	-0.113	6.944	-0.421 *	1.9
TURBIDITY (JTU)	11	16.9	11.6	5	45	10	-0.606	44.706	-0.350 *	12.1
FLOURIDE, DISSOLVED	10	0.09	0.09	0.0	0.3	9	-0.0044	0.3002	-0.362 *	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02368000 -- YELLOW RIVER AT MILLIGAN FLA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	0	< 10	4	0	1
COBALT (CO), UG/L	4	0	3	4	0	0
COPPER (CU), UG/L	4	0	4	4	2	3
IRON (FE), UG/L	4	650	1800	4	140	450
LEAD (PB), UG/L	4	3	14	4	0	9
MANGANESE (MN), UG/L	4	48	130	4	29	60
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	6	2.0	7.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02375500 NAME: ESCAMBIA RIVER NEAR CENTURY, FLA.

LAT 30D57M25S LONG 087D14M00S
DRAINAGE AREA: 3817 SQ MI (9886 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.58	6.56	8.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	69.0	17.5	41	100					
STREAMFLOW (CUBIC FT/SEC)	12	5940.0	4040.7	1650	16300	12	-108.344	13415.746	-0.470 *	3740.3
PH (STANDARD UNITS)	11	6.90	0.30	6.1	7.2	11	0.0069	6.4189	0.417 *	0.29
PHOSPHORUS, TOTAL	9	0.029	0.009	0.01	0.04	9	0.00013	0.01902	0.247 *	0.010
NITRITE + NITRATE, TOTAL	9	0.139	0.038	0.08	0.18	9	-0.00071	0.19108	-0.323 *	0.038
NITROGEN, KJELDAHL, TOTAL	9	0.292	0.061	0.21	0.40	9	-0.00215	0.45025	-0.601 *	0.052
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	868.8	1580.9	40	5200	10	-46.933	4036.766	-0.514 *	1437.9
SEDIMENT, SUSPENDED	4	21.3	7.1	14	31					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	632.5	420.9	160	1300					
STREPTOCOCCI, FECAL (COL/100 ML)	9	550.4	1002.6	48	3100					
SILICA, DISSOLVED	4	7.92	0.26	7.7	8.3	4	-0.0002	7.9427	-0.019 *	0.32
CALCIUM, DISSOLVED	4	9.40	1.35	7.8	11.0	4	0.0378	6.6403	0.570 *	1.35
MAGNESIUM, DISSOLVED	4	0.95	0.39	0.5	1.4	4	-0.0126	1.8699	-0.661 *	0.36
SODIUM, DISSOLVED	4	5.05	2.13	3.6	8.2	4	0.0874	-1.3301	0.835 *	1.43
POTASSIUM, DISSOLVED	4	0.80	0.14	0.7	1.0	4	0.0067	0.3106	0.963 *	0.05
BICARBONATE, ION	5	28.4	4.2	25	35	5	0.206	13.712	0.875 *	2.4
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	4.35	0.83	3.6	5.5	4	0.0312	2.0739	0.759 *	0.67
CHLORIDE, DISSOLVED	4	6.35	2.05	4.9	9.3	4	0.0741	0.9428	0.733 *	1.71
DISSOLVED SOLIDS, SUM OF CONST	4	49.8	7.8	43	61	4	0.314	26.812	0.818 *	5.5
DISSOLVED SOLIDS, ROE 180 DEG C	4	49.8	16.9	30	69	4	0.414	19.559	0.497 *	18.0
HARDNESS, TOTAL	4	27.5	3.5	24	31	4	0.053	23.667	0.304 *	4.1
HARDNESS, NONCARBONATE	4	3.5	3.4	0	8	4	-0.118	12.109	-0.701 *	3.0
TURBIDITY (JTU)	9	19.1	6.6	11	30	9	-0.219	35.187	-0.568 *	5.8
FLOURIDE, DISSOLVED	4	0.10	0.00	0.1	0.1	4	-0.0000	0.1000	0.000 *	0.00

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	18.74	8.24	2.93	87	2.63

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02375500 -- ESCAMBIA RIVER NEAR CENTURY, FLA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	30	4	0	1
COBALT (CO), UG/L	4	0	5	4	0	0
COPPER (CU), UG/L	4	0	7	4	1	3
IRON (FE), UG/L	4	890	2100	4	120	520
LEAD (PB), UG/L	4	4	20	4	0	10
MANGANESE (MN), UG/L	4	50	120	4	23	60
MERCURY (HG), UG/L	3	0.1	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	8	30	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	7	.0	7.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02420000 NAME: ALABAMA RIVER NEAR MONTGOMERY, ALA.

LAT 32D24M41S LONG 086D24M30S
DRAINAGE AREA: 15100 SQ MI (39109 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	18.54	6.87	9.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	98.2	24.2	60	155					
STREAMFLOW (CUBIC FT/SEC)	10	51580.0	33326.2	15600	129000	10	-258.079	75684.563	-0.200*	34633.0
PH (STANDARD UNITS)	13	7.09	0.36	6.3	7.8	13	0.0048	6.6162	0.323*	0.36
PHOSPHORUS, TOTAL	10	0.050	0.020	0.01	0.08	10	-0.00012	0.06104	-0.153*	0.021
NITRITE + NITRATE, TOTAL	10	0.173	0.050	0.10	0.23	10	-0.00155	0.31822	-0.809	0.031
NITROGEN, KJELDAHL, TOTAL	10	0.348	0.195	0.15	0.87	10	0.00121	0.23487	0.161*	0.204
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	501.1	296.5	140	1100	9	-1.763	665.884	-0.163*	312.7
SEDIMENT, SUSPENDED	10	35.5	31.9	12	116					
SEDIMENT, CLAY-SILT (PERCENT)	10	85.5	8.2	73	97					
COLIFORM, FECAL (COL/100 ML)	10	782.8	1237.5	76	4000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	221.7	376.3	4	1200					
SILICA, DISSOLVED	12	6.64	0.92	4.5	8.2	12	-0.0168	8.2862	-0.459*	0.86
CALCIUM, DISSOLVED	12	8.49	1.96	5.7	13.0	12	0.0647	2.1479	0.835	1.13
MAGNESIUM, DISSOLVED	12	2.86	0.78	2.0	3.9	12	0.0264	0.2714	0.855	0.42
SODIUM, DISSOLVED	12	4.57	1.67	2.6	7.2	12	0.0447	0.1856	0.677	1.29
POTASSIUM, DISSOLVED	12	1.42	0.46	0.9	2.2	12	0.0086	0.5832	0.470*	0.43
BICARBONATE, ION	13	38.2	9.1	24	49	13	0.322	6.521	0.854	5.0
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.97	1.19	4.1	8.0	12	0.0395	2.0889	0.839	0.68
CHLORIDE, DISSOLVED	12	4.00	1.58	1.6	6.6	12	0.0438	-0.2998	0.700	1.18
DISSOLVED SOLIDS, SUM OF CONST	12	55.0	10.7	39	69	12	0.351	20.604	0.828	6.3
DISSOLVED SOLIDS, ROE 180 DEG C	9	58.3	8.8	46	71	9	0.234	33.864	0.648	7.2
HARDNESS, TOTAL	12	33.0	7.5	22	48	12	0.277	5.798	0.940	.7
HARDNESS, NONCARBONATE	12	2.1	2.4	0	8	12	0.021	0.063	0.218*	2.4
TURBIDITY (JTU)	9	21.7	10.3	5	40	9	-0.011	22.677	-0.029*	11.0
FLOURIDE, DISSOLVED	12	0.11	0.05	0.0	0.2	12	-0.0005	0.1614	-0.266*	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	18.44	9.24	2.60	96	1.48

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02420000 -- ALABAMA RIVER NEAR MONTGOMERY, ALA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	1	2	8	0	3
CADMIUM (CD), UG/L	4	0	4	8	0	2
CHROMIUM (CR), UG/L	4	<10	<10	8	0	1
COBALT (CO), UG/L	4	0	2	8	0	4
COPPER (CU), UG/L	4	6	13	8	0	3
IRON (FE), UG/L	4	370	2900	7	0	210
LEAD (PB), UG/L	4	0	44	8	0	6
MANGANESE (MN), UG/L	4	30	260	7	10	70
MERCURY (HG), UG/L	3	0.0	0.2	8	0.0	0.5
SELENIUM (SE), UG/L	2	0	0	4	0	1
ZINC (ZN), UG/L	4	20	80	8	0	9
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.09	45.00			
BIOMASS, ASH WT., G/SQ M	3	.00	32.00			
CHLOROPHYLL A, MG/SQ M	3	.1	13.0			
CHLOROPHYLL B, MG/SQ M	3	.0	3.8			
ORGANIC CARBON, MG/L	4	4.7	27.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02429500 NAME: ALABAMA RIVER AT CLAIBORNE, ALA.

LAT 31D32M48S LONG 087D30M45S
DRAINAGE AREA: 22000 SQ MI (56980 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.21	6.86	9.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	102.6	20.6	74	128					
STREAMFLOW (CUBIC FT/SEC)	12	55710.0	49571.3	7120	142000	12	-1319.234	191041.438	-0.548 *	43483.1
PH (STANDARD UNITS)	12	7.12	0.23	6.6	7.4	12	0.0006	7.0609	0.055 *	0.25
PHOSPHORUS, TOTAL	12	0.070	0.035	0.03	0.16	12	-0.00029	0.09967	-0.169 *	0.036
NITRITE + NITRATE, TOTAL	12	0.192	0.037	0.14	0.26	12	-0.00035	0.22849	-0.194 *	0.038
NITROGEN, KJELDAHL, TOTAL	12	0.342	0.140	0.19	0.63	12	-0.00170	0.51698	-0.249 *	0.143
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	482.5	299.6	110	990	12	6.482	-182.479	0.446 *	281.3
SEDIMENT, SUSPENDED	12	74.8	72.5	20	260					
SEDIMENT, CLAY-SILT (PERCENT)	12	81.2	17.5	40	98					
COLIFORM, FECAL (COL/100 ML)	12	193.3	291.8	2	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	337.3	484.9	6	1600					
SILICA, DISSOLVED	12	6.97	0.88	5.3	8.1	12	0.0077	6.1792	0.179 *	0.91
CALCIUM, DISSOLVED	12	10.78	1.42	8.1	13.0	12	0.0429	6.3823	0.621	1.17
MAGNESIUM, DISSOLVED	12	2.24	0.57	1.5	3.1	12	0.0225	-0.0688	0.817	0.34
SODIUM, DISSOLVED	12	4.64	1.73	2.2	7.8	12	0.0685	-2.3814	0.816	1.05
POTASSIUM, DISSOLVED	12	1.32	0.24	1.1	1.7	12	0.0070	0.6101	0.594	0.20
BICARBONATE, ION	12	40.5	6.6	31	50	12	0.290	10.705	0.912	2.8
CARBONATE, ION	1	0.0	0.0	0						
SULFATE, DISSOLVED	12	6.22	1.16	4.6	8.2	12	0.0447	1.6319	0.794	0.74
CHLORIDE, DISSOLVED	12	4.19	1.78	1.6	7.1	12	0.0741	-3.4083	0.858	0.96
DISSOLVED SOLIDS, SUM OF CONST	12	58.8	8.8	47	72	12	0.372	20.619	0.874	4.5
DISSOLVED SOLIDS, ROE 180 DEG C	10	58.5	8.2	48	73	10	0.218	36.992	0.548 *	7.2
HARDNESS, TOTAL	12	36.2	5.3	26	45	12	0.202	15.486	0.788	3.4
HARDNESS, NONCARBONATE	12	3.8	1.9	0	6	12	-0.016	5.360	-0.173 *	1.9
TURBIDITY (JTU)	12	26.6	16.9	9	60	12	-0.393	66.876	-0.478 *	15.6
FLUORIDE, DISSOLVED	12	0.17	0.06	0.1	0.3	12	-0.0005	0.2217	-0.151 *	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.36	8.89	2.70	91	2.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02429500 -- ALABAMA RIVER AT CLAIBORNE, ALA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	2
CHROMIUM (CR), UG/L	4	<10	<10	4	0	0
COBALT (CO), UG/L	3	0	2	4	0	5
COPPER (CU), UG/L	4	0	9	4	0	9
IRON (FE), UG/L	4	780	2200	4	80	150
LEAD (PB), UG/L	4	2	11	4	0	4
MANGANESE (MN), UG/L	4	44	100	4	7	60
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	30	4	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.09	2.29			
BIOMASS, ASH WT., G/SQ M	3	.00	1.50			
CHLOROPHYLL A, MG/SQ M	3	.0	40.0			
CHLOROPHYLL B, MG/SQ M	3	.0	7.1			
ORGANIC CARBON, MG/L	4	5.2	29.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02449000 NAME: TOMBIGBEE RIVER AT GAINESVILLE, ALA.

LAT 32D49M S LONG 088D09M S
DRAINAGE AREA: 8700 SQ MI (22533 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.18	7.98	8.0	31.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	100.2	34.2	64	158					
STREAMFLOW (CUBIC FT/SEC)	11	22664.5	20947.0	2210	63400	9	-407.823	67417.313	-0.655 *	17192.1
PH (STANDARD UNITS)	11	7.17	0.27	6.8	7.9	9	0.0005	7.0426	0.124 *	0.13
PHOSPHORUS, TOTAL	11	0.116	0.053	0.05	0.22	9	-0.00033	0.14467	-0.271 *	0.043
NITRITE + NITRATE, TOTAL	10	0.200	0.156	0.00	0.48	9	0.00112	0.05689	0.297 *	0.131
NITROGEN, KJELDAHL, TOTAL	10	0.517	0.135	0.33	0.77	9	-0.00197	0.72705	-0.493 *	0.127
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	5880.0	9381.4	320	27000	9	98.481	-6336.695	0.553 *	5421.7
SEDIMENT, SUSPENDED	10	64.6	40.0	14	122					
SEDIMENT, CLAY-SILT (PERCENT)	10	85.8	8.3	74	97					
COLIFORM, FECAL (COL/100 ML)	11	316.0	321.8	1	860					
STREPTOCOCCI, FECAL (COL/100 ML)	9	222.2	194.1	17	510					
SILICA, DISSOLVED	10	6.69	1.55	3.4	8.4	9	0.0231	4.1888	0.522 *	1.38
CALCIUM, DISSOLVED	11	13.87	4.15	9.0	21.0	9	0.1043	2.7218	0.936	1.44
MAGNESIUM, DISSOLVED	11	1.16	0.37	0.4	1.7	9	0.0074	0.3926	0.647 *	0.32
SODIUM, DISSOLVED	10	3.29	0.97	2.2	5.0	9	0.0170	1.3974	0.723	0.59
POTASSIUM, DISSOLVED	10	1.44	0.22	1.1	1.7	9	0.0028	1.1398	0.433 *	0.21
BICARBONATE, ION	11	39.7	12.8	25	62	9	0.306	6.107	0.917	4.9
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	11	6.93	1.33	4.8	9.1	9	0.0193	4.8001	0.503 *	1.21
CHLORIDE, DISSOLVED	11	4.31	1.99	1.2	7.7	9	0.0411	-0.2599	0.783	1.19
DISSOLVED SOLIDS, SUM OF CONST	10	58.5	12.8	40	81	9	0.370	20.316	0.963	3.8
DISSOLVED SOLIDS, ROE 180 DEG C	8	68.1	11.4	48	84	6	0.322	30.701	0.898	6.4
HARDNESS, TOTAL	11	39.5	10.9	26	57	9	0.291	8.526	0.963	3.0
HARDNESS, NONCARBONATE	11	6.9	3.0	3	12	9	0.038	3.618	0.434 *	2.9
TURBIDITY (JTU)	11	45.5	27.7	5	90	9	-0.277	71.670	-0.389 *	24.0
FLOURIDE, DISSOLVED	10	0.21	0.07	0.1	0.3	9	0.0007	0.1374	0.322 *	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02449000 -- TOMBIGBEE RIVER AT GAINESVILLE, ALA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	0
CADMIUM (CD), UG/L	6	0	2	4	0	2
CHROMIUM (CR), UG/L	7	< 10	10	4	0	0
COBALT (CO), UG/L	3	0	1	4	0	4
COPPER (CU), UG/L	7	3	10	4	0	3
IRON (FE), UG/L	7	1300	5500	4	30	330
LEAD (PB), UG/L	7	1	34	4	0	2
MANGANESE (MN), UG/L	7	80	180	4	2	60
MERCURY (HG), UG/L	6	0.0	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	5	0	0	4	0	0
ZINC (ZN), UG/L	6	0	40	4	0	5
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.19	14.00			
BIOMASS, ASH WT., G/SQ M	4	.79	74.00			
CHLOROPHYLL A, MG/SQ M	4	.6	21.0			
CHLOROPHYLL B, MG/SQ M	4	.1	1.3			
ORGANIC CARBON, MG/L	6	5.5	28.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02469762 NAME: TOMBIGBEE R BELOW COFFEEVILLE L&D NR COFFEEVILLE

LAT 31D45M30S LONG 088D07M45S
DRAINAGE AREA: 18500 SQ MI (47915 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.29	7.42	9.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	146.5	37.5	86	200					
STREAMFLOW (CUBIC FT/SEC)	12	45579.3	43431.6	4402	125000	12	-999.719	192038.063	-0.864	22945.5
PH (STANDARD UNITS)	12	7.14	0.22	6.9	7.4	12	0.0014	6.9352	0.241 *	0.22
PHOSPHORUS, TOTAL	12	0.076	0.032	0.04	0.15	12	-0.00000	0.07607	-0.002 *	0.034
NITRITE + NITRATE, TOTAL	12	0.331	0.110	0.16	0.46	12	0.00265	-0.05737	0.901	0.050
NITROGEN, KJELDAHL, TOTAL	12	0.435	0.105	0.25	0.55	12	-0.00035	0.48654	-0.126 *	0.109
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	627.5	383.0	250	1600	12	-2.154	943.090	-0.211 *	392.7
SEDIMENT, SUSPENDED	12	80.6	68.8	10	186					
SEDIMENT, CLAY-SILT (PERCENT)	12	81.3	10.1	63	99					
COLIFORM, FECAL (COL/100 ML)	11	1203.6	2792.6	10	9500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	289.3	478.5	7	1500					
SILICA, DISSOLVED	12	7.33	1.10	4.8	8.8	12	0.0188	4.5742	0.641	0.89
CALCIUM, DISSOLVED	12	15.45	3.33	9.4	23.0	12	0.0613	6.4641	0.691	2.52
MAGNESIUM, DISSOLVED	12	2.40	0.57	1.6	3.3	12	0.0123	0.6034	0.809	0.35
SODIUM, DISSOLVED	12	6.83	2.79	3.0	12.0	12	0.0630	-2.3983	0.849	1.54
POTASSIUM, DISSOLVED	12	1.74	0.42	1.2	2.3	12	0.0069	0.7322	0.621	0.34
BICARBONATE, ION	12	44.3	10.8	29	72	12	0.206	14.005	0.715	7.9
CARBONATE, ION	1	0.0	0.0	0						
SULFATE, DISSOLVED	12	16.41	4.33	9.9	23.0	12	0.1003	1.7087	0.870	2.24
CHLORIDE, DISSOLVED	12	6.79	3.55	1.5	13.0	12	0.0775	-4.5614	0.819	2.14
DISSOLVED SOLIDS, SUM OF CONST	12	81.7	18.7	48	108	12	0.451	15.523	0.907	8.3
DISSOLVED SOLIDS, ROE 180 DEG C	9	90.2	13.5	65	110	9	0.411	23.703	0.874	7.0
HARDNESS, TOTAL	12	48.4	9.9	30	70	12	0.205	18.446	0.777	6.5
HARDNESS, NONCARBONATE	12	12.1	3.0	6	18	12	0.034	7.162	0.416 *	2.9
TURBIDITY (JTU)	12	27.5	21.1	10	70	12	-0.310	72.936	-0.553 *	18.4
FLOURIDE, DISSOLVED	12	0.23	0.10	0.1	0.4	12	0.0005	0.1549	0.204 *	0.10

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.56	9.77	2.67	91	2.40

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02469762 -- TOMBIGBEE R BELOW COFFEEVILLE L&D NR COFFEEVILLE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	1	5	0	1
CADMIUM (CD), UG/L	4	0	1	5	0	7
CHROMIUM (CR), UG/L	5	<10	10	5	0	11
COBALT (CO), UG/L	5	0	2	5	0	2
COPPER (CU), UG/L	5	1	10	5	0	7
IRON (FE), UG/L	5	610	1800	5	10	270
LEAD (PB), UG/L	5	1	24	5	0	4
MANGANESE (MN), UG/L	5	52	100	5	10	70
MERCURY (HG), UG/L	5	0.0	0.3	5	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	5	0	0
ZINC (ZN), UG/L	4	10	160	5	3	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.19	34.00			
BIOMASS, ASH WT., G/SQ M	4	1.50	18.00			
CHLOROPHYLL A, MG/SQ M	4	.1	22.0			
CHLOROPHYLL B, MG/SQ M	4	.0	7.5			
ORGANIC CARBON, MG/L	5	5.7	24.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02479020 NAME: PASCAGOULA RIVER NR BENNDALE, MS.

LAT 30D52M45S LONG 088D46M22S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.58	7.02	8.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	81.8	21.0	40	120					
STREAMFLOW (CUBIC FT/SEC)	12	15605.8	15457.2	3230	45700	12	-604.813	65099.668	-0.823	9214.3
PH (STANDARD UNITS)	9	6.49	0.34	5.9	6.9	9	0.0039	6.1353	0.158 *	0.36
PHOSPHORUS, TOTAL	12	0.076	0.044	0.03	0.20	12	0.00068	0.01995	0.323 *	0.044
NITRITE + NITRATE, TOTAL	12	0.167	0.101	0.03	0.31	12	0.00325	-0.09957	0.675	0.078
NITROGEN, KJELDAHL, TOTAL	10	0.386	0.084	0.20	0.47	10	-0.00327	0.63512	-0.680	0.066
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1641.8	1599.8	100	5600	11	41.801	-1709.839	0.554 *	1403.3
SEDIMENT, SUSPENDED	8	47.4	31.7	14	96					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	196.3	289.4	4	900					
STREPTOCOCCI, FECAL (COL/100 ML)	7	494.1	867.4	14	2400					
SILICA, DISSOLVED	12	9.50	1.69	7.2	12.0	12	0.0668	4.0301	0.830	0.99
CALCIUM, DISSOLVED	12	5.38	1.52	3.3	7.9	12	0.0551	0.8714	0.762	1.03
MAGNESIUM, DISSOLVED	12	1.29	1.06	0.8	4.6	12	0.0341	-1.4960	0.674	0.82
SODIUM, DISSOLVED	12	6.69	2.74	3.3	13.0	12	0.1145	-2.6763	0.878	1.37
POTASSIUM, DISSOLVED	12	1.22	0.28	0.8	1.8	12	0.0043	0.8692	0.327 *	0.28
BICARBONATE, ION	12	15.2	4.6	8	22	12	0.166	1.549	0.753	3.2
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	4.74	0.65	3.9	6.0	12	0.0134	3.6416	0.435 *	0.61
CHLORIDE, DISSOLVED	12	10.44	4.70	4.7	22.0	12	0.1825	-4.4954	0.817	2.84
DISSOLVED SOLIDS, SUM OF CONST	12	47.2	13.1	30	74	12	0.561	1.228	0.898	6.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	53.8	15.6	20	73	12	0.355	24.718	0.478 *	14.4
HARDNESS, TOTAL	12	18.8	7.5	12	39	12	0.280	-4.077	0.789	4.8
HARDNESS, NONCARBONATE	12	6.4	6.6	0	26	12	0.147	-5.628	0.468 *	6.1
TURBIDITY (JTU)	12	22.3	9.3	7	40	12	-0.371	52.611	-0.836	5.4
FLOURIDE, DISSOLVED	12	0.17	0.26	0.0	1.0	12	0.0033	-0.0951	0.264 *	0.27

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	20.46	9.01	2.91	85	3.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02479020 -- PASCAGOULA RIVER NR BENNDALE, MS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	4	0	1
CADMIUM (CD), UG/L	4,	0	1	4	0	1
CHROMIUM (CR), UG/L	4	< 10	40	4	0	1
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	4	23	4	2	8
IRON (FE), UG/L	4	1200	2600	4	340	940
LEAD (PB), UG/L	4	0	5	4	0	3
MANGANESE (MN), UG/L	4	40	280	4	10	180
MERCURY (HG), UG/L	3	0.1	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	30	80	4	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	4.0	7.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02489500 NAME: PEARL RIVER NR BOGALUSA

LAT 30D47M35S LONG 089D49M15S
DRAINAGE AREA: 6630 SQ MI (17172 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.21	6.41	11.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	63.9	17.3	38	92					
STREAMFLOW (CUBIC FT/SEC)	12	13957.5	12891.8	1240	34800	12	-526.471	47607.777	-0.707	9562.1
PH (STANDARD UNITS)	12	6.53	0.31	6.0	7.1	12	0.0128	5.7127	0.721	0.22
PHOSPHORUS, TOTAL	12	0.097	0.045	0.05	0.22	12	-0.00104	0.16342	-0.400 *	0.043
NITRITE + NITRATE, TOTAL	12	0.243	0.125	0.10	0.50	12	0.00578	-0.12625	0.804	0.078
NITROGEN, KJELDAHL, TOTAL	12	0.603	0.194	0.34	0.97	12	-0.00571	0.96853	-0.510 *	0.175
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	1163.0	796.6	180	2900	10	-17.902	2278.312	-0.384 *	780.2
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	636.0	916.7	5	2900					
STREPTOCOCCI, FECAL (COL/100 ML)	10	538.1	783.0	22	2300					
SILICA, DISSOLVED	7	8.29	1.26	6.5	10.0	7	0.0652	3.8798	0.720 *	0.95
CALCIUM, DISSOLVED	7	4.30	0.83	3.0	5.3	7	0.0377	1.7507	0.630 *	0.71
MAGNESIUM, DISSOLVED	7	1.50	0.68	1.0	3.0	7	0.0144	0.5236	0.294 *	0.72
SODIUM, DISSOLVED	5	4.92	1.69	3.4	7.6	5	0.1625	-5.1551	0.952 *	0.60
POTASSIUM, DISSOLVED	7	2.07	0.47	1.4	2.8	7	0.0280	0.1763	0.832	0.28
BICARBONATE, ION	12	13.3	5.1	5	21	12	0.225	-1.120	0.768	3.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	7	8.94	1.52	7.7	12.0	7	0.0069	8.4735	0.063 *	1.67
CHLORIDE, DISSOLVED	6	5.47	1.46	3.9	7.5	6	0.0939	-0.8228	0.970	0.40
DISSOLVED SOLIDS, SUM OF CONST	5	40.0	5.5	33	48	5	0.533	6.944	0.956 *	1.9
DISSOLVED SOLIDS, ROE 180 DEG C	5	65.2	19.9	44	90	5	0.860	3.308	0.616 *	18.1
HARDNESS, TOTAL	7	17.0	3.2	12	22	7	0.149	6.944	0.653 *	2.6
HARDNESS, NONCARBONATE	7	7.3	5.5	2	17	7	0.017	6.125	0.043 *	6.1
TURBIDITY (JTU)	12	37.0	27.3	9	100	12	-1.287	119.239	-0.817	16.5
FLOURIDE, DISSOLVED	7	0.19	0.15	0.1	0.4	7	0.0023	0.0304	0.218 *	0.16

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 113

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	99	89	87	76	73	68	61	55	48	41

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
112	19.77	8.76	2.70	87	1.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02489500 -- PEARL RIVER NR BOGALUSA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	0	4	0	2
CHROMIUM (CR), UG/L	4	< 10	< 10	4	0	0
COBALT (CO), UG/L	4	0	5	4	0	0
COPPER (CU), UG/L	4	3	6	4	5	13
IRON (FE), UG/L	4	440	2700	4	90	230
LEAD (PB), UG/L	4	1	10	4	0	3
MANGANESE (MN), UG/L	4	65	120	4	10	75
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	30	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	5	5.1	8.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 02492000 NAME: BOGUE CHITTO NEAR BUSH, LOUISIANA

LAT 30D37M45S LONG 089D53M50S
DRAINAGE AREA: 1210 SQ MI (3134 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.92	6.26	12.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	48.0	14.6	32	84					
STREAMFLOW (CUBIC FT/SEC)	12	4027.3	3942.2	708	11200	12	-163.986	11898.645	-0.606	3289.9
PH (STANDARD UNITS)	12	6.48	0.30	5.9	7.0	12	0.0084	6.0819	0.401 *	0.29
PHOSPHORUS, TOTAL	12	0.082	0.027	0.05	0.13	12	-0.00015	0.08908	-0.083 *	0.028
NITRITE + NITRATE, TOTAL	12	0.177	0.058	0.09	0.29	12	0.00271	0.04721	0.685	0.044
NITROGEN, KJELDAHL, TOTAL	12	0.527	0.211	0.13	0.81	12	0.00188	0.43652	0.130 *	0.219
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	425.2	302.0	92	1100	10	5.266	168.722	0.277 *	307.7
SEDIMENT, SUSPENDED	11	87.6	91.2	15	322					
SEDIMENT, CLAY-SILT (PERCENT)	11	73.7	10.6	53	85					
COLIFORM, FECAL (COL/100 ML)	11	1278.4	2594.8	13	8800					
STREPTOCOCCI, FECAL (COL/100 ML)	11	763.1	1199.0	12	4000					
SILICA, DISSOLVED	12	8.69	2.59	4.9	12.0	12	0.0907	4.3384	0.509 *	2.34
CALCIUM, DISSOLVED	12	2.64	0.71	1.6	3.9	12	0.0012	2.5840	0.025 *	0.75
MAGNESIUM, DISSOLVED	12	0.88	0.16	0.7	1.3	12	0.0075	0.5252	0.662	0.13
SODIUM, DISSOLVED	11	4.28	2.07	2.0	9.8	11	0.1175	-1.3923	0.864	1.10
POTASSIUM, DISSOLVED	12	1.70	0.35	1.1	2.3	12	0.0056	1.4304	0.233 *	0.36
BICARBONATE, ION	12	10.5	2.2	7	15	12	0.057	7.783	0.375 *	2.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	2.91	0.92	1.6	4.6	12	-0.0193	3.8345	-0.306 *	0.92
CHLORIDE, DISSOLVED	12	6.63	3.18	3.9	16.0	12	0.1760	-1.8140	0.807	1.97
DISSOLVED SOLIDS, SUM OF CONST	11	33.1	7.4	25	51	11	0.420	12.829	0.862	4.0
DISSOLVED SOLIDS, ROE 180 DEG C	10	47.7	20.9	28	94	10	0.072	44.121	0.053 *	22.2
HARDNESS, TOTAL	12	10.2	2.0	7	13	12	0.046	7.964	0.328 *	2.0
HARDNESS, NONCARBONATE	12	1.9	2.0	0	6	12	-0.005	2.164	-0.038 *	2.1
TURBIDITY (JTU)	12	22.5	17.2	5	50	12	-0.641	53.272	-0.542 *	15.2
FLOURIDE, DISSOLVED	12	0.09	0.12	0.0	0.4	12	-0.0036	0.2625	-0.445 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 281

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	60	49	48	46	45	43	41	34	31	28

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
265	20.67	6.74	2.84	84	2.15

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

02492000 -- BOGUE CHITTO NEAR BUSH, LOUISIANA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	1	3	4	0	0
COPPER (CU), UG/L	4	2	7	4	2	18
IRON (FE), UG/L	4	630	1100	4	60	180
LEAD (PB), UG/L	4	0	7	4	0	2
MANGANESE (MN), UG/L	4	65	120	4	10	100
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	31.00				
BIOMASS, ASH WT., G/SQ M	1	29.00				
CHLOROPHYLL A, MG/SQ M	1	7.7				
CHLOROPHYLL B, MG/SQ M	1	1.6				
ORGANIC CARBON, MG/L	4	2.5	9.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03049625 NAME: ALLEGHENY R AT NEW KENSINGTON, PA.

LAT 40D33M52S LONG 079D46M22S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	11.88	8.85	0.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	250.5	61.4	160	370					
STREAMFLOW (CUBIC FT/SEC)	21	21185.2	14785.9	3740	56500	21	-169.164	63556.691	-0.703	10793.4
PH (STANDARD UNITS)	21	6.95	0.26	6.5	7.4	21	-0.0004	7.0489	-0.091*	0.27
PHOSPHORUS, TOTAL	21	0.025	0.012	0.01	0.05	21	-0.00014	0.06094	-0.710	0.009
NITRITE + NITRATE, TOTAL	21	0.495	0.209	0.14	0.86	21	-0.00132	0.82659	-0.389*	0.197
NITROGEN, KJELDAHL, TOTAL	21	0.379	0.157	0.20	0.76	21	0.00130	0.05283	0.509	0.139
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3193.3	2392.6	190	7300	7	-32.377	12611.211	-0.928	926.0
SEDIMENT, SUSPENDED	19	25.2	19.7	5	71					
SEDIMENT, CLAY-SILT (PERCENT)	19	93.9	7.5	77	100					
COLIFORM, FECAL (COL/100 ML)	21	269.4	305.0	1	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	21	223.3	489.0	4	2200					
SILICA, DISSOLVED	21	4.34	1.12	2.3	5.8	21	-0.0075	6.2053	-0.410*	1.04
CALCIUM, DISSOLVED	21	23.19	6.00	14.0	35.0	21	0.0818	2.6958	0.838	3.36
MAGNESIUM, DISSOLVED	21	6.57	1.49	4.0	8.9	21	0.0205	1.4428	0.842	0.83
SODIUM, DISSOLVED	21	10.39	3.45	5.5	19.0	21	0.0416	-0.0378	0.741	2.37
POTASSIUM, DISSOLVED	21	1.81	0.56	1.2	3.4	21	0.0061	0.2860	0.662	0.43
BICARBONATE, ION	21	21.4	8.5	9	40	21	0.019	16.546	0.139*	8.6
CARBONATE, ION	19	0.0	0.0	0	0	19	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	21	75.29	24.30	36.0	120.0	21	0.3555	-13.7473	0.898	10.94
CHLORIDE, DISSOLVED	21	12.64	2.53	9.0	18.0	21	0.0285	5.4982	0.691	1.88
DISSOLVED SOLIDS, SUM OF CONST	21	145.2	36.5	92	208	21	0.533	11.767	0.896	16.6
DISSOLVED SOLIDS, ROE 180 DEG C	21	156.3	34.9	94	224	21	0.538	21.470	0.948	11.4
HARDNESS, TOTAL	21	84.5	20.3	51	120	21	0.282	13.842	0.853	10.9
HARDNESS, NONCARBONATE	21	67.4	19.7	31	95	21	0.273	-1.048	0.853	10.5
TURBIDITY (JTU)	21	11.9	11.6	1	40	21	-0.043	22.626	-0.228*	11.6
FLOURIDE, DISSOLVED	21	0.18	0.09	0.0	0.4	21	0.0006	0.0194	0.408*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 357

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	345	330	315	285	240	220	200	170	160	150

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
357	12.37	12.48	2.71	96	1.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03049625 -- ALLEGHENY R AT NEW KENSINGTON, PA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	7	1	3	7	0	1
CADMIUM (CD), UG/L	7	0	1	7	0	1
CHROMIUM (CR), UG/L	7	0	20	7	0	<10
COBALT (CO), UG/L	7	2	9	7	0	8
COPPER (CU), UG/L	7	0	10	7	0	10
IRON (FE), UG/L	7	550	3600	7	10	1600
LEAD (PB), UG/L	7	2	11	7	0	3
MANGANESE (MN), UG/L	7	190	510	7	140	480
MERCURY (HG), UG/L	7	<0.5	<0.5	7	<0.5	<0.5
SELENIUM (SE), UG/L	7	0	0	7	0	0
ZINC (ZN), UG/L	7	20	70	7	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.29	7.19			
BIOMASS, ASH WT., G/SQ M	2	1.50	5.50			
CHLOROPHYLL A, MG/SQ M	2	.5	4.0			
CHLOROPHYLL B, MG/SQ M	2	.1	.1			
ORGANIC CARBON, MG/L	8	1.0	4.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03085000 NAME: MONONGAHELA RIVER AT BRADDOCK, PA.

LAT 40D24M19S LONG 079D52M53S
DRAINAGE AREA: 7337 SQ MI (19003 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	15.31	9.51	2.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	349.6	95.5	210	500					
STREAMFLOW (CUBIC FT/SEC)	13	16177.7	16969.6	3190	56700	12	-94.881	45969.762	-0.734	8797.6
PH (STANDARD UNITS)	12	7.21	0.27	6.5	7.5	12	0.0012	6.7864	0.425*	0.26
PHOSPHORUS, TOTAL	12	0.052	0.028	0.01	0.11	12	0.00005	0.03328	0.190*	0.028
NITRITE + NITRATE, TOTAL	12	0.632	0.125	0.42	0.86	12	-0.00074	0.88992	-0.563*	0.108
NITROGEN, KJELDAHL, TOTAL	12	0.547	0.342	0.14	1.20	12	0.00222	-0.23037	0.620	0.282
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5642.9	5095.8	65	13000	12	17.904	-616.063	0.335*	5034.8
SEDIMENT, SUSPENDED	13	57.6	72.4	17	230					
SEDIMENT, CLAY-SILT (PERCENT)	12	95.5	4.0	88	100					
COLIFORM, FECAL (COL/100 ML)	12	2257.5	2670.0	270	9300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	523.3	752.3	21	2200					
SILICA, DISSOLVED	12	5.14	0.62	3.8	6.3	12	-0.0007	5.3815	-0.105*	0.65
CALCIUM, DISSOLVED	12	31.92	8.33	20.0	44.0	12	0.0837	2.6680	0.959	2.47
MAGNESIUM, DISSOLVED	12	8.51	2.15	5.5	12.0	12	0.0218	0.9046	0.964	0.60
SODIUM, DISSOLVED	12	19.83	9.26	9.0	35.0	12	0.0911	-12.0111	0.939	3.34
POTASSIUM, DISSOLVED	12	2.37	1.06	1.0	4.2	12	0.0079	-0.3974	0.715	0.77
BICARBONATE, ION	12	27.7	8.1	17	42	12	0.057	7.818	0.667	6.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	120.33	44.75	63.0	190.0	12	0.4596	-40.3213	0.981	9.22
CHLORIDE, DISSOLVED	12	11.40	2.97	7.0	15.0	12	0.0165	5.6406	0.530*	2.64
DISSOLVED SOLIDS, SUM OF CONST	12	213.4	69.1	125	320	12	0.707	-33.892	0.978	15.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	230.1	67.1	138	341	12	0.684	-9.096	0.974	16.1
HARDNESS, TOTAL	12	114.3	30.2	73	160	12	0.304	8.013	0.961	8.7
HARDNESS, NONCARBONATE	12	91.8	24.4	54	130	12	0.248	5.149	0.969	6.3
TURBIDITY (JTU)	12	15.2	13.9	3	40	12	-0.101	50.341	-0.693	10.5
FLOURIDE, DISSOLVED	12	0.20	0.14	0.0	0.4	12	0.0005	0.0292	0.330*	0.14

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	15.45	12.33	2.69	96	1.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03085000 -- MONONGAHELA RIVER AT BRADDOCK, PA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	1	6	4	1	5
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	560	3400	4	10	120
LEAD (PB), UG/L	4	6	11	4	0	1
MANGANESE (MN), UG/L	4	280	520	4	220	440
MERCURY (HG), UG/L	4	< 0.5	0.6	4	0.5	0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	600	4	20	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.39	11.00			
BIOMASS, ASH WT., G/SQ M	4	1.50	8.59			
CHLOROPHYLL A, MG/SQ M	3	2.0	9.1			
CHLOROPHYLL B, MG/SQ M	3	.0	1.5			
ORGANIC CARBON, MG/L	4	1.5	4.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03150000 NAME: MUSKINGUM R AT MCCONNELSVILLE OH

LAT 39D38M42S LONG 081D51M00S
DRAINAGE AREA: 7422 SQ MI (19223 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.04	9.80	1.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	621.5	156.5	425	910					
STREAMFLOW (CUBIC FT/SEC)	12	11127.5	9130.9	1470	34200	11	-46.189	40714.188	-0.801	5703.2
PH (STANDARD UNITS)	11	7.44	0.15	7.3	7.8	11	0.0007	7.0149	0.707	0.11
PHOSPHORUS, TOTAL	12	0.118	0.062	0.05	0.28	11	-0.00015	0.21876	-0.387 *	0.060
NITRITE + NITRATE, TOTAL	12	1.141	0.721	0.05	2.70	11	-0.00262	2.85972	-0.600 *	0.578
NITROGEN, KJELDAHL, TOTAL	12	0.621	0.249	0.27	1.10	11	0.00043	0.31152	0.323 *	0.207
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	17241.7	19840.8	200	66000	11	91.152	-38382.602	0.697	15472.3
SEDIMENT, SUSPENDED	10	65.2	57.0	17	170					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1111.7	1177.2	36	4200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	863.8	1364.7	9	5000					
SILICA, DISSOLVED	4	5.27	2.88	1.3	8.2	4	-0.0122	14.7621	-0.467 *	3.12
CALCIUM, DISSOLVED	4	83.25	11.53	68.0	96.0	4	0.0839	17.9355	0.804 *	8.40
MAGNESIUM, DISSOLVED	4	24.00	3.37	19.0	26.0	4	0.0212	7.5185	0.695 *	2.97
SODIUM, DISSOLVED	4	41.00	9.90	27.0	48.0	4	0.0669	-11.1027	0.747 *	8.06
POTASSIUM, DISSOLVED	4	3.37	0.84	2.4	4.3	4	0.0072	-2.1939	0.938 *	0.36
BICARBONATE, ION	4	123.8	7.1	118	134	4	0.041	92.196	0.627 *	6.8
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	167.50	28.72	130.0	200.0	4	0.2154	-0.2389	0.829 *	19.70
CHLORIDE, DISSOLVED	4	87.00	23.34	57.0	110.0	4	0.1636	-40.3859	0.774 *	18.09
DISSOLVED SOLIDS, SUM OF CONST	4	473.0	62.9	410	547	4	0.567	31.296	0.996 *	7.3
DISSOLVED SOLIDS, ROE 180 DEG C	4	504.5	73.9	431	583	4	0.653	-4.352	0.977 *	19.3
HARDNESS, TOTAL	4	310.0	42.4	250	350	4	0.296	79.259	0.772 *	33.1
HARDNESS, NONCARBONATE	4	205.0	38.7	150	240	4	0.283	-15.639	0.808 *	27.9
TURBIDITY (JTU)	4	12.5	5.6	7	20	4	-0.034	38.605	-0.665 *	5.1
FLOURIDE, DISSOLVED	4	0.15	0.19	0.0	0.4	4	0.0017	-1.1845	0.989 *	0.04

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	13.97	12.83	2.80	94	2.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03150000 -- MUSKINGUM R AT MCCONNELSVILLE OH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	< 10
COBALT (CO), UG/L	4	1	5	4	1	1
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	590	1700	4	20	230
LEAD (PB), UG/L	4	4	8	4	0	3
MANGANESE (MN), UG/L	4	280	680	4	20	580
MERCURY (HG), UG/L	4	<0.5	0.6	4	< 0.5	<0.5
SELENIUM (SE), UG/L	4	0	2	4	0	2
ZINC (ZN), UG/L	4	10	100	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	19.00	28.00			
BIOMASS, ASH WT., G/SQ M	3	15.00	24.00			
CHLOROPHYLL A, MG/SQ M	3	22.0	39.0			
CHLOROPHYLL B, MG/SQ M	3	3.3	10.0			
ORGANIC CARBON, MG/L	4	2.8	9.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03201300 NAME: KANAWHA @ WINFIELD

LAT 38D31M32S LONG 081D54M40S
DRAINAGE AREA: 11809 SQ MI (30585 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	15.75	10.17	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	246.5	99.1	83	420					
STREAMFLOW (CUBIC FT/SEC)	10	26051.0	42506.0	3720	143000	10	-295.670	98933.625	-0.689	32670.6
PH (STANDARD UNITS)	10	7.54	0.30	7.1	8.1	10	-0.0018	7.9890	-0.604*	0.25
PHOSPHORUS, TOTAL	9	0.097	0.034	0.05	0.14	9	0.00017	0.05446	0.541*	0.030
NITRITE + NITRATE, TOTAL	9	0.663	0.119	0.51	0.90	9	0.00002	0.65958	0.014*	0.127
NITROGEN, KJELDAHL, TOTAL	9	1.971	1.490	0.39	4.60	9	0.00767	0.11819	0.534*	1.346
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	934.0	625.8	300	2500	10	-2.957	1662.888	-0.468*	586.6
SEDIMENT, SUSPENDED	8	287.3	622.2	24	1820					
SEDIMENT, CLAY-SILT (PERCENT)	9	74.4	21.8	38	98					
COLIFORM, FECAL (COL/100 ML)	10	597.4	568.4	4	1380					
STREPTOCOCCI, FECAL (COL/100 ML)	10	434.6	670.9	0	2000					
SILICA, DISSOLVED	9	5.61	1.16	3.2	6.9	9	-0.0027	6.2705	-0.244*	1.20
CALCIUM, DISSOLVED	9	15.96	4.58	8.6	24.0	9	0.0317	8.2879	0.719	3.40
MAGNESIUM, DISSOLVED	9	5.19	1.46	3.3	7.5	9	0.0101	2.7389	0.721	1.08
SODIUM, DISSOLVED	9	15.20	8.99	5.0	30.0	9	0.0838	-5.0606	0.968	2.39
POTASSIUM, DISSOLVED	9	5.36	2.12	2.6	9.4	9	-0.0011	5.6233	-0.054*	2.27
BICARBONATE, ION	9	45.1	15.2	21	65	9	0.092	22.969	0.626*	12.7
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	32.67	11.08	20.0	53.0	9	0.0947	9.7719	0.888	5.45
CHLORIDE, DISSOLVED	9	20.78	9.40	11.0	39.0	9	0.0869	-0.2234	0.959	2.84
DISSOLVED SOLIDS, SUM OF CONST	9	123.3	39.6	70	194	9	0.349	39.041	0.914	17.2
DISSOLVED SOLIDS, ROE 180 DEG C	10	137.9	45.7	79	201	10	0.419	34.561	0.908	20.3
HARDNESS, TOTAL	9	61.2	17.2	35	91	9	0.120	32.185	0.725	12.7
HARDNESS, NONCARBONATE	9	24.3	8.2	17	43	9	0.045	13.560	0.561*	7.3
TURBIDITY (JTU)	9	23.9	18.1	3	65	9	-0.078	42.754	-0.447*	17.3
FLOURIDE, DISSOLVED	9	0.11	0.08	0.0	0.2	9	0.0002	0.0723	0.213*	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
91	14.47	13.08	2.51	93	1.64

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03201300 -- KANAWHA @ WINFIELD

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	3
CADMIUM (CD), UG/L	4	1	22	4	2	23
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	30	110	4	20	100
IRON (FE), UG/L	4	630	1300	4	40	160
LEAD (PB), UG/L	4	24	91	4	3	34
MANGANESE (MN), UG/L	4	90	110	4	40	80
MERCURY (HG), UG/L	4	<0.5	1.2	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	<2	4	0	<2
ZINC (ZN), UG/L	4	30	260	4	30	260
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.09	21.00			
BIOMASS, ASH WT., G/SQ M	3	.00	14.00			
CHLOROPHYLL A, MG/SQ M	4	.0	90.0			
CHLOROPHYLL B, MG/SQ M	4	.0	28.0			
ORGANIC CARBON, MG/L	4	2.7	18.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03204500 NAME: MUD RIVER NEAR MILTON, W. VA.

LAT 38D23M15S LONG 082D06M46S
DRAINAGE AREA: 256 SQ MI (663 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	14.90	8.14	4.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	136.4	31.9	100	185					
STREAMFLOW (CUBIC FT/SEC)	10	233.0	305.1	7	763	10	-5.434	974.164	-0.568*	266.3
PH (STANDARD UNITS)	10	7.60	0.31	7.2	8.1	10	-0.0037	8.1061	-0.383*	0.30
PHOSPHORUS, TOTAL	9	0.044	0.028	0.02	0.11	9	-0.00027	0.08237	-0.300*	0.028
NITRITE + NITRATE, TOTAL	9	0.201	0.108	0.06	0.36	9	-0.00026	0.23769	-0.075*	0.115
NITROGEN, KJELDAHL, TOTAL	9	0.571	0.320	0.18	1.20	9	0.00248	0.22310	0.240*	0.333
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	502.5	701.5	120	2200	8	-8.383	1701.293	-0.384*	699.6
SEDIMENT, SUSPENDED	9	47.8	44.1	5	150					
SEDIMENT, CLAY-SILT (PERCENT)	9	85.2	20.7	33	100					
COLIFORM, FECAL (COL/100 ML)	10	732.2	564.1	64	1900					
STREPTOCOCCI, FECAL (COL/100 ML)	10	601.0	496.2	100	1500					
SILICA, DISSOLVED	9	5.64	0.77	4.6	6.7	9	-0.0180	8.1777	-0.731	0.56
CALCIUM, DISSOLVED	10	12.31	3.36	9.0	18.0	10	0.0821	1.1176	0.780	2.23
MAGNESIUM, DISSOLVED	10	3.51	0.66	2.6	4.8	10	0.0167	1.2368	0.801	0.42
SODIUM, DISSOLVED	10	5.04	1.71	2.8	7.9	10	0.0475	-1.4394	0.888	0.83
POTASSIUM, DISSOLVED	10	2.88	1.37	1.2	6.3	10	0.0215	-0.0467	0.500*	1.26
BICARBONATE, ION	10	39.2	16.0	18	59	10	0.426	-18.971	0.853	8.8
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	17.60	3.17	12.0	22.0	10	-0.0257	21.1028	-0.259*	3.25
CHLORIDE, DISSOLVED	10	6.23	2.15	3.1	10.0	10	0.0439	0.2441	0.652	1.73
DISSOLVED SOLIDS, SUM OF CONST	9	74.4	13.8	54	92	9	0.383	20.612	0.862	7.5
DISSOLVED SOLIDS, RUE 180 DEG C	9	84.8	14.4	65	104	9	0.374	32.284	0.803	9.2
HARDNESS, TOTAL	10	45.3	11.0	35	65	10	0.277	7.492	0.803	7.0
HARDNESS, NONCARBONATE	10	13.1	5.9	2	21	10	-0.076	23.522	-0.414*	5.7
TURBIDITY (JTU)	10	20.1	16.7	4	45	10	-0.171	43.394	-0.327*	16.7
FLOURIDE, DISSOLVED	9	0.09	0.08	0.0	0.2	9	0.0009	-0.0397	0.363*	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03204500 -- MUD RIVER NEAR MILTON, W. VA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	1	2
CHROMIUM (CR), UG/L	4	0	0	3	0	< 10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	20	3	0	10
IRON (FE), UG/L	6	640	2000	6	50	420
LEAD (PB), UG/L	4	0	19	4	1	3
MANGANESE (MN), UG/L	6	70	270	6	30	210
MERCURY (HG), UG/L	4	< 0.5	< 0.5	4	< 0.5	< 0.5
SELENIUM (SE), UG/L	4	0	2	4	0	0
ZINC (ZN), UG/L	4	10	40	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	22.00				
BIOMASS, ASH WT., G/SQ M	1	19.00				
CHLOROPHYLL A, MG/SQ M	1	39.0				
CHLOROPHYLL B, MG/SQ M	1	5.0				
ORGANIC CARBON, MG/L	5	3.6	7.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03215000 NAME: BIG SANDY R AT LOUISA, KY

LAT 38D10M16S LONG 082D38M05S
DRAINAGE AREA: 3892 SQ MI (10080 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	14.27	8.32	3.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	314.0	114.8	205	550					
STREAMFLOW (CUBIC FT/SEC)	11	5644.6	6386.4	758	23400	11	-31.084	15404.859	-0.559 *	5583.1
PH (STANDARD UNITS)	11	7.45	0.43	6.8	8.1	11	0.0006	7.2570	0.159 *	0.45
PHOSPHORUS, TOTAL	11	0.085	0.039	0.01	0.14	11	0.00018	0.02684	0.547 *	0.034
NITRITE + NITRATE, TOTAL	11	0.425	0.106	0.27	0.56	11	0.00061	0.23166	0.668	0.083
NITROGEN, KJELDAHL, TOTAL	11	0.465	0.285	0.16	1.20	11	0.00103	0.14221	0.413 *	0.274
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	672.7	646.0	100	2000	11	4.527	-748.825	0.805	404.4
SEDIMENT, SUSPENDED	7	131.6	124.0	46	389					
SEDIMENT, CLAY-SILT (PERCENT)	7	90.0	6.2	81	96					
COLIFORM, FECAL (COL/100 ML)	7	3957.1	2619.7	900	7700					
STREPTOCOCCI, FECAL (COL/100 ML)	7	1887.1	2009.0	210	5000					
SILICA, DISSOLVED	11	7.30	1.15	5.5	8.8	11	-0.0076	9.6775	-0.755	0.79
CALCIUM, DISSOLVED	11	25.82	8.08	19.0	41.0	11	0.0660	5.1073	0.937	2.99
MAGNESIUM, DISSOLVED	11	10.65	2.57	7.6	14.0	11	0.0197	4.4565	0.879	1.29
SODIUM, DISSOLVED	11	22.33	14.13	7.6	48.0	11	0.1205	-15.5218	0.979	3.01
POTASSIUM, DISSOLVED	11	2.65	0.83	1.8	3.8	11	0.0064	0.6423	0.889	0.40
BICARBONATE, ION	11	69.0	37.3	30	140	11	0.315	-30.037	0.970	9.5
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	84.64	22.79	64.0	120.0	11	0.1815	27.6384	0.914	9.73
CHLORIDE, DISSOLVED	11	8.80	4.96	3.4	18.0	11	0.0340	-1.8797	0.788	3.22
DISSOLVED SOLIDS, SUM OF CONST	11	196.5	68.8	142	315	11	0.576	15.741	0.961	20.1
DISSOLVED SOLIDS, RUE 180 DEG C	11	194.5	74.7	118	338	11	0.617	0.589	0.949	24.8
HARDNESS, TOTAL	11	108.3	30.0	82	160	11	0.247	30.611	0.947	10.1
HARDNESS, NONCARBONATE	11	51.7	7.3	41	67	11	-0.014	56.071	-0.219 *	7.5
TURBIDITY (JTU)	11	83.7	69.0	6	250	11	0.456	-59.610	0.760	47.2
FLOURIDE, DISSOLVED	11	0.11	0.09	0.0	0.3	11	0.0004	-0.0019	0.430 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 292

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	549	513	475	448	420	317	230	166	148	136

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
292	15.29	11.72	2.84	94	2.19

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03215000 -- BIG SANDY R AT LOUISA, KY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	6	5	0	1
CADMIUM (CD), UG/L	4	0	3	5	0	2
CHROMIUM (CR), UG/L	4	< 10	10	5	0	3
COBALT (CO), UG/L	4	0	5	5	0	2
COPPER (CU), UG/L	4	11	22	5	2	13
IRON (FE), UG/L	3	70	2500	4	0	1600
LEAD (PB), UG/L	4	12	32	5	0	10
MANGANESE (MN), UG/L	3	30	120	4	0	30
MERCURY (HG), UG/L	5	0.0	0.4	5	0.0	0.3
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	4	30	60	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.79	6.79			
BIOMASS, ASH WT., G/SQ M	2	3.09	5.50			
CHLOROPHYLL A, MG/SQ M	2	.0	.7			
CHLOROPHYLL B, MG/SQ M	2	.0	.2			
ORGANIC CARBON, MG/L	4	2.3	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03216600 NAME: OHIO R AT GREENUP DAM NR GREENUP, KY

LAT 38D38M48S LONG 082D51M38S
DRAINAGE AREA: 62000 SQ MI (160580 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	15.91	8.88	4.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	359.5	109.1	220	610					
STREAMFLOW (CUBIC FT/SEC)	12	89576.6	78515.9	23900	295000	11	-522.369	280508.063	-0.699	61486.0
PH (STANDARD UNITS)	10	7.18	0.27	6.8	7.6	10	-0.0002	7.2414	-0.072*	0.28
PHOSPHORUS, TOTAL	11	0.069	0.040	0.01	0.14	11	-0.00020	0.14139	-0.554*	0.035
NITRITE + NITRATE, TOTAL	11	0.964	0.246	0.61	1.40	11	0.00159	0.39026	0.707	0.183
NITROGEN, KJELDAHL, TOTAL	11	0.725	0.304	0.42	1.40	11	0.00181	0.07524	0.648	0.244
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2196.4	1568.9	560	5100	11	4.040	743.715	0.281*	1587.1
SEDIMENT, SUSPENDED	4	45.8	27.9	19	84					
SEDIMENT, CLAY-SILT (PERCENT)	4	84.0	12.8	69	100					
COLIFORM, FECAL (COL/100 ML)	7	760.0	605.1	230	1900					
STREPTOCOCCI, FECAL (COL/100 ML)	6	228.5	302.2	3	830					
SILICA, DISSOLVED	11	5.16	1.64	1.3	6.6	11	-0.0121	9.5256	-0.809	1.01
CALCIUM, DISSOLVED	11	34.73	9.07	22.0	52.0	11	0.0663	10.8718	0.799	5.75
MAGNESIUM, DISSOLVED	11	9.70	2.07	6.7	14.0	11	0.0170	3.5850	0.898	0.96
SODIUM, DISSOLVED	11	20.44	8.89	9.8	38.0	11	0.0748	-6.4419	0.917	3.73
POTASSIUM, DISSOLVED	11	2.58	0.81	1.8	3.9	11	0.0053	0.6610	0.716	0.60
BICARBONATE, ION	11	49.6	7.4	36	61	11	0.038	36.060	0.560*	6.4
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	89.55	30.48	52.0	160.0	11	0.2444	1.6898	0.875	15.55
CHLORIDE, DISSOLVED	11	24.64	10.74	13.0	47.0	11	0.0896	-7.5784	0.910	4.69
DISSOLVED SOLIDS, SUM OF CONST	11	211.6	61.9	130	342	11	0.505	30.122	0.890	29.8
DISSOLVED SOLIDS, RLE 180 DEG C	11	220.1	69.7	140	378	11	0.588	8.794	0.920	28.7
HARDNESS, TOTAL	11	126.4	31.9	83	190	11	0.242	39.446	0.828	18.8
HARDNESS, NONCARBONATE	11	87.0	28.8	53	150	11	0.216	9.490	0.817	17.5
TURBIDITY (JTU)	11	17.3	17.0	4	60	11	-0.088	48.870	-0.565*	14.8
FLOURIDE, DISSOLVED	11	0.22	0.12	0.0	0.4	11	0.0006	0.0172	0.522*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 249

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	480	469	444	420	403	325	265	210	185	165

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
249	16.66	12.90	2.59	97	1.39

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03216600 -- OHIO R AT GREENUP DAM NR GREENUP, KY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	4	4	0	0
CADMIUM (CD), UG/L	3	1	2	4	0	2
CHROMIUM (CR), UG/L	3	<10	<10	4	0	4
COBALT (CO), UG/L	3	0	7	4	0	1
COPPER (CU), UG/L	3	15	17	4	3	10
IRON (FE), UG/L	3	150	2900	4	0	70
LEAD (PB), UG/L	3	11	17	4	0	5
MANGANESE (MN), UG/L	3	38	320	4	20	250
MERCURY (HG), UG/L	4	0.2	0.6	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	3	30	80	4	8	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.50	39.00			
BIOMASS, ASH WT., G/SQ M	5	.00	33.00			
CHLOROPHYLL A, MG/SQ M	5	.0	58.0			
CHLOROPHYLL B, MG/SQ M	5	.0	10.0			
ORGANIC CARBON, MG/L	4	2.3	5.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03234500 NAME: SCIOTO R AT HIGBY OH

LAT 39D12M44S LONG 082D51M50S
DRAINAGE AREA: 5131 SQ MI (13289 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	13.81	8.84	1.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	602.1	63.7	505	730					
STREAMFLOW (CUBIC FT/SEC)	12	5176.3	4665.4	846	13500	11	-39.925	29615.875	-0.570 *	4052.0
PH (STANDARD UNITS)	12	7.72	0.16	7.6	8.2	12	0.0001	7.6595	0.043 *	0.17
PHOSPHORUS, TOTAL	12	0.502	0.218	0.31	1.10	12	0.00213	-0.77887	0.622	0.179
NITRITE + NITRATE, TOTAL	12	2.367	1.119	0.70	4.40	12	0.00001	2.36231	0.000 *	1.173
NITROGEN, KJELDAHL, TOTAL	12	0.971	0.155	0.74	1.20	12	0.00086	0.45109	0.355 *	0.152
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	24234.2	27722.4	410	84000	12	-2.190	25552.766	-0.005 *	29074.8
SEDIMENT, SUSPENDED	12	67.8	31.1	22	114					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	3068.3	4485.4	390	17000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1997.7	3273.7	75	10000					
SILICA, DISSOLVED	4	5.42	1.98	2.9	7.1	4	-0.0207	18.4219	-0.494 *	2.11
CALCIUM, DISSOLVED	4	70.00	3.37	66.0	74.0	4	0.0105	63.4195	0.147 *	4.08
MAGNESIUM, DISSOLVED	4	25.75	1.71	24.0	28.0	4	0.0348	3.8933	0.962 *	0.57
SODIUM, DISSOLVED	4	22.75	6.70	14.0	30.0	4	0.1187	-51.7509	0.836 *	4.51
POTASSIUM, DISSOLVED	4	3.15	0.93	2.3	4.0	4	0.0161	-6.9548	0.821 *	0.65
BICARBONATE, ION	4	243.3	11.9	229	254	4	0.137	156.998	0.546 *	12.2
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	77.50	12.97	63.0	92.0	4	0.2464	-77.1423	0.896 *	7.06
CHLORIDE, DISSOLVED	4	34.25	7.68	23.0	40.0	4	0.0940	-24.7397	0.578 *	7.67
DISSOLVED SOLIDS, SUM OF CONST	4	359.5	27.4	336	396	4	0.572	0.862	0.983 *	6.2
DISSOLVED SOLIDS, ROE 180 DEG C	4	401.0	30.6	363	438	4	0.563	47.532	0.867 *	18.7
HARDNESS, TOTAL	4	280.0	14.1	260	290	4	0.150	185.993	0.500 *	15.0
HARDNESS, NONCARBONATE	4	81.3	3.8	76	84	4	0.054	47.642	0.669 *	3.4
TURBIDITY (JTU)	4	31.3	16.5	10	50	4	-0.114	102.931	-0.326 *	19.1
FLOURIDE, DISSOLVED	4	0.45	0.13	0.3	0.6	4	0.0020	-0.8191	0.739 *	0.11

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	13.13	11.68	2.67	93	2.64

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03234500 -- SCIOTO R AT HIGBY OH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	5	4	1	5
CADMIUM (CD), UG/L	4	1	1	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	< 10
COBALT (CO), UG/L	4	0	2	4	0	2
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	420	2100	4	30	190
LEAD (PB), UG/L	4	3	12	4	1	5
MANGANESE (MN), UG/L	4	50	270	4	10	80
MERCURY (HG), UG/L	4	< 0.5	< 0.5	4	< 0.5	< 0.5
SELENIUM (SE), UG/L	4	0	2	4	0	2
ZINC (ZN), UG/L	4	30	70	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	13.00	110.00			
BIOMASS, ASH WT., G/SQ M	4	3.09	100.00			
CHLOROPHYLL A, MG/SQ M	4	15.0	70.0			
CHLOROPHYLL B, MG/SQ M	4	.0	11.0			
ORGANIC CARBON, MG/L	3	5.0	6.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03245500 NAME: L MIAMI R AT MILFORD OH

LAT 39D10M17S LONG 084D17M53S
DRAINAGE AREA: 1203 SQ MI (3116 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	15.90	8.88	4.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	641.1	83.2	530	830					
STREAMFLOW (CUBIC FT/SEC)	9	1487.2	1872.1	96	6240	9	-14.859	11013.383	-0.661*	1502.3
PH (STANDARD UNITS)	9	7.99	0.13	7.8	8.2	9	0.0013	7.1550	0.853	0.07
PHOSPHORUS, TOTAL	9	0.433	0.264	0.15	0.95	9	0.00036	0.20473	0.113*	0.280
NITRITE + NITRATE, TOTAL	9	2.967	1.712	1.80	7.40	9	-0.00166	4.03260	-0.081*	1.824
NITROGEN, KJELDAHL, TOTAL	9	0.564	0.345	0.24	1.40	9	-0.00156	1.56353	-0.376*	0.342
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	3040.0	3036.6	160	8900	9	-2.724	4786.316	-0.075*	3237.2
SEDIMENT, SUSPENDED	9	135.6	212.7	8	694					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	1711.9	3242.7	3	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	633.6	1032.2	8	3100					
SILICA, DISSOLVED	3	6.90	1.41	5.6	8.4	3	0.1499	-89.8108	0.920*	0.78
CALCIUM, DISSOLVED	3	83.33	2.08	81.0	85.0	3	-0.2333	233.8333	-0.971*	0.71
MAGNESIUM, DISSOLVED	3	29.33	1.53	28.0	31.0	3	0.1667	-78.1666	0.945*	0.71
SODIUM, DISSOLVED	3	15.33	2.31	14.0	18.0	3	0.2667	-156.6666	1.000*	0.00
POTASSIUM, DISSOLVED	3	2.13	0.42	1.8	2.6	3	0.0466	-27.9554	0.970*	0.14
BICARBONATE, ION	3	311.7	3.2	308	314	3	0.233	161.167	0.629*	3.5
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	3	49.33	4.04	45.0	53.0	3	-0.4333	328.8330	-0.929*	2.12
CHLORIDE, DISSOLVED	3	30.33	5.13	26.0	36.0	3	0.5667	-335.1663	0.956*	2.12
DISSOLVED SOLIDS, SUM OF CONST	3	370.7	6.0	365	377	3	0.633	-37.833	0.910*	3.5
DISSOLVED SOLIDS, ROE 180 DEG C	3	409.7	8.5	400	416	3	-0.967	1033.166	-0.984*	2.1
HARDNESS, TOTAL	3	330.0	0.0	330	330	3	0.000	330.000	0.000*	0.0
HARDNESS, NONCARBONATE	3	73.0	1.7	72	75	3	-0.100	137.500	-0.500*	2.1
TURBIDITY (JTU)	3	14.0	13.9	5	30	3	1.600	-1018.000	0.997*	1.4
FLOURIDE, DISSOLVED	3	0.27	0.12	0.2	0.4	3	-0.0067	4.5684	-0.500*	0.14

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03245500 -- L MIAMI R AT MILFORD OH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	3	0	2
CADMIUM (CD), UG/L	3	0	1	3	0	0
CHROMIUM (CR), UG/L	3	0	10	3	0	< 10
COBALT (CO), UG/L	3	0	1	3	0	1
COPPER (CU), UG/L	3	10	10	3	0	10
IRON (FE), UG/L	3	330	1100	3	30	130
LEAD (PB), UG/L	3	2	6	3	1	2
MANGANESE (MN), UG/L	3	30	70	3	10	40
MERCURY (HG), UG/L	3	< 0.5	< 0.5	3	< 0.5	< 0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	10	60	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.50	31.00			
BIOMASS, ASH WT., G/SQ M	3	1.09	18.00			
CHLOROPHYLL A, MG/SQ M	3	.0	74.0			
CHLOROPHYLL B, MG/SQ M	3	.0	21.0			
ORGANIC CARBON, MG/L	3	1.7	7.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03254000 NAME: LICKING RIVER AT BUTLER,KY.

T 38D47M22S LONG 084D21M05S
AINAGE AREA: 3385 SQ MI (8767 SQ KM)
RIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFFICIENT, B	CONSTANT, b	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.17	8.37	3.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	236.3	52.1	175	338					
STREAMFLOW (CUBIC FT/SEC)	11	7137.1	9828.8	430	34200	10	-41.287	17629.930	-0.224*	10432.8
PH (STANDARD UNITS)	11	7.15	0.56	6.1	7.9	10	0.0033	6.3732	0.302*	0.60
PHOSPHORUS, TOTAL	12	0.272	0.415	0.05	1.50	11	-0.00210	0.77614	-0.252*	0.443
NITRITE + NITRATE, TOTAL	12	0.542	0.202	0.10	0.86	11	0.00098	0.31215	0.242*	0.217
NITROGEN, KJELDAHL, TOTAL	12	0.633	0.615	0.15	2.50	11	-0.00414	1.61231	-0.334*	0.641
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3295.8	6608.7	230	24000	11	32.647	-4227.320	0.247*	7044.8
SEDIMENT, SUSPENDED	9	77.1	76.5	13	263					
SEDIMENT, CLAY-SILT (PERCENT)	9	81.4	13.6	59	100					
COLIFORM, FECAL (COL/100 ML)	8	1826.9	2340.1	40	6400					
STREPTOCOCCI, FECAL (COL/100 ML)	7	1981.7	3070.6	32	7000					
SILICA, DISSOLVED	12	5.37	1.12	4.2	7.4	11	0.0051	4.1669	0.227*	1.20
CALCIUM, DISSOLVED	12	35.42	6.26	26.0	48.0	11	0.0889	14.4583	0.706	4.90
MAGNESIUM, DISSOLVED	12	5.82	1.22	3.8	7.3	11	0.0196	1.1707	0.799	0.81
SODIUM, DISSOLVED	12	3.02	0.77	2.1	4.2	11	0.0083	1.0950	0.545*	0.70
POTASSIUM, DISSOLVED	12	2.52	0.84	1.4	4.2	11	0.0003	2.2905	0.023*	0.72
BICARBONATE, ION	12	104.8	18.9	77	144	11	0.278	38.219	0.741	13.9
CARBONATE, ION	8	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	24.00	4.67	16.0	32.0	11	0.0601	10.0629	0.653	3.83
CHLORIDE, DISSOLVED	12	3.75	1.22	2.5	6.1	11	0.0156	0.1342	0.655	0.99
DISSOLVED SOLIDS, SUM OF CONST	12	131.8	21.3	105	175	11	0.337	52.096	0.786	14.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	141.1	22.3	113	182	11	0.295	71.118	0.659	18.5
HARDNESS, TOTAL	12	111.8	19.8	85	150	11	0.316	37.420	0.791	13.4
HARDNESS, NONCARBONATE	12	26.5	6.9	16	36	11	0.074	9.587	0.573*	5.9
TURBIDITY (JTU)	12	55.4	80.0	8	300	11	-0.572	193.946	-0.359*	81.6
FLOURIDE, DISSOLVED	12	0.20	0.11	0.0	0.4	11	0.0007	0.0508	0.376*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 329

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	330	290	282	260	240	225	200	170	160	150

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
323	16.38	11.57	2.69	94	2.03

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03254000 -- LICKING RIVER AT BUTLER,KY.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	1
COBALT (CO), UG/L	4	1	5	4	0	1
COPPER (CU), UG/L	4	6	30	4	3	22
IRON (FE), UG/L	4	920	4200	4	0	50
LEAD (PB), UG/L	4	8	25	4	0	7
MANGANESE (MN), UG/L	4	77	180	4	0	10
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.00	12.00			
BIOMASS, ASH WT., G/SQ M	3	.00	11.00			
CHLOROPHYLL A, MG/SQ M	3	.0	3.5			
CHLOROPHYLL B, MG/SQ M	3	.0	.7			
ORGANIC CARBON, MG/L	4	2.0	6.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03274600 NAME: G MIAMI R AT NEW BALTIMORE OH

LAT 39D15M47S LONG 084D40M04S
DRAINAGE AREA: 3814 SQ MI (9878 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	14.71	8.00	3.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	633.8	65.0	520	700					
STREAMFLOW (CUBIC FT/SEC)	12	4747.5	4328.6	1020	13100	12	-51.700	37516.945	-0.776	2862.5
PH (STANDARD UNITS)	12	7.80	0.17	7.6	8.2	12	0.0001	7.7345	0.039*	0.18
PHOSPHORUS, TOTAL	12	0.537	0.201	0.32	1.00	12	-0.00016	0.63881	-0.052*	0.211
NITRITE + NITRATE, TOTAL	12	3.825	1.969	2.20	9.50	12	-0.00490	6.92875	-0.162*	2.038
NITROGEN, KJELDAHL, TOTAL	12	1.125	0.273	0.75	1.70	12	0.00167	0.06696	0.397*	0.263
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	43463.6	62455.5	3400	210000	11	117.620	-32304.992	0.107*	65454.7
SEDIMENT, SUSPENDED	12	121.6	126.8	46	469					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	8473.3	7703.1	580	22000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	12179.2	26604.8	110	80000					
SILICA, DISSOLVED	4	6.65	0.97	5.7	8.0	4	0.0084	1.1015	0.431*	1.07
CALCIUM, DISSOLVED	4	74.75	5.50	70.0	80.0	4	0.0521	40.3227	0.471*	5.94
MAGNESIUM, DISSOLVED	4	28.25	1.71	26.0	30.0	4	0.0302	8.3067	0.878*	1.00
SODIUM, DISSOLVED	4	21.25	6.40	16.0	29.0	4	0.0922	-39.6942	0.717*	5.46
POTASSIUM, DISSOLVED	4	3.40	0.76	2.7	4.2	4	0.0111	-3.9525	0.726*	0.64
BICARBONATE, ION	4	274.0	22.2	249	300	4	0.261	101.083	0.585*	22.1
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	66.00	5.35	60.0	73.0	4	0.0842	10.2924	0.782*	4.08
CHLORIDE, DISSOLVED	4	35.25	7.54	28.0	44.0	4	0.1205	-44.4120	0.794*	5.62
DISSOLVED SOLIDS, SUM OF CONST	4	371.3	26.1	333	390	4	0.521	26.420	0.995*	3.1
DISSOLVED SOLIDS, ROE 180 DEG C	4	420.0	28.0	383	451	4	0.530	69.265	0.943*	11.4
HARDNESS, TOTAL	4	302.5	20.6	280	320	4	0.268	125.350	0.646*	19.3
HARDNESS, NONCARBONATE	4	78.5	7.3	73	89	4	0.039	52.429	0.268*	8.6
TURBIDITY (JTU)	4	68.8	88.2	15	200	4	-1.654	1162.291	-0.933*	38.9
FLOURIDE, DISSOLVED	4	0.40	0.08	0.3	0.5	4	0.0013	-0.4913	0.621*	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	14.75	10.56	2.69	92	2.59

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03274600 -- G MIAMI R AT NEW BALTIMORE OH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	1	2
CADMIUM (CD), UG/L	4	0	3	4	0	1
CHROMIUM (CR), UG/L	4	< 10	20	4	0	< 10
COBALT (CO), UG/L	4	0	2	4	0	1
COPPER (CU), UG/L	4	0	30	4	0	20
IRON (FE), UG/L	4	930	7900	4	30	170
LEAD (PB), UG/L	4	5	49	4	1	3
MANGANESE (MN), UG/L	4	70	250	4	10	60
MERCURY (HG), UG/L	4	< 0.5	< 0.5	4	< 0.5	< 0.5
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	4	20	230	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.09	34.00			
BIOMASS, ASH WT., G/SQ M	4	.00	30.00			
CHLOROPHYLL A, MG/SQ M	4	.0	11.0			
CHLOROPHYLL B, MG/SQ M	4	.0	2.0			
ORGANIC CARBON, MG/L	3	4.5	9.7			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03276500 NAME: WHITEWATER RIVER AT BROOKVILLE, IND

LAT 39D24M24S LONG 085D00M46S
DRAINAGE AREA: 1224 SQ MI (3170 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	13.55	8.90	3.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	515.5	84.0	320	640					
STREAMFLOW (CUBIC FT/SEC)	10	1898.3	2065.6	194	7040	10	-20.636	12535.926	-0.839	1191.2
PH (STANDARD UNITS)	10	8.04	0.30	7.6	8.7	10	-0.0015	8.8004	-0.415*	0.29
PHOSPHORUS, TOTAL	10	0.109	0.111	0.03	0.40	10	-0.00111	0.68149	-0.841	0.064
NITRITE + NITRATE, TOTAL	10	2.162	0.808	0.92	3.40	10	-0.00323	3.82727	-0.336*	0.807
NITROGEN, KJELDAHL, TOTAL	10	0.661	0.653	0.33	2.50	10	-0.00636	3.93793	-0.818	0.398
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	7918.8	9301.6	140	28000	8	13.638	920.957	0.139*	9948.8
SEDIMENT, SUSPENDED	10	165.0	297.7	40	1009					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	0									
STREPTOCOCCI, FECAL (COL/100 ML)	0									
SILICA, DISSOLVED	10	4.61	1.20	2.9	6.1	10	-0.0005	4.8701	-0.035*	1.27
CALCIUM, DISSOLVED	10	67.20	10.18	42.0	80.0	10	0.1165	7.1561	0.961	3.00
MAGNESIUM, DISSOLVED	10	23.10	4.51	12.0	27.0	10	0.0450	-0.1053	0.839	2.60
SODIUM, DISSOLVED	10	7.91	2.51	2.8	12.0	10	0.0236	-4.2461	0.790	1.63
POTASSIUM, DISSOLVED	10	2.30	0.28	2.0	2.9	10	-0.0010	2.8316	-0.311*	0.28
BICARBONATE, ION	10	261.9	44.8	145	302	10	0.470	19.537	0.882	22.4
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	37.40	6.35	21.0	45.0	10	0.0623	5.2803	0.825	3.80
CHLORIDE, DISSOLVED	10	14.93	3.83	7.3	22.0	10	0.0396	-5.4942	0.868	2.02
DISSOLVED SOLIDS, SUM OF CONST	10	287.0	46.7	165	338	10	0.518	20.093	0.932	18.0
DISSOLVED SOLIDS, ROE 180 DEG C	10	308.9	44.8	202	374	10	0.473	64.873	0.888	21.8
HARDNESS, TOTAL	10	264.0	45.0	150	310	10	0.503	4.478	0.940	16.4
HARDNESS, NONCARBONATE	10	48.1	10.9	33	69	10	0.091	0.955	0.704	8.2
TURBIDITY (JTU)	10	58.2	138.0	4	450	10	-1.344	750.795	-0.818	84.3
FLOURIDE, DISSOLVED	10	0.26	0.10	0.1	0.4	10	-0.0003	0.4085	-0.251*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 319

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	590	570	560	540	530	505	490	440	410	330

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
319	14.03	10.47	2.66	94	2.08

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03276500 -- WHITEWATER RIVER AT BROOKVILLE, IND

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	1	1	2	0	1
CADMIUM (CD), UG/L	2	0	0	2	0	0
CHROMIUM (CR), UG/L	2	< 10	10	2	0	< 10
COBALT (CO), UG/L	2	0	0	2	0	0
COPPER (CU), UG/L	2	20	30	2	10	10
IRON (FE), UG/L	2	330	1100	2	0	10
LEAD (PB), UG/L	2	0	5	2	1	1
MANGANESE (MN), UG/L	2	40	80	2	20	20
MERCURY (HG), UG/L	2	< 0.5	< 0.5	2	< 0.5	< 0.5
SELENIUM (SE), UG/L	2	1	1	2	0	0
ZINC (ZN), UG/L	2	10	20	2	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	2.5	5.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03277200 NAME: OHIO R AT MARKLAND DAM NR WARSAW, KY

LAT 38D46M29S LONG 084D57M52S
DRAINAGE AREA: 83170 SQ MI (215410 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	15.17	8.87	4.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	350.4	73.7	255	460					
STREAMFLOW (CUBIC FT/SEC)	13	151253.8	150603.8	13200	469999	12	-1322.197	624136.250	-0.636	123868.8
PH (STANDARD UNITS)	12	7.27	0.40	6.5	7.8	12	0.0004	7.1177	0.084 *	0.41
PHOSPHORUS, TOTAL	12	0.141	0.082	0.06	0.34	12	-0.00008	0.16789	-0.070 *	0.085
NITRITE + NITRATE, TOTAL	12	1.132	0.246	0.82	1.50	12	0.00168	0.54534	0.503 *	0.223
NITROGEN, KJELDAHL, TOTAL	12	0.682	0.287	0.27	1.30	12	0.00004	0.66897	0.010 *	0.301
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5196.7	11049.1	890	40000	12	66.735	-18188.344	0.445 *	10376.6
SEDIMENT, SUSPENDED	4	39.0	21.0	18	59					
SEDIMENT, CLAY-SILT (PERCENT)	4	92.5	9.0	82	100					
COLIFORM, FECAL (COL/100 ML)	7	3344.3	2872.1	110	8500					
STREPTOCOCCI, FECAL (COL/100 ML)	7	615.7	1198.6	28	3300					
SILICA, DISSOLVED	10	5.82	0.71	4.4	6.8	10	-0.0069	8.1169	-0.677	0.55
CALCIUM, DISSOLVED	12	38.42	8.93	26.0	51.0	12	0.1082	0.4855	0.894	4.20
MAGNESIUM, DISSOLVED	12	9.74	3.24	2.0	15.0	12	0.0156	4.2897	0.354 *	3.18
SODIUM, DISSOLVED	12	17.55	7.44	8.8	33.0	12	0.0949	-15.7212	0.940	2.66
POTASSIUM, DISSOLVED	12	2.95	1.46	1.8	7.0	12	0.0124	-1.3794	0.626	1.19
BICARBONATE, ION	12	77.3	16.7	56	109	12	0.128	32.545	0.565 *	14.4
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	69.17	25.37	22.0	120.0	12	0.2498	-18.3544	0.726	18.31
CHLORIDE, DISSOLVED	12	24.92	13.63	11.0	57.0	12	0.1050	-11.8799	0.568 *	11.76
DISSOLVED SOLIDS, SUM OF CONST	12	206.1	50.5	141	312	12	0.633	-15.687	0.924	20.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	223.7	54.7	156	334	12	0.617	7.448	0.831	31.9
HARDNESS, TOTAL	12	136.4	29.1	97	190	12	0.357	11.476	0.904	13.0
HARDNESS, NONCARBONATE	12	72.7	21.3	51	120	12	0.235	-9.820	0.816	12.9
TURBIDITY (JTU)	12	41.3	55.2	5	200	12	-0.313	151.139	-0.418 *	52.6
FLOURIDE, DISSOLVED	12	0.28	0.11	0.1	0.4	12	0.0010	-0.0643	0.656	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	517	481	451	420	390	322	288	252	240	225

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.18	12.65	2.63	97	1.45

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03277200 -- OHIO R AT MARKLAND DAM NR WARSAW, KY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	3	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	< 10	10	4	0	2
COBALT (CO), UG/L	4	0	20	4	0	7
COPPER (CU), UG/L	4	5	33	4	3	6
IRON (FE), UG/L	4	410	6900	4	0	0
LEAD (PB), UG/L	4	1	43	4	0	3
MANGANESE (MN), UG/L	4	50	400	4	4	110
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	180	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.50	48.00			
BIOMASS, ASH WT., G/SQ M	4	1.29	44.00			
CHLOROPHYLL A, MG/SQ M	4	.0	57.0			
CHLOROPHYLL B, MG/SQ M	4	.0	6.5			
ORGANIC CARBON, MG/L	4	2.8	4.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03290500 NAME: KENTUCKY RIVER AT LOCK 2,AT LOCKPORT,KY.

LAT 38D26M20S LONG 084D57M48S
DRAINAGE AREA: 6180 SQ MI (16006 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	15.64	8.82	5.5	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	243.3	47.7	185	336					
STREAMFLOW (CUBIC FT/SEC)	11	8281.1	7056.2	792	20400	9	-73.952	26736.637	-0.477*	6932.3
PH (STANDARD UNITS)	11	7.16	0.51	6.1	7.8	9	0.0082	5.1147	0.749	0.39
PHOSPHORUS, TOTAL	12	0.167	0.070	0.11	0.37	10	-0.00035	0.26089	-0.225*	0.076
NITRITE + NITRATE, TOTAL	12	0.590	0.215	0.15	0.94	10	-0.00034	0.68067	-0.110*	0.153
NITROGEN, KJELDAHL, TOTAL	12	0.392	0.166	0.22	0.73	10	-0.00080	0.59392	-0.221*	0.179
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1055.0	1300.8	130	4700	10	6.992	-715.184	0.235*	1463.9
SEDIMENT, SUSPENDED	7	108.9	100.0	25	294					
SEDIMENT, CLAY-SILT (PERCENT)	7	88.1	8.5	77	98					
COLIFORM, FECAL (COL/100 ML)	8	1396.3	2385.5	130	7200					
STREPTOCOCCI, FECAL (COL/100 ML)	7	404.0	499.0	68	1400					
SILICA, DISSOLVED	12	6.61	3.07	3.9	16.0	10	-0.0062	7.2524	-0.320*	0.93
CALCIUM, DISSOLVED	12	34.75	6.08	27.0	47.0	10	0.1217	4.1929	0.930	2.44
MAGNESIUM, DISSOLVED	12	6.83	1.26	5.4	9.1	10	0.0229	1.0901	0.842	0.74
SODIUM, DISSOLVED	12	6.67	4.08	3.0	16.0	10	0.0477	-5.8249	0.728	2.28
POTASSIUM, DISSOLVED	12	2.12	0.60	1.4	3.3	10	0.0083	0.0088	0.788	0.33
BICARBONATE, ION	12	97.5	20.6	72	134	10	0.402	-2.482	0.872	11.4
CARBONATE, ION	8	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	32.67	7.41	22.0	44.0	10	0.0707	14.8045	0.441*	7.29
CHLORIDE, DISSOLVED	12	9.44	7.33	3.5	29.0	10	0.0739	-10.3698	0.803	2.78
DISSOLVED SOLIDS, SUM OF CONST	12	146.3	28.0	114	199	10	0.542	9.143	0.968	7.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	159.8	34.2	118	220	10	0.596	9.151	0.877	16.5
HARDNESS, TOTAL	12	114.6	18.3	90	150	10	0.379	19.350	0.974	4.5
HARDNESS, NONCARBONATE	12	35.0	8.2	19	47	10	0.067	17.197	0.397*	7.9
TURBIDITY (JTU)	12	40.9	35.8	1	110	10	-0.591	189.826	-0.770	24.8
FLOURIDE, DISSOLVED	12	0.22	0.13	0.1	0.5	10	0.0013	-0.0864	0.430*	0.13

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 358

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	395	345	309	290	276	250	225	185	165	145

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
359	16.32	11.29	2.69	96	1.72

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03290500 -- KENTUCKY RIVER AT LOCK 2,AT LOCKPORT,KY.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	1	2
CHROMIUM (CR), UG/L	4	<10	<10	4	0	1
COBALT (CO), UG/L	4	0	3	4	0	3
COPPER (CU), UG/L	4	8	16	4	4	7
IRON (FE), UG/L	4	760	3600	4	0	10
LEAD (PB), UG/L	4	10	19	4	0	6
MANGANESE (MN), UG/L	4	60	130	4	0	10
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	90	4	4	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.39	6.79			
BIOMASS, ASH WT., G/SQ M	4	.19	5.29			
CHLOROPHYLL A, MG/SQ M	4	.0	5.7			
CHLOROPHYLL B, MG/SQ M	4	.0	.5			
ORGANIC CARBON, MG/L	4	3.6	6.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03301630 NAME: ROLLING FORK NR LEBANON JUNCTION,KY.

LAT 37D49M22S LONG 085D44M52S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.04	7.53	4.5	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	363.0	55.1	230	440					
STREAMFLOW (CUBIC FT/SEC)	12	1409.4	1372.9	26	4260	12	-2.393	2278.160	-0.096 *	1433.3
PH (STANDARD UNITS)	12	7.35	0.33	6.9	8.1	12	0.0020	6.6106	0.344 *	0.32
PHOSPHORUS, TOTAL	12	0.281	0.177	0.13	0.58	12	-0.00123	0.72614	-0.382 *	0.171
NITRITE + NITRATE, TOTAL	12	0.547	0.226	0.23	0.82	12	-0.00203	1.28525	-0.495 *	0.206
NITROGEN, KJELDAHL, TOTAL	12	0.697	0.416	0.39	1.80	12	-0.00121	1.13596	-0.160 *	0.431
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1448.3	1391.5	230	4900	12	3.452	195.290	0.137 *	1445.7
SEDIMENT, SUSPENDED	6	119.3	81.8	29	229					
SEDIMENT, CLAY-SILT (PERCENT)	6	93.0	3.3	89	98					
COLIFORM, FECAL (COL/100 ML)	7	2215.7	1545.5	540	4600					
STREPTOCOLCI, FECAL (COL/100 ML)	8	5801.5	7396.8	42	18000					
SILICA, DISSOLVED	12	5.97	1.00	4.1	7.1	12	0.0048	4.2188	0.266 *	1.01
CALCIUM, DISSOLVED	12	54.50	9.40	34.0	71.0	12	0.1497	0.1609	0.878	4.72
MAGNESIUM, DISSOLVED	12	12.23	2.27	5.8	15.0	12	0.0372	-1.2792	0.903	1.03
SODIUM, DISSOLVED	12	4.50	1.51	2.3	7.5	12	0.0192	-2.4705	0.699	1.13
POTASSIUM, DISSOLVED	12	2.71	1.00	1.2	4.0	12	0.0008	2.4246	0.043 *	1.05
BICARBONATE, ION	12	187.0	34.6	103	235	12	0.592	-27.855	0.942	12.2
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	29.92	5.82	20.0	37.0	12	0.0424	14.5186	0.401 *	5.59
CHLORIDE, DISSOLVED	12	5.43	2.17	3.0	9.6	12	0.0250	-3.6500	0.635	1.76
DISSOLVED SOLIDS, SUM OF CONST	12	207.8	33.6	125	262	12	0.573	-0.265	0.941	12.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	220.3	32.8	142	266	12	0.518	32.142	0.872	16.8
HARDNESS, TOTAL	12	187.5	31.4	110	240	12	0.521	-1.605	0.915	13.3
HARDNESS, NONCARBONATE	12	32.9	9.0	14	46	12	0.042	17.627	0.258 *	9.1
TURBIDITY (JTU)	12	80.4	77.8	20	220	12	-0.800	370.924	-0.566 *	67.3
FLOURIDE, DISSOLVED	12	0.18	0.08	0.0	0.3	12	-0.0006	0.3834	-0.364 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 145

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	451	436	427	390	364	314	287	245	223	202

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
145	14.47	11.10	2.79	84	1.77

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03301630 -- ROLLING FORK NR LEBANON JUNCTION,KY.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	3	4	1	7
CHROMIUM (CR), UG/L	4	< 10	10	4	0	2
COBALT (CO), UG/L	4	0	3	4	0	3
COPPER (CU), UG/L	4	5	28	4	4	7
IRON (FE), UG/L	4	970	3800	4	0	720
LEAD (PB), UG/L	4	16	37	3	3	10
MANGANESE (MN), UG/L	4	95	200	4	60	140
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	30	4	0	130
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	3.6	4.7			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03303280 NAME: OHIO R AT CANNELTON DAM, KY

LAT 37D53M58S LONG 086D42M20S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	14.75	9.19	4.2	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	344.4	74.2	250	490					
STREAMFLOW (CUBIC FT/SEC)	11	176017.9	159132.3	22000	504999	11	-1267.658	612553.000	-0.591	135333.7
PH (STANDARD UNITS)	11	7.46	0.36	7.1	8.4	11	-0.0028	8.4175	-0.564 *	0.32
PHOSPHORUS, TOTAL	11	0.156	0.088	0.06	0.38	11	-0.00034	0.27266	-0.286 *	0.088
NITRITE + NITRATE, TOTAL	11	1.214	0.245	0.88	1.60	11	0.00175	0.60999	0.530 *	0.219
NITROGEN, KJELDAHL, TOTAL	11	0.702	0.368	0.31	1.50	11	-0.00080	0.97733	-0.161 *	0.383
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2586.4	2466.8	950	9400	11	1.094	2209.760	0.033 *	2598.8
SEDIMENT, SUSPENDED	2	40.0	32.5	17	63					
SEDIMENT, CLAY-SILT (PERCENT)	2	65.0	24.0	48	82					
COLIFORM, FECAL (COL/100 ML)	7	1947.4	1976.2	10	5100					
STREPTOCOCCI, FECAL (COL/100 ML)	7	305.0	497.2	2	1200					
SILICA, DISSOLVED	10	5.55	0.81	4.2	6.6	10	-0.0050	7.2445	-0.463 *	0.77
CALCIUM, DISSOLVED	11	38.27	7.24	30.0	52.0	11	0.0849	9.0361	0.870	3.77
MAGNESIUM, DISSOLVED	11	10.22	2.02	7.3	14.0	11	0.0256	1.4187	0.936	0.75
SODIUM, DISSOLVED	11	15.54	7.01	8.9	28.0	11	0.0867	-14.3159	0.917	2.96
POTASSIUM, DISSOLVED	11	2.55	0.76	1.8	3.9	11	0.0087	-0.4453	0.850	0.42
BICARBONATE, ION	11	82.2	14.1	64	113	11	0.164	25.753	0.865	7.4
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	67.00	20.33	50.0	110.0	11	0.2514	-19.5721	0.917	8.55
CHLORIDE, DISSOLVED	11	20.36	8.26	11.0	34.0	11	0.0985	-13.5662	0.885	4.06
DISSOLVED SOLIDS, SUM OF CONST	11	200.1	49.5	153	293	11	0.631	-17.314	0.945	17.1
DISSOLVED SOLIDS, ROE 180 DEG C	11	216.8	57.5	142	326	11	0.762	-45.688	0.982	11.3
HARDNESS, TOTAL	11	139.1	27.4	110	190	11	0.328	26.001	0.890	13.2
HARDNESS, NONCARBONATE	11	70.6	17.2	52	110	11	0.193	4.277	0.830	10.1
TURBIDITY (JTU)	11	54.9	59.5	1	200	11	-0.267	146.757	-0.332 *	59.1
FLOURIDE, DISSOLVED	11	0.25	0.10	0.1	0.4	11	0.0005	0.0956	0.330 *	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 299

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	561	449	420	391	364	300	270	250	225	210

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
291	16.50	12.04	2.55	96	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03303280 -- OHIO R AT CANNELTON DAM, KY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	3	4	0	1
CADMIUM (CD), UG/L	4	0	9	4	1	2
CHROMIUM (CR), UG/L	4	< 10	10	4	0	1
COBALT (CO), UG/L	4	0	7	4	0	2
COPPER (CU), UG/L	4	5	36	4	3	8
IRON (FE), UG/L	4	260	5700	4	0	10
LEAD (PB), UG/L	4	6	34	4	0	6
MANGANESE (MN), UG/L	4	20	110	4	3	30
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	100	4	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	6.19	46.00			
BIOMASS, ASH WT., G/SQ M	3	3.09	17.00			
CHLOROPHYLL A, MG/SQ M	3	.0	94.0			
CHLOROPHYLL B, MG/SQ M	3	.1	29.0			
ORGANIC CARBON, MG/L	4	4.3	6.5			

STATION NUMBER: 03321230 NAME: GREEN RIVER NR BEECH GROVE,KY.

LAT 37D35M21S LONG 087D24M16S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.75	8.35	7.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	304.8	90.3	190	500					
STREAMFLOW (CUBIC FT/SEC)	12	19281.7	19900.0	1640	61300	12	-158.337	67547.875	-0.718	14523.8
PH (STANDARD UNITS)	9	7.12	0.37	6.6	7.6	9	-0.0010	7.4511	-0.284 *	0.38
PHOSPHORUS, TOTAL	12	0.120	0.181	0.03	0.65	12	-0.00053	0.28134	-0.264 *	0.183
NITRITE + NITRATE, TOTAL	12	0.599	0.166	0.29	0.83	12	0.00017	0.54631	0.094 *	0.173
NITROGEN, KJELDAHL, TOTAL	12	0.358	0.059	0.26	0.44	12	-0.00031	0.45257	-0.472 *	0.055
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3228.7	6407.6	64	23000	12	47.175	-11151.945	0.665	5021.8
SEDIMENT, SUSPENDED	11	39.3	14.1	24	70					
SEDIMENT, CLAY-SILT (PERCENT)	11	92.1	9.2	75	100					
COLIFORM, FECAL (COL/100 ML)	8	160.4	103.8	42	340					
STREPTOCOCCI, FECAL (COL/100 ML)	8	98.8	80.3	24	250					
SILICA, DISSOLVED	12	5.70	0.86	4.7	7.4	12	-0.0022	6.3664	-0.231 *	0.87
CALCIUM, DISSOLVED	12	40.58	9.73	30.0	60.0	12	0.1045	8.7435	0.969	2.51
MAGNESIUM, DISSOLVED	12	9.51	3.65	4.2	17.0	12	0.0395	-2.5349	0.977	0.81
SODIUM, DISSOLVED	12	6.74	3.44	3.0	15.0	12	0.0369	-4.4990	0.967	0.92
POTASSIUM, DISSOLVED	12	2.36	1.24	1.5	6.0	12	0.0102	-0.7515	0.744	0.87
BICARBONATE, ION	12	97.2	21.5	63	129	12	0.192	38.766	0.805	13.4
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	59.92	29.10	16.0	120.0	12	0.3059	-33.3421	0.949	9.62
CHLORIDE, DISSOLVED	12	6.35	3.00	3.2	14.0	12	0.0302	-2.8460	0.907	1.33
DISSOLVED SOLIDS, SUM OF CONST	12	179.3	56.5	103	301	12	0.621	-10.036	0.991	7.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	190.9	62.9	104	319	12	0.677	-15.355	0.971	15.9
HARDNESS, TOTAL	12	142.1	39.2	95	220	12	0.424	12.756	0.978	8.6
HARDNESS, NONCARBONATE	12	60.5	25.1	31	110	12	0.256	-17.503	0.920	10.3
TURBIDITY (JTU)	12	23.9	13.6	4	50	12	-0.122	61.053	-0.807	8.4
FLOURIDE, DISSOLVED	12	0.15	0.11	0.0	0.4	12	0.0005	-0.0027	0.416 *	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 352

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	495	460	430	360	330	270	240	190	170	140

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
354	17.64	11.86	2.72	94	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03321230 -- GREEN RIVER NR BEECH GROVE,KY.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	0	4
CHROMIUM (CR), UG/L	4	0	< 10	4	0	1
COBALT (CO), UG/L	4	0	6	4	0	6
COPPER (CU), UG/L	4	6	35	4	6	14
IRON (FE), UG/L	4	1100	2700	4	0	30
LEAD (PB), UG/L	4	5	35	4	0	9
MANGANESE (MN), UG/L	4	320	480	4	20	380
MERCURY (HG), UG/L	4	0.0	0.2	4	0.1	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	30	60	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.00	110.00			
BIOMASS, ASH WT., G/SQ M	3	.00	100.00			
CHLOROPHYLL A, MG/SQ M	3	.0	29.0			
CHLOROPHYLL B, MG/SQ M	3	.0	12.0			
ORGANIC CARBON, MG/L	4	3.1	10.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03374100 NAME: WHITE RIVER AT HAZLETON, IND.

LAT 38D29M23S LONG 087D33M00S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	16.17	10.39	3.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	440.0	90.5	300	575					
STREAMFLOW (CUBIC FT/SEC)	11	17696.4	14058.0	980	45300	11	-127.093	73617.375	-0.818	8525.6
PH (STANDARD UNITS)	11	7.68	0.42	7.0	8.6	11	0.0031	6.3325	0.655	0.34
PHOSPHORUS, TOTAL	11	0.200	0.084	0.08	0.34	11	-0.00057	0.44943	-0.610	0.070
NITRITE + NITRATE, TOTAL	11	1.440	0.795	0.02	2.60	11	-0.00224	2.42492	-0.255*	0.810
NITROGEN, KJELDAHL, TOTAL	11	0.762	0.162	0.47	1.00	11	0.00014	0.69973	0.079*	0.170
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	22714.4	35852.3	300	110000	9	242.829	-87368.000	0.644*	29332.6
SEDIMENT, SUSPENDED	11	146.4	67.9	58	255					
SEDIMENT, CLAY-SILT (PERCENT)	1	82.0	0.0	82						
COLIFORM, FECAL (COL/100 ML)	1	7200.0	0.0	7200						
STREPTOCOCCI, FECAL (COL/100 ML)	1	3700.0	0.0	3700						
SILICA, DISSOLVED	11	5.70	2.55	0.3	7.5	11	-0.0168	13.0729	-0.596*	2.16
CALCIUM, DISSOLVED	11	51.45	7.78	40.0	61.0	11	0.0716	19.9525	0.833	4.54
MAGNESIUM, DISSOLVED	11	16.00	4.63	11.0	24.0	11	0.0461	-4.2935	0.902	2.11
SODIUM, DISSOLVED	11	10.79	4.05	6.7	20.0	11	0.0381	-5.9707	0.851	2.24
POTASSIUM, DISSOLVED	11	2.56	0.84	1.9	4.8	11	-0.0014	3.1604	-0.147*	0.87
BICARBONATE, ION	11	174.7	37.5	125	223	11	0.366	13.589	0.882	18.6
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	50.82	9.91	35.0	65.0	11	0.0925	10.1236	0.845	5.59
CHLORIDE, DISSOLVED	11	16.00	4.77	10.0	26.0	11	0.0465	-4.4548	0.881	2.38
DISSOLVED SOLIDS, SUM OF CONST	11	239.6	43.1	182	293	11	0.456	39.174	0.957	13.2
DISSOLVED SOLIDS, ROE 180 DEG C	11	268.5	53.3	202	345	11	0.505	46.526	0.856	29.0
HARDNESS, TOTAL	11	195.5	34.5	150	240	11	0.349	41.708	0.917	14.4
HARDNESS, NONCARBONATE	11	51.0	7.9	43	70	11	0.069	20.600	0.788	5.2
TURBIDITY (JTU)	11	60.0	30.3	20	100	11	-0.275	181.009	-0.820	18.3
FLOURIDE, DISSOLVED	11	0.18	0.09	0.1	0.4	11	0.0002	0.0877	0.221*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 339

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	591	560	537	503	463	409	351	227	216	211

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
340	18.64	7.93	2.65	50	5.51

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03374100 -- WHITE RIVER AT HAZLETON, IND.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	2	2	2	1	1
CADMIUM (CD), UG/L	2	0	1	2	0	0
CHROMIUM (CR), UG/L	2	< 10	20	2	0	0
COBALT (CO), UG/L	2	1	2	2	0	0
COPPER (CU), UG/L	2	10	10	2	0	10
IRON (FE), UG/L	2	870	1900	2	10	50
LEAD (PB), UG/L	2	5	11	2	0	3
MANGANESE (MN), UG/L	2	150	160	2	10	10
MERCURY (HG), UG/L	2	< 0.5	< 0.5	2	< 0.5	< 0.5
SELENIUM (SE), UG/L	2	0	1	2	0	0
ZINC (ZN), UG/L	2	10	10	2	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	15.00				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	5.3	8.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03378500 NAME: WABASH RIVER AT NEW HARMONY, IND.

LAT 38D07M55S LONG 087D56M25S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	15.75	10.21	4.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	445.5	85.3	320	550					
STREAMFLOW (CUBIC FT/SEC)	10	38822.0	22644.2	8220	80300	10	-158.160	109282.188	-0.596*	19290.8
PH (STANDARD UNITS)	10	7.59	0.34	7.2	8.2	10	0.0016	6.8650	0.403*	0.33
PHOSPHORUS, TOTAL	10	0.217	0.097	0.08	0.42	10	-0.00082	0.58128	-0.718	0.072
NITRITE + NITRATE, TOTAL	10	2.165	1.173	0.95	5.00	10	0.00173	1.39329	0.126*	1.234
NITROGEN, KJELDAHL, TOTAL	10	0.840	0.172	0.55	1.10	10	-0.00065	1.13123	-0.324*	0.172
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	18837.5	26008.8	1000	73000	8	176.209	-62108.375	0.614*	22164.6
SEDIMENT, SUSPENDED	10	168.5	89.2	56	324					
SEDIMENT, CLAY-SILT (PERCENT)	1	90.0	0.0	90						
COLIFORM, FECAL (COL/100 ML)	0									
STREPTOCOCCI, FECAL (COL/100 ML)	0									
SILICA, DISSOLVED	10	5.68	1.84	2.5	7.7	10	-0.0115	10.7826	-0.530*	1.66
CALCIUM, DISSOLVED	10	53.30	11.57	40.0	74.0	10	0.1270	-3.2687	0.936	4.31
MAGNESIUM, DISSOLVED	10	17.00	4.22	12.0	23.0	10	0.0483	-4.5020	0.976	0.97
SODIUM, DISSOLVED	10	11.14	2.77	7.0	16.0	10	0.0249	0.0433	0.768	1.88
POTASSIUM, DISSOLVED	10	2.78	0.97	1.9	5.1	10	-0.0058	5.3685	-0.512*	0.88
BICARBONATE, ION	10	174.9	42.7	121	246	10	0.482	-40.021	0.964	12.0
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	55.30	11.35	38.0	71.0	10	0.1127	5.0935	0.847	6.41
CHLORIDE, DISSOLVED	10	17.20	3.91	10.0	22.0	10	0.0324	2.7474	0.708	2.93
DISSOLVED SOLIDS, SUM OF CONST	10	249.0	49.6	176	323	10	0.567	-3.751	0.976	11.4
DISSOLVED SOLIDS, ROE 180 DEG C	10	295.5	75.2	210	452	10	0.738	-33.103	0.836	43.8
HARDNESS, TOTAL	10	203.0	45.2	150	280	10	0.513	-25.527	0.967	12.2
HARDNESS, NONCARBONATE	10	59.8	14.1	31	78	10	0.122	5.596	0.735	10.2
TURBIDITY (JTU)	10	102.8	109.8	18	400	10	-0.928	516.366	-0.721	80.6
FLOURIDE, DISSOLVED	10	0.26	0.10	0.1	0.4	10	0.0003	0.1226	0.272*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 336

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	610	570	550	525	515	480	450	380	350	320

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
333	15.41	12.19	2.72	95	1.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03378500 -- WABASH RIVER AT NEW HARMONY, IND.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	2	5	2	2	5
CADMIUM (CD), UG/L	2	0	1	2	0	0
CHROMIUM (CR), UG/L	2	10	10	2	0	<10
COBALT (CO), UG/L	2	2	4	2	0	0
COPPER (CU), UG/L	2	20	20	2	10	10
IRON (FE), UG/L	2	2700	7400	2	10	30
LEAD (PB), UG/L	2	11	16	2	0	1
MANGANESE (MN), UG/L	2	260	310	2	0	0
MERCURY (HG), UG/L	2	< 0.5	< 0.5	2	< 0.5	< 0.5
SELENIUM (SE), UG/L	2	0	1	2	0	0
ZINC (ZN), UG/L	2	20	40	2	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	8.5	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03425000 NAME: CUMBERLAND RIVER AT CARTHAGE, TENN.

LAT 36D14M53S LONG 085D57M19S
DRAINAGE AREA: 10690 SQ MI (27687 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	17.60	5.52	8.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	161.0	43.9	110	250					
STREAMFLOW (CUBIC FT/SEC)	10	28288.4	25828.0	794	75700	10	54.943	19442.648	0.093*	27275.1
PH (STANDARD UNITS)	10	7.11	0.28	6.6	7.7	10	-0.0006	7.2132	-0.102*	0.29
PHOSPHORUS, TOTAL	9	0.069	0.068	0.01	0.23	9	0.00025	0.02882	0.165*	0.072
NITRITE + NITRATE, TOTAL	9	0.294	0.098	0.17	0.52	9	0.00071	0.17893	0.331*	0.099
NITROGEN, KJELDAHL, TOTAL	9	0.259	0.140	0.15	0.59	9	0.00046	0.18442	0.149*	0.148
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	2303.3	2623.5	150	6700	9	8.519	911.848	0.149*	2773.3
SEDIMENT, SUSPENDED	9	32.6	23.4	8	81					
SEDIMENT, CLAY-SILT (PERCENT)	9	91.9	5.9	80	97					
COLIFORM, FECAL (COL/100 ML)	9	183.3	356.1	21	1120					
STREPTOCOCCI, FECAL (COL/100 ML)	9	94.6	80.6	9	276					
SILICA, DISSOLVED	9	4.30	0.64	2.8	5.1	9	-0.0028	4.7653	-0.204*	0.67
CALCIUM, DISSOLVED	9	22.44	5.13	15.0	31.0	9	0.0980	6.4342	0.878	2.63
MAGNESIUM, DISSOLVED	9	3.89	0.55	3.1	4.8	9	0.0064	2.8388	0.535*	0.50
SODIUM, DISSOLVED	9	2.38	0.24	2.0	2.7	9	0.0035	1.7994	0.667	0.19
POTASSIUM, DISSOLVED	9	1.22	0.27	1.0	1.9	9	0.0027	0.7731	0.463*	0.26
BICARBONATE, ION	9	64.3	15.4	45	84	9	0.284	17.999	0.844	8.8
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	16.67	3.46	10.0	21.0	9	-0.0053	17.5390	-0.071*	3.69
CHLORIDE, DISSOLVED	9	2.40	0.57	1.7	3.5	9	0.0100	0.7618	0.814	0.35
DISSOLVED SOLIDS, SUM OF CONST	9	85.2	12.2	69	104	9	0.250	44.332	0.938	4.5
DISSOLVED SOLIDS, ROE 180 DEG C	9	88.6	19.4	69	128	9	0.368	28.521	0.871	10.2
HARDNESS, TOTAL	9	72.0	13.3	53	93	9	0.268	28.283	0.925	5.4
HARDNESS, NONCARBONATE	9	19.3	6.3	7	27	9	0.036	13.420	0.263*	6.5
TURBIDITY (JTU)	9	19.0	12.7	5	42	9	-0.147	43.040	-0.532*	11.5
FLOURIDE, DISSOLVED	9	0.14	0.10	0.0	0.3	9	0.0008	0.0217	0.340*	0.10

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
35	16.23	6.64	2.69	76	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03425000 -- CUMBERLAND RIVER AT CARTHAGE, TENN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	1	3	0	0
CADMIUM (CD), UG/L	3	0	2	3	0	2
CHROMIUM (CR), UG/L	3	<10	10	3	0	0
COBALT (CO), UG/L	3	0	1	3	0	0
COPPER (CU), UG/L	3	7	48	3	0	9
IRON (FE), UG/L	3	410	1500	3	0	0
LEAD (PB), UG/L	4	4	250	4	0	17
MANGANESE (MN), UG/L	3	50	80	3	0	30
MERCURY (HG), UG/L	3	0.1	0.3	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	43	70	3	3	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	48.00				
BIOMASS, ASH WT., G/SQ M	1	42.00				
CHLOROPHYLL A, MG/SQ M	1	99.0				
CHLOROPHYLL B, MG/SQ M	1	14.0				
ORGANIC CARBON, MG/L	3	1.7	6.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03438220 NAME: CUMBERLAND RIVER NEAR GRAND RIVERS, KY.

LAT 37D01M18S LONG 088D13M16S
DRAINAGE AREA: 17598 SQ MI (45579 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.38	8.46	6.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	183.8	26.1	145	229					
STREAMFLOW (CUBIC FT/SEC)	12	50791.7	32364.1	9700	119000	12	317.445	-7565.227	0.256 *	32809.1
PH (STANDARD UNITS)	11	7.05	0.36	6.4	7.5	11	0.0073	5.7298	0.529 *	0.32
PHOSPHORUS, TOTAL	12	0.147	0.156	0.04	0.62	12	0.00377	-0.54500	0.630	0.127
NITRITE + NITRATE, TOTAL	12	0.297	0.187	0.03	0.54	12	0.00365	-0.37349	0.510 *	0.169
NITROGEN, KJELDAHL, TOTAL	12	0.409	0.123	0.23	0.66	12	-0.00070	0.53791	-0.149 *	0.127
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7316.7	6329.4	1200	25000	12	13.886	4763.988	0.057 *	6627.3
SEDIMENT, SUSPENDED	11	19.9	12.8	6	41					
SEDIMENT, CLAY-SILT (PERCENT)	11	91.7	11.1	73	100					
COLIFORM, FECAL (COL/100 ML)	8	96.1	123.2	10	340					
STREPTOCOCCI, FECAL (COL/100 ML)	8	57.6	40.5	6	120					
SILICA, DISSOLVED	10	4.35	0.59	3.5	5.4	10	0.0077	2.9086	0.370 *	0.58
CALCIUM, DISSOLVED	10	28.00	6.32	20.0	39.0	10	0.2208	-13.0879	0.980	1.33
MAGNESIUM, DISSOLVED	10	3.93	0.63	3.1	4.8	10	0.0162	0.9215	0.715	0.47
SODIUM, DISSOLVED	10	3.29	1.20	2.0	6.1	10	0.0140	0.6923	0.326 *	1.20
POTASSIUM, DISSOLVED	10	1.34	0.23	1.1	1.8	10	0.0037	0.6484	0.450 *	0.22
BICARBONATE, ION	10	89.1	19.5	65	117	10	0.669	-35.473	0.966	5.4
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	14.50	2.92	10.0	18.0	10	0.0810	-0.5734	0.780	1.94
CHLORIDE, DISSOLVED	10	3.13	0.98	1.7	5.0	10	0.0138	0.5676	0.395 *	0.95
DISSOLVED SOLIDS, SUM OF CONST	10	102.6	19.8	78	131	10	0.685	-24.820	0.970	5.1
DISSOLVED SOLIDS, RUE 180 DEG C	10	112.3	22.7	86	148	10	0.760	-29.086	0.938	8.3
HARDNESS, TOTAL	10	85.4	16.6	63	110	10	0.582	-22.819	0.981	3.4
HARDNESS, NONCARBONATE	10	13.1	4.0	6	19	10	0.069	0.246	0.487 *	3.7
TURBIDITY (JTU)	10	14.4	11.4	1	40	10	-0.046	22.885	-0.112 *	12.0
FLOURIDE, DISSOLVED	10	0.14	0.10	0.0	0.3	10	0.0009	-0.0347	0.273 *	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 352

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	235	220	215	205	200	175	160	145	140	135

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
349	17.16	10.67	2.75	96	1.50

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03438220 -- CUMBERLAND RIVER NEAR GRAND RIVERS, KY.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	0	15	4	0	2
COBALT (CO), UG/L	4	0	6	4	0	6
COPPER (CU), UG/L	4	4	22	4	3	6
IRON (FE), UG/L	4	500	1200	4	0	50
LEAD (PB), UG/L	4	1	32	4	0	7
MANGANESE (MN), UG/L	4	70	12000	4	0	20
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	60	4	4	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	21.00	110.00			
BIOMASS, ASH WT., G/SQ M	3	15.00	46.00			
CHLOROPHYLL A, MG/SQ M	3	27.0	86.0			
CHLOROPHYLL B, MG/SQ M	3	2.0	13.0			
ORGANIC CARBON, MG/L	4	2.8	5.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03470500 NAME: FRENCH BROAD RIVER NEAR KNOXVILLE, TENN.

LAT 35D57M30S LONG 083D46M26S
DRAINAGE AREA: 5101 SQ MI (13212 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	14.23	7.88	5.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	139.5	24.4	100	185					
STREAMFLOW (CUBIC FT/SEC)	11	8536.4	7869.4	1460	21900	11	-80.310	19743.223	-0.249 *	8032.8
PH (STANDARD UNITS)	11	7.46	0.49	6.7	8.2	11	-0.0025	7.8071	-0.123 *	0.51
PHOSPHORUS, TOTAL	11	0.037	0.019	0.01	0.07	11	-0.00009	0.04927	-0.111 *	0.020
NITRITE + NITRATE, TOTAL	11	0.419	0.156	0.13	0.59	11	-0.00297	0.83391	-0.467 *	0.145
NITROGEN, KJELDAHL, TOTAL	11	0.240	0.130	0.03	0.46	11	0.00141	0.04376	0.264 *	0.132
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1149.1	1283.2	140	3900	11	29.826	-3013.058	0.568 *	1113.2
SEDIMENT, SUSPENDED	11	27.2	37.9	4	134					
SEDIMENT, CLAY-SILT (PERCENT)	11	89.0	15.4	49	100					
COLIFORM, FECAL (COL/100 ML)	6	85.2	131.0	2	340					
STREPTOCOCCI, FECAL (COL/100 ML)	7	39.7	19.7	8	59					
SILICA, DISSOLVED	11	7.03	1.19	5.1	8.6	11	0.0062	6.1598	0.128 *	1.24
CALCIUM, DISSOLVED	11	16.55	1.51	14.0	19.0	11	0.0423	10.6408	0.686	1.16
MAGNESIUM, DISSOLVED	11	2.93	0.22	2.6	3.3	11	-0.0007	3.0291	-0.080 *	0.24
SODIUM, DISSOLVED	11	6.28	3.41	3.0	13.0	11	0.1320	-12.1380	0.947	1.16
POTASSIUM, DISSOLVED	11	1.58	0.25	1.2	2.0	11	0.0064	0.6845	0.623	0.21
BICARBONATE, ION	11	53.0	5.4	42	62	11	0.085	41.201	0.385 *	5.2
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	11.79	3.62	8.1	20.0	11	0.1318	-6.5951	0.891	1.73
CHLORIDE, DISSOLVED	11	6.63	3.72	3.2	14.0	11	0.1400	-12.9079	0.921	1.53
DISSOLVED SOLIDS, SUM OF CONST	11	79.2	13.0	63	104	11	0.515	7.317	0.966	3.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	79.0	12.3	52	96	11	0.357	29.118	0.710	9.1
HARDNESS, TOTAL	11	53.4	4.2	46	59	11	0.096	40.004	0.557 *	3.7
HARDNESS, NONCARBONATE	11	9.8	3.6	5	14	11	0.035	4.933	0.236 *	3.7
TURBIDITY (JTU)	11	13.5	12.2	5	40	11	-0.341	61.144	-0.683	9.4
FLOURIDE, DISSOLVED	11	0.13	0.08	0.0	0.2	11	0.0022	-0.1796	0.684	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 112

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	185	153	150	147	144	137	126	120	118	113

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
112	14.81	9.91	2.24	89	1.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03470500 -- FRENCH BROAD RIVER NEAR KNOXVILLE, TENN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	2	3	0	2
CADMIUM (CD), UG/L	3	0	3	3	0	1
CHROMIUM (CR), UG/L	3	< 10	< 10	3	0	1
COBALT (CO), UG/L	3	0	1	3	0	1
COPPER (CU), UG/L	3	6	9	3	2	3
IRON (FE), UG/L	3	390	1300	3	0	40
LEAD (PB), UG/L	3	10	62	3	1	3
MANGANESE (MN), UG/L	3	30	130	2	0	26
MERCURY (HG), UG/L	3	0.0	0.4	3	0.0	0.3
SELENIUM (SE), UG/L	0			3	0	0
ZINC (ZN), UG/L	3	20	60	3	4	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	1.7	3.7			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03543005 NAME: TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN

LAT 35D37M13S LONG 084D47M00S
DRAINAGE AREA: 17310 SQ MI (44833 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	39	15.74	6.48	6.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	155.7	18.2	97	180					
STREAMFLOW (CUBIC FT/SEC)	39	39685.9	13666.8	13100	85900	22	-385.768	102574.625	-0.429 *	15102.8
PH (STANDARD UNITS)	24	7.37	0.34	6.5	7.8	22	0.0025	6.9974	0.134 *	0.35
PHOSPHORUS, TOTAL	22	0.028	0.012	0.02	0.06	18	-0.00023	0.06500	-0.351 *	0.012
NITRITE + NITRATE, TOTAL	22	0.380	0.107	0.18	0.53	18	-0.00229	0.75104	-0.410 *	0.104
NITROGEN, KJELDAHL, TOTAL	7	0.250	0.059	0.16	0.33	7	0.00136	0.03328	0.441 *	0.058
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	2382.5	2185.8	580	6900	8	44.223	-4632.359	0.358 *	2204.1
SEDIMENT, SUSPENDED	11	12.8	11.0	4	43					
SEDIMENT, CLAY-SILT (PERCENT)	11	92.6	13.3	55	100					
COLIFORM, FECAL (COL/100 ML)	12	20.3	22.8	3	82					
STREPTOCOCCI, FECAL (COL/100 ML)	7	10.3	14.5	1	36					
SILICA, DISSOLVED	16	4.81	0.94	3.1	6.0	14	0.0111	3.0210	0.246 *	0.97
CALCIUM, DISSOLVED	10	20.90	1.60	19.0	23.0	10	0.0185	17.9439	0.183 *	1.66
MAGNESIUM, DISSOLVED	10	4.64	0.21	4.4	5.0	10	0.0040	4.0099	0.301 *	0.21
SODIUM, DISSOLVED	10	4.65	1.74	2.9	7.3	10	0.0934	-10.2438	0.847	0.98
POTASSIUM, DISSOLVED	10	1.36	0.17	1.2	1.6	10	0.0085	-0.0008	0.785	0.11
BICARBONATE, ION	7	70.9	3.0	68	77	7	0.083	57.712	0.521 *	2.8
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	22	12.50	2.56	9.0	18.0	18	0.0654	2.4995	0.476	2.48
CHLORIDE, DISSOLVED	22	5.94	1.75	3.4	9.0	18	0.0678	-4.7801	0.725	1.32
DISSOLVED SOLIDS, SUM OF CONST	7	90.6	7.2	80	99	7	0.343	35.957	0.905	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	20	89.1	11.5	60	116	18	0.443	20.597	0.725	8.6
HARDNESS, TOTAL	25	66.3	9.3	31	77	21	0.374	7.872	0.684	7.6
HARDNESS, NONCARBONATE	7	13.4	2.8	9	16	7	-0.020	16.598	-0.135 *	3.1
TURBIDITY (JTU)	22	9.6	8.1	1	34	18	-0.304	58.211	-0.754	5.4
FLOURIDE, DISSOLVED	10	0.14	0.08	0.0	0.3	10	0.0003	0.0943	0.054 *	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
35	16.09	9.70	2.52	95	1.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03543005 -- TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	9	0	< 5	3	0	2
CADMIUM (CD), UG/L	9	0	13	3	0	0
CHROMIUM (CR), UG/L	9	< 5	<10	3	0	0
COBALT (CO), UG/L	1	1		3	0	0
COPPER (CU), UG/L	9	<10	30	3	2	5
IRON (FE), UG/L	16	220	1000	9	30	110
LEAD (PB), UG/L	9	<10	130	3	3	7
MANGANESE (MN), UG/L	16	30	90	9	< 10	23
MERCURY (HG), UG/L	9	0.0	0.2	3	0.0	0.3
SELENIUM (SE), UG/L	8	< 2	< 2	3	0	0
ZINC (ZN), UG/L	9	<10	50	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	9	1.5	3.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03571850 NAME: TENNESSEE RIVER AT SOUTH PITTSBURG, TENN.

LAT 35D00M41S LONG 085D41M51S
DRAINAGE AREA: 22640 SQ MI (58638 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	16.05	8.02	7.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	148.6	24.5	110	190					
STREAMFLOW (CUBIC FT/SEC)	11	57354.5	28930.5	30500	121000	11	-712.994	163331.250	-0.604	24306.2
PH (STANDARD UNITS)	11	7.55	0.41	7.0	8.4	11	-0.0106	9.1253	-0.634	0.33
PHOSPHORUS, TOTAL	11	0.040	0.013	0.02	0.06	11	-0.00026	0.07837	-0.500*	0.012
NITRITE + NITRATE, TOTAL	11	0.367	0.078	0.28	0.50	11	-0.00089	0.49950	-0.280*	0.079
NITROGEN, KJELDAHL, TOTAL	11	0.193	0.056	0.04	0.25	11	-0.00085	0.31919	-0.371*	0.055
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1053.6	717.8	190	2200	11	-2.281	1392.667	-0.078*	754.3
SEDIMENT, SUSPENDED	11	13.5	8.8	4	35					
SEDIMENT, CLAY-SILT (PERCENT)	11	96.7	3.7	88	100					
COLIFORM, FECAL (COL/100 ML)	6	102.5	168.8	4	435					
STREPTOCOCCI, FECAL (COL/100 ML)	9	25.9	21.2	2	62					
SILICA, DISSOLVED	11	4.94	0.66	3.8	5.8	11	0.0054	4.1311	0.202*	0.68
CALCIUM, DISSOLVED	11	19.09	2.70	16.0	24.0	11	0.0777	7.5465	0.705	2.02
MAGNESIUM, DISSOLVED	11	4.07	0.50	3.0	4.8	11	0.0180	1.3972	0.889	0.24
SODIUM, DISSOLVED	11	4.71	1.75	2.0	7.8	11	0.0587	-4.0198	0.821	1.05
POTASSIUM, DISSOLVED	11	1.33	0.18	1.1	1.6	11	0.0061	0.4137	0.840	0.10
BICARBONATE, ION	11	67.5	7.2	53	79	11	0.227	33.744	0.776	4.8
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	11.13	2.32	8.0	16.0	11	0.0644	1.5499	0.682	1.79
CHLORIDE, DISSOLVED	11	5.34	1.69	3.2	7.9	11	0.0570	-3.1427	0.829	0.99
DISSOLVED SOLIDS, SUM OF CONST	11	84.1	10.5	65	101	11	0.400	24.648	0.937	3.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	87.3	13.0	66	106	11	0.318	40.015	0.599*	11.0
HARDNESS, TOTAL	11	64.5	8.1	52	80	11	0.270	24.365	0.815	5.0
HARDNESS, NONCARBONATE	11	9.2	6.7	3	26	11	0.080	-2.768	0.294*	6.8
TURBIDITY (JTU)	11	10.7	11.1	4	40	11	-0.278	52.044	-0.616	9.2
FLOURIDE, DISSOLVED	11	0.11	0.08	0.0	0.2	11	0.0019	-0.1790	0.571*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
74	17.04	12.39	2.58	92	1.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03571850 -- TENNESSEE RIVER AT SOUTH PITTSBURG, TENN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	2	3	0	1
CADMIUM (CD), UG/L	3	0	2	3	0	2
CHROMIUM (CR), UG/L	3	<10	<10	3	0	1
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	5	9	3	2	3
IRON (FE), UG/L	3	360	920	3	0	20
LEAD (PB), UG/L	3	12	41	3	2	8
MANGANESE (MN), UG/L	3	50	87	3	7	29
MERCURY (HG), UG/L	2	0.0	0.4	3	0.0	0.2
SELENIUM (SE), UG/L	1	0		3	0	0
ZINC (ZN), UG/L	3	10	30	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.00				
BIOMASS, ASH WT., G/SQ M	1	1.19				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	1.7	4.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03593005 NAME: TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN

LAT 35D03M54S LONG 088D15M08S
DRAINAGE AREA: 32820 SQ MI (85004 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	29	18.82	6.84	10.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	19	147.3	18.7	115	180					
STREAMFLOW (CUBIC FT/SEC)	30	65723.3	35523.7	29000	183000	19	-1023.157	230690.250	-0.512	32954.1
PH (STANDARD UNITS)	19	7.47	0.63	6.1	8.5	19	-0.0072	8.5299	-0.215*	0.63
PHOSPHORUS, TOTAL	14	0.060	0.015	0.04	0.09	14	0.00019	0.03088	0.251*	0.015
NITRITE + NITRATE, TOTAL	14	0.426	0.139	0.15	0.59	14	-0.00128	0.61746	-0.180*	0.142
NITROGEN, KJELDAHL, TOTAL	2	0.405	0.205	0.26	0.55					
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	2714.2	4578.1	35	12000	6	137.367	-15578.484	0.537*	4317.1
SEDIMENT, SUSPENDED	6	9.7	5.9	5	19					
SEDIMENT, CLAY-SILT (PERCENT)	6	87.3	21.0	50	100					
COLIFORM, FECAL (COL/100 ML)	6	10.0	14.3	0	33					
STREPTOCOCCI, FECAL (COL/100 ML)	4	1093.3	2137.9	5	4300					
SILICA, DISSOLVED	9	5.04	0.51	4.0	5.6	9	0.0039	4.4921	0.102*	0.55
CALCIUM, DISSOLVED	7	19.00	1.53	17.0	21.0	7	0.0609	10.8348	0.659*	1.26
MAGNESIUM, DISSOLVED	7	3.40	0.54	2.5	4.0	7	0.0284	-0.4132	0.879	0.28
SODIUM, DISSOLVED	7	3.63	1.37	2.1	5.8	7	0.0800	-7.1065	0.968	0.38
POTASSIUM, DISSOLVED	7	1.30	0.15	1.1	1.5	7	0.0086	0.1488	0.930	0.06
BICARBONATE, ION	2	57.5	0.7	57	58					
CARBONATE, ION	0									
SULFATE, DISSOLVED	14	9.78	2.42	4.0	13.0	14	0.0757	-1.5636	0.612	1.99
CHLORIDE, DISSOLVED	14	5.63	1.89	2.5	8.0	14	0.0848	-7.0723	0.877	0.95
DISSOLVED SOLIDS, SUM OF CONST	2	68.5	0.7	68	69					
DISSOLVED SOLIDS, ROE 180 DEG C	14	86.6	9.8	70	100	14	0.358	33.012	0.712	7.2
HARDNESS, TOTAL	18	61.6	7.9	45	75	18	0.176	35.718	0.429*	7.3
HARDNESS, NONCARBONATE	2	8.0	4.2	5	11					
TURBIDITY (JTU)	14	7.0	5.9	1	20	14	-0.130	26.488	-0.428*	5.6
FLOURIDE, DISSOLVED	7	0.09	0.07	0.0	0.2	7	0.0015	-0.1196	0.367*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
29	18.37	9.74	2.54	81	3.09

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03593005 -- TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	6	0	5	3	0	0
CADMIUM (CD), UG/L	5	<1	3	3	0	1
CHROMIUM (CR), UG/L	5	<5	<10	3	0	0
COBALT (CO), UG/L	2	1	10	3	0	4
COPPER (CU), UG/L	5	7	40	3	1	4
IRON (FE), UG/L	13	60	950	2	0	10
LEAD (PB), UG/L	5	6	66	3	0	4
MANGANESE (MN), UG/L	13	10	70	2	30	50
MERCURY (HG), UG/L	6	0.0	0.9	3	0.0	0.3
SELENIUM (SE), UG/L	6	0	< 2	3	0	0
ZINC (ZN), UG/L	5	<10	80	3	0	5
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	15.00	140.00			
BIOMASS, ASH WT., G/SQ M	3	11.00	91.00			
CHLOROPHYLL A, MG/SQ M	3	62.0	150.0			
CHLOROPHYLL B, MG/SQ M	3	10.0	14.0			
ORGANIC CARBON, MG/L	6	1.1	3.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03609750 NAME: TENNESSEE RIVER AT HIGHWAY 60,NEAR PADUCAH,KY.

LAT 37D02M16S LONG 088D31M46S
DRAINAGE AREA: 40330 SQ MI (104455 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.75	8.48	8.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	152.3	19.0	120	177					
STREAMFLOW (CUBIC FT/SEC)	12	82066.6	65380.8	30900	216000	12	-2305.490	433077.438	-0.671	50857.0
PH (STANDARD UNITS)	12	7.14	0.56	6.5	8.4	12	0.0097	5.6706	0.325 *	0.56
PHOSPHORUS, TOTAL	12	0.072	0.029	0.02	0.11	12	0.00068	-0.03218	0.449 *	0.027
NITRITE + NITRATE, TOTAL	12	0.272	0.168	0.07	0.56	12	-0.00236	0.63200	-0.267 *	0.170
NITROGEN, KJELDAHL, TOTAL	12	0.326	0.143	0.19	0.64	12	0.00315	-0.15316	0.418 *	0.136
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4585.8	4879.1	750	15000	12	59.856	-4527.273	0.233 *	4975.9
SEDIMENT, SUSPENDED	11	15.3	11.7	0	42					
SEDIMENT, CLAY-SILT (PERCENT)	10	76.4	32.7	0	100					
COLIFORM, FECAL (COL/100 ML)	8	47.9	29.1	14	100					
STREPTOCOCCI, FECAL (COL/100 ML)	8	62.5	43.6	14	130					
SILICA, DISSOLVED	10	4.75	0.72	3.5	5.9	10	0.0134	2.7251	0.388 *	0.70
CALCIUM, DISSOLVED	10	18.70	2.83	15.0	25.0	10	0.1116	1.8822	0.814	1.74
MAGNESIUM, DISSOLVED	10	3.23	0.74	2.4	4.7	10	0.0253	-0.5801	0.709	0.55
SODIUM, DISSOLVED	10	4.83	2.26	2.3	9.2	10	0.0843	-7.8737	0.771	1.53
POTASSIUM, DISSOLVED	10	1.43	0.30	1.0	2.0	10	0.0028	1.0022	0.196 *	0.31
BICARBONATE, ION	10	63.1	8.9	49	76	10	0.388	4.633	0.895	4.2
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	11.02	2.52	7.8	15.0	10	0.1046	-4.7430	0.858	1.37
CHLORIDE, DISSOLVED	10	5.07	1.71	2.4	7.2	10	0.0732	-5.9688	0.882	0.86
DISSOLVED SOLIDS, SUM OF CONST	10	80.3	13.8	60	102	10	0.614	-12.172	0.915	5.9
DISSOLVED SOLIDS, ROE 180 DEG C	10	87.3	15.4	67	114	10	0.486	14.117	0.650	12.4
HARDNESS, TOTAL	10	60.1	9.4	48	78	10	0.376	3.400	0.825	5.6
HARDNESS, NONCARBONATE	10	8.3	4.1	3	16	10	0.070	-2.224	0.355 *	4.0
TURBIDITY (JTU)	10	12.4	10.9	1	30	10	-0.395	71.908	-0.748	7.7
FLOURIDE, DISSOLVED	10	0.15	0.10	0.0	0.3	10	0.0029	-0.2802	0.606 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	190	180	180	170	155	140	130	110	105	95

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	16.50	10.91	2.69	96	1.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03609750 -- TENNESSEE RIVER AT HIGHWAY 60,NEAR PADUCAH,KY.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	0	< 10	4	0	0
COBALT (CO), UG/L	4	0	6	4	0	5
COPPER (CU), UG/L	4	3	34	4	5	8
IRON (FE), UG/L	4	260	1300	4	0	40
LEAD (PB), UG/L	4	2	28	4	0	9
MANGANESE (MN), UG/L	4	60	88	4	0	10
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	40	50	4	4	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.69	93.00			
BIOMASS, ASH WT., G/SQ M	4	.50	69.00			
CHLOROPHYLL A, MG/SQ M	4	.2	6.3			
CHLOROPHYLL B, MG/SQ M	4	.0	.7			
ORGANIC CARBON, MG/L	4	2.0	5.6			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 03612500 NAME: OHIO R AT LOCK AND DAM 53 NR GRAND CHAIN ILL

LAT 37D12M11S LONG 089D02M30S
DRAINAGE AREA: 203100 SQ MI (526029 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.33	8.71	6.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	292.8	53.8	190	397					
STREAMFLOW (CUBIC FT/SEC)	12	434083.3	360089.8	124000	1150000	12	-5206.066	1958158.000	-0.779	237037.0
PH (STANDARD UNITS)	12	7.19	0.63	6.4	8.3	12	-0.0010	7.4784	-0.083 *	0.66
PHOSPHORUS, TOTAL	12	0.231	0.265	0.08	0.98	12	0.00153	-0.21647	0.310 *	0.265
NITRITE + NITRATE, TOTAL	12	0.854	0.262	0.50	1.30	12	0.00082	0.61266	0.169 *	0.271
NITROGEN, KJELDAHL, TOTAL	12	0.572	0.143	0.41	0.84	12	0.00138	0.16912	0.521 *	0.128
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6916.7	7758.0	900	25000	12	45.906	-6522.227	0.319 *	7712.5
SEDIMENT, SUSPENDED	11	77.5	44.1	26	147					
SEDIMENT, CLAY-SILT (PERCENT)	11	87.2	14.1	55	100					
COLIFORM, FECAL (COL/100 ML)	8	293.8	232.6	70	740					
STREPTOCOCCI, FECAL (COL/100 ML)	8	134.8	77.1	28	240					
SILICA, DISSOLVED	10	4.89	1.41	1.7	6.4	10	-0.0067	6.8398	-0.278 *	1.44
CALCIUM, DISSOLVED	10	32.90	5.97	23.0	44.0	10	0.0992	4.0006	0.975	1.42
MAGNESIUM, DISSOLVED	10	8.37	1.75	5.6	11.0	10	0.0284	0.0953	0.950	0.58
SODIUM, DISSOLVED	10	10.24	4.14	5.0	18.0	10	0.0652	-8.7598	0.925	1.67
POTASSIUM, DISSOLVED	10	2.09	0.47	1.6	3.0	10	0.0069	0.0843	0.868	0.25
BICARBONATE, ION	10	88.4	14.0	67	107	10	0.203	29.367	0.852	7.8
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	45.20	11.74	29.0	69.0	10	0.1936	-11.1954	0.968	3.14
CHLORIDE, DISSOLVED	10	12.67	5.34	6.4	23.0	10	0.0838	-11.7282	0.920	2.21
DISSOLVED SOLIDS, SUM OF CONST	10	160.2	34.7	109	225	10	0.575	-7.201	0.972	8.6
DISSOLVED SOLIDS, ROE 180 DEG C	10	173.6	34.7	120	232	10	0.554	12.127	0.937	12.9
HARDNESS, TOTAL	10	117.0	23.1	81	160	10	0.379	6.531	0.964	6.5
HARDNESS, NONCARBONATE	10	44.2	13.0	26	71	10	0.197	-13.089	0.889	6.3
TURBIDITY (JTU)	10	43.3	20.2	10	70	10	-0.237	112.418	-0.688	15.6
FLOURIDE, DISSOLVED	10	0.23	0.12	0.1	0.4	10	0.0015	-0.1981	0.743	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 350

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	465	420	405	355	335	310	285	250	245	230

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
348	16.07	10.95	2.56	96	1.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

03612500 -- OHIO R AT LOCK AND DAM 53 NR GRAND CHAIN ILL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	0	1
CADMIUM (CD), UG/L	4	0	3	4	0	3
CHROMIUM (CR), UG/L	4	0	10	4	0	1
COBALT (CO), UG/L	4	0	7	4	0	6
COPPER (CU), UG/L	4	6	45	4	4	8
IRON (FE), UG/L	4	1700	5200	4	0	30
LEAD (PB), UG/L	4	13	33	4	1	7
MANGANESE (MN), UG/L	4	180	380	4	0	40
MERCURY (HG), UG/L	4	0.0	0.6	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	100	4	4	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.50	11.00			
BIOMASS, ASH WT., G/SQ M	3	.59	4.59			
CHLOROPHYLL A, MG/SQ M	3	.0	3.5			
CHLOROPHYLL B, MG/SQ M	3	.0	4.3			
ORGANIC CARBON, MG/L	4	3.7	4.6			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04014500 NAME: BAPTISM RIVER NEAR BEAVER BAY, MINN.

LAT 47D20M15S LONG 091D12M00S
DRAINAGE AREA: 140 SQ MI (363 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	8.14	7.68	0.0	18.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	92.2	18.2	60	116					
STREAMFLOW (CUBIC FT/SEC)	14	62.0	49.5	5	163	9	-2.655	310.217	-0.930	20.4
PH (STANDARD UNITS)	9	7.70	0.41	7.0	8.3	9	0.0106	6.7211	0.467*	0.39
PHOSPHORUS, TOTAL	9	0.012	0.010	0.00	0.03	9	-0.00014	0.02531	-0.265*	0.010
NITRITE + NITRATE, TOTAL	9	0.211	0.194	0.01	0.53	9	0.00319	-0.08322	0.299*	0.198
NITROGEN, KJELDAHL, TOTAL	8	0.630	0.413	0.28	1.50	8	-0.01402	1.93081	-0.656*	0.337
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	443.3	390.3	100	1300	9	-6.709	1062.098	-0.312*	396.4
SEDIMENT, SUSPENDED	9	9.7	6.0	3	17					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	21.1	28.9	2	92					
STREPTOCOCCI, FECAL (COL/100 ML)	9	22.7	27.1	0	74					
SILICA, DISSOLVED	9	10.69	2.83	6.5	14.0	9	0.0757	3.7058	0.486*	2.64
CALCIUM, DISSOLVED	9	10.61	1.59	8.4	13.0	9	0.0753	3.6681	0.859	0.87
MAGNESIUM, DISSOLVED	9	3.36	0.78	2.6	4.7	9	0.0371	-0.0637	0.867	0.41
SODIUM, DISSOLVED	9	3.18	0.98	1.9	4.6	9	0.0520	-1.6176	0.959	0.30
POTASSIUM, DISSOLVED	9	0.50	0.12	0.3	0.7	9	0.0008	0.4266	0.118*	0.13
BICARBONATE, ION	9	39.4	9.4	27	57	9	0.475	-4.406	0.923	3.9
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	6.93	1.40	5.1	9.4	9	0.0043	6.5408	0.055*	1.49
CHLORIDE, DISSOLVED	9	3.27	1.12	1.8	5.1	9	0.0431	-0.7043	0.701	0.85
DISSOLVED SOLIDS, SUM OF CONST	9	58.1	10.1	43	69	9	0.530	9.238	0.950	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	9	82.8	8.5	67	96	9	0.073	76.014	0.157*	9.0
HARDNESS, TOTAL	9	40.3	6.7	32	49	9	0.340	8.993	0.915	2.9
HARDNESS, NONCARBONATE	9	8.1	3.6	3	12	9	-0.045	12.280	-0.227*	3.8
TURBIDITY (JTU)	9	2.0	1.3	1	5	9	0.005	1.580	0.062*	1.4
FLOURIDE, DISSOLVED	9	0.22	0.07	0.2	0.4	9	0.0006	0.1678	0.161*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04014500 -- BAPTISM RIVER NEAR BEAVER BAY, MINN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	1
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	<50	< 50	4	0	1
COPPER (CU), UG/L	4	<10	110	4	0	3
IRON (FE), UG/L	4	90	400	4	40	260
LEAD (PB), UG/L	4	<100	<100	4	0	13
MANGANESE (MN), UG/L	4	0	60	4	0	0
MERCURY (HG), UG/L	4	0.0	1.1	4	0.0	1.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	270	4	6	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.59	64.00			
BIOMASS, ASH WT., G/SQ M	3	1.50	64.00			
CHLOROPHYLL A, MG/SQ M	2	.0	2.0			
CHLOROPHYLL B, MG/SQ M	2	.0	.5			
ORGANIC CARBON, MG/L	4	4.0	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04024000 NAME: ST. LOUIS RIVER AT SCANLON, MINN.

LAT 46D42M12S LONG 092D25M07S
DRAINAGE AREA: 3430 SQ MI (8884 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	10.29	9.60	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	205.9	42.2	115	244					
STREAMFLOW (CUBIC FT/SEC)	14	1713.5	1470.6	877	6580	9	-37.761	9662.105	-0.880	920.1
PH (STANDARD UNITS)	9	7.53	0.63	7.2	9.2	9	-0.0125	10.1166	-0.837	0.37
PHOSPHORUS, TOTAL	9	0.051	0.016	0.03	0.08	9	-0.00002	0.05486	-0.047 *	0.017
NITRITE + NITRATE, TOTAL	9	0.079	0.087	0.00	0.23	9	-0.00003	0.08556	-0.016 *	0.093
NITROGEN, KJELDAHL, TOTAL	9	0.992	0.390	0.62	1.60	9	-0.00500	2.02172	-0.541 *	0.350
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	11561.0	18626.6	360	60000	9	-350.487	84740.250	-0.759	13532.4
SEDIMENT, SUSPENDED	9	35.2	68.2	5	216					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	7	474.3	172.8	250	800					
STREPTOCOCCI, FECAL (COL/100 ML)	9	208.3	204.2	32	590					
SILICA, DISSOLVED	9	6.96	1.87	3.7	9.8	9	-0.0092	8.8522	-0.208 *	1.95
CALCIUM, DISSOLVED	9	19.11	3.48	14.0	23.0	9	0.0700	4.6935	0.848	1.97
MAGNESIUM, DISSOLVED	9	7.21	1.20	5.7	9.7	9	0.0190	3.2917	0.666	0.96
SODIUM, DISSOLVED	9	10.19	2.96	3.2	13.0	9	0.0642	-3.0328	0.914	1.28
POTASSIUM, DISSOLVED	9	1.44	0.31	1.0	2.0	9	0.0044	0.5421	0.599 *	0.26
BICARBONATE, ION	9	75.9	13.7	53	98	9	0.278	18.719	0.852	7.7
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	15.56	4.25	10.0	23.0	9	0.0740	0.3210	0.735	3.08
CHLORIDE, DISSOLVED	9	12.18	4.01	3.4	16.0	9	0.0804	-4.3741	0.846	2.29
DISSOLVED SOLIDS, SUM OF CONST	9	110.7	19.4	72	133	9	0.439	20.297	0.952	6.3
DISSOLVED SOLIDS, ROE 180 DEG C	9	155.1	16.8	127	181	9	0.295	94.290	0.740	12.1
HARDNESS, TOTAL	9	77.3	12.2	58	95	9	0.253	25.194	0.872	6.4
HARDNESS, NONCARBONATE	9	15.2	5.8	6	24	9	0.023	10.486	0.167 *	6.1
TURBIDITY (JTU)	9	8.7	7.5	3	24	9	-0.090	27.270	-0.509 *	6.9
FLOURIDE, DISSOLVED	9	0.14	0.05	0.1	0.2	9	0.0007	0.0077	0.531 *	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04024000 -- ST. LOUIS RIVER AT SCANLON, MINN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	2
CADMIUM (CD), UG/L	4	< 10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	0	1
COPPER (CU), UG/L	4	< 10	170	4	1	4
IRON (FE), UG/L	4	550	1000	4	300	650
LEAD (PB), UG/L	4	<100	100	4	0	5
MANGANESE (MN), UG/L	4	50	90	4	40	90
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	40	140	4	10	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	9.50				
BIOMASS, ASH WT., G/SQ M	1	5.19				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	3.2	40.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04027000 NAME: BAD RIVER NEAR ODANAH, WIS.

LAT 46D29M15S LONG 090D41M45S
DRAINAGE AREA: 611 SQ MI (1582 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	8.39	9.23	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	128.8	40.7	76	195					
STREAMFLOW (CUBIC FT/SEC)	27	598.7	971.5	92	3690	12	-6.859	1308.260	-0.648	344.6
PH (STANDARD UNITS)	11	7.43	0.28	6.8	7.8	11	0.0009	7.3007	0.132*	0.29
PHOSPHORUS, TOTAL	12	0.024	0.014	0.01	0.05	12	0.00001	0.02312	0.024*	0.014
NITRITE + NITRATE, TOTAL	12	0.149	0.164	0.00	0.57	12	-0.00005	0.15595	-0.013*	0.171
NITROGEN, KJELDAHL, TOTAL	12	0.368	0.162	0.21	0.83	12	-0.00235	0.67079	-0.591	0.137
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	898.9	1259.3	0	4400	12	19.906	-1665.646	0.644	1010.5
SEDIMENT, SUSPENDED	25	55.9	127.1	2	558					
SEDIMENT, CLAY-SILT (PERCENT)	2	63.5	47.4	30	97					
COLIFORM, FECAL (COL/100 ML)	12	70.3	51.9	14	160					
STREPTOCOCCI, FECAL (COL/100 ML)	12	56.3	48.2	2	160					
SILICA, DISSOLVED	12	11.26	2.70	7.0	15.0	12	0.0099	9.9798	0.150*	2.80
CALCIUM, DISSOLVED	12	16.70	5.06	8.4	24.0	12	0.1096	2.5825	0.882	2.50
MAGNESIUM, DISSOLVED	12	4.87	1.49	2.1	6.9	12	0.0320	0.7444	0.873	0.76
SODIUM, DISSOLVED	12	2.79	0.66	1.8	4.0	12	0.0142	0.9641	0.870	0.34
POTASSIUM, DISSOLVED	12	0.87	0.19	0.6	1.1	12	0.0013	0.7045	0.282*	0.19
BICARBONATE, ION	12	69.8	25.3	30	110	12	0.541	0.102	0.871	13.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.32	1.47	2.9	8.9	12	-0.0244	9.4594	-0.676	1.14
CHLORIDE, DISSOLVED	12	2.63	0.59	1.6	3.8	12	-0.0016	2.8390	-0.109*	0.62
DISSOLVED SOLIDS, SUM OF CONST	12	80.0	19.1	48	106	12	0.407	27.562	0.869	9.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	93.3	13.8	66	118	12	0.209	66.347	0.618	11.4
HARDNESS, TOTAL	12	61.6	18.6	30	88	12	0.404	9.511	0.887	9.0
HARDNESS, NONCARBONATE	12	4.8	3.1	0	9	12	-0.024	7.782	-0.311*	3.1
TURBIDITY (JTU)	12	6.5	4.1	1	15	12	0.030	2.631	0.298*	4.1
FLOURIDE, DISSOLVED	12	0.24	0.12	0.0	0.5	12	-0.0007	0.3329	-0.232*	0.13

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
19	7.57	11.86	2.78	86	3.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04027000 -- BAD RIVER NEAR ODANAH, WIS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	1
COBALT (CO), UG/L	4	0	4	4	0	0
COPPER (CU), UG/L	4	7	13	4	0	2
IRON (FE), UG/L	4	390	930	4	190	290
LEAD (PB), UG/L	4	4	37	4	0	2
MANGANESE (MN), UG/L	4	10	70	4	0	50
MERCURY (HG), UG/L	3	0.0	1.0	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	30	4	3	4
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.00	3.79			
BIOMASS, ASH WT., G/SQ M	3	.79	3.09			
CHLOROPHYLL A, MG/SQ M	3	.1	1.5			
CHLOROPHYLL B, MG/SQ M	3	.0	1.2			
ORGANIC CARBON, MG/L	4	6.2	9.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04040000 NAME: ONTONAGON R NR ROCKLAND, MICH

LAT 46D43M15S LONG 089D12M25S
DRAINAGE AREA: 1340 SQ MI (3471 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	7.73	8.40	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	124.8	23.7	82	162					
STREAMFLOW (CUBIC FT/SEC)	12	2646.3	4718.5	300	16800	12	-73.037	11763.785	-0.367 *	4603.3
PH (STANDARD UNITS)	12	8.07	0.32	7.6	8.6	12	0.0015	7.8766	0.114 *	0.33
PHOSPHORUS, TOTAL	12	0.074	0.131	0.01	0.48	11	0.00001	0.07837	0.002 *	0.143
NITRITE + NITRATE, TOTAL	12	0.077	0.057	0.00	0.16	11	-0.00095	0.18992	-0.415 *	0.054
NITROGEN, KJELDAHL, TOTAL	12	0.468	0.339	0.16	1.30	11	-0.00367	0.94125	-0.259 *	0.355
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	607.5	456.2	210	1700	11	3.023	264.500	0.160 *	483.3
SEDIMENT, SUSPENDED	12	210.4	445.0	11	1400					
SEDIMENT, CLAY-SILT (PERCENT)	11	93.5	14.4	63	100					
COLIFORM, FECAL (COL/100 ML)	10	18.6	29.1	1	100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	30.1	27.2	3	86					
SILICA, DISSOLVED	12	8.22	1.48	5.6	10.0	11	0.0154	6.1502	0.262 *	1.46
CALCIUM, DISSOLVED	12	19.00	3.81	15.0	27.0	11	0.1162	4.5060	0.719	2.92
MAGNESIUM, DISSOLVED	12	4.67	0.90	3.4	6.0	11	0.0325	0.6259	0.851	0.52
SODIUM, DISSOLVED	12	2.11	0.49	1.1	2.9	11	0.0135	0.4289	0.654	0.40
POTASSIUM, DISSOLVED	12	1.22	0.40	0.8	2.3	11	0.0032	0.8548	0.193 *	0.42
BICARBONATE, ION	12	68.3	17.7	50	101	11	0.562	-1.726	0.748	13.0
CARBONATE, ION	12	0.2	0.6	0	2	11	0.000	0.137	0.015 *	0.6
SULFATE, DISSOLVED	12	6.01	0.99	4.8	7.9	11	-0.0195	8.4695	-0.466 *	0.96
CHLORIDE, DISSOLVED	12	2.22	0.60	1.2	3.1	11	-0.0065	3.0128	-0.257 *	0.63
DISSOLVED SOLIDS, SUM OF CONST	12	77.7	12.4	62	105	11	0.427	24.401	0.813	7.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	87.2	12.9	59	110	11	0.084	77.258	0.154 *	13.9
HARDNESS, TOTAL	12	66.7	13.1	51	92	11	0.430	13.082	0.774	9.2
HARDNESS, NONCARBONATE	12	10.8	12.0	0	46	11	-0.017	12.903	-0.033 *	13.3
TURBIDITY (JTU)	12	46.9	77.3	1	220	11	-0.728	140.896	-0.225 *	82.0
FLOURIDE, DISSOLVED	12	0.18	0.09	0.0	0.3	11	-0.0000	0.1863	-0.009 *	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 355

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	184	173	169	155	145	130	120	95	90	80

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
353	9.26	11.62	2.74	89	2.92

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04040000 -- ONTONAGON R NR ROCKLAND, MICH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	4	4	0	2
CADMIUM (CD), UG/L	3	0	2	4	0	3
CHROMIUM (CR), UG/L	4	< 10	20	4	0	0
COBALT (CO), UG/L	4	0	9	4	0	4
COPPER (CU), UG/L	4	8	28	4	5	24
IRON (FE), UG/L	4	410	9600	4	100	1100
LEAD (PB), UG/L	4	7	23	4	2	14
MANGANESE (MN), UG/L	4	30	530	4	11	150
MERCURY (HG), UG/L	4	0.0	0.6	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	3	20	80	4	10	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.59	10.00			
BIOMASS, ASH WT., G/SQ M	3	.59	8.79			
CHLOROPHYLL A, MG/SQ M	3	.1	2.1			
CHLOROPHYLL B, MG/SQ M	3	.0	.3			
ORGANIC CARBON, MG/L	4	6.0	19.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04045500 NAME: TAHQUAMENON RIVER NR TAHQUAMENON PARADISE, MICH.

LAT 46D34M30S LONG 085D16M10S
DRAINAGE AREA: 790 SQ MI (2046 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.67	9.87	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	130.0	32.8	60	160					
STREAMFLOW (CUBIC FT/SEC)	12	920.3	1154.2	281	4500	12	-28.039	4565.348	-0.797	731.2
PH (STANDARD UNITS)	12	7.46	0.41	6.7	8.1	12	-0.0005	7.5178	-0.036 *	0.43
PHOSPHORUS, TOTAL	12	0.027	0.016	0.01	0.07	12	0.00021	0.00038	0.427 *	0.015
NITRITE + NITRATE, TOTAL	12	0.081	0.047	0.02	0.15	12	0.00028	0.04405	0.198 *	0.048
NITROGEN, KJELDAHL, TOTAL	12	0.437	0.165	0.23	0.78	12	0.00189	0.19195	0.375 *	0.160
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	300.7	412.9	8	1200	11	3.387	-134.403	0.278 *	418.0
SEDIMENT, SUSPENDED	10	5.6	3.4	1	11					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	6.8	7.5	1	22					
STREPTOCOCCI, FECAL (COL/100 ML)	11	19.9	35.3	1	120					
SILICA, DISSOLVED	12	7.32	1.67	4.2	9.5	12	0.0354	2.7156	0.694	1.26
CALCIUM, DISSOLVED	12	20.12	5.08	8.4	26.0	12	0.1386	2.0959	0.896	2.36
MAGNESIUM, DISSOLVED	12	5.16	1.04	2.4	6.7	12	0.0255	1.8421	0.808	0.64
SODIUM, DISSOLVED	12	1.53	0.31	0.8	2.0	12	0.0082	0.4637	0.867	0.16
POTASSIUM, DISSOLVED	12	0.79	0.14	0.6	1.1	12	-0.0003	0.8312	-0.072 *	0.14
BICARBONATE, ION	12	75.4	17.8	44	108	12	0.459	15.688	0.846	10.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	11.42	2.58	7.1	16.0	12	0.0514	4.7399	0.653	2.05
CHLORIDE, DISSOLVED	12	2.15	0.83	1.0	4.3	12	-0.0079	3.1833	-0.315 *	0.82
DISSOLVED SOLIDS, SUM OF CONST	12	86.0	17.0	47	108	12	0.473	24.481	0.916	7.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	102.9	24.0	57	149	12	0.489	39.300	0.669	18.7
HARDNESS, TOTAL	12	71.7	16.7	31	93	12	0.452	12.882	0.889	8.0
HARDNESS, NONCARBONATE	12	10.3	6.0	0	20	12	0.049	3.892	0.269 *	6.0
TURBIDITY (JTU)	12	2.4	0.9	1	4	12	0.000	2.417	0.000 *	0.9
FLOURIDE, DISSOLVED	12	0.23	0.08	0.1	0.4	12	-0.0006	0.3124	-0.256 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 160

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	204	195	188	175	160	140	122	90	70	65

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
169	9.81	12.37	2.60	90	3.25

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04045500 -- TAHQUAMENON RIVER NR TAHQUAMENON PARADISE, MICH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	1	4	0	1
CADMIUM (CD), UG/L	4	0	5	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	3	0	1	4	0	1
COPPER (CU), UG/L	4	5	13	4	1	10
IRON (FE), UG/L	4	380	670	4	200	440
LEAD (PB), UG/L	4	4	51	4	0	7
MANGANESE (MN), UG/L	4	10	40	4	0	13
MERCURY (HG), UG/L	4	0.1	0.2	4	0.1	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	3	10	40	4	7	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.29	9.00			
BIOMASS, ASH WT., G/SQ M	3	.19	6.29			
CHLOROPHYLL A, MG/SQ M	3	.0	18.0			
CHLOROPHYLL B, MG/SQ M	3	.0	1.0			
ORGANIC CARBON, MG/L	4	7.7	19.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04045580 NAME: ST MARYS RIVER ABOVE SAULT STE MARIE, MICH. .

LAT 46D29M29S LONG 084D25M17S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.63	6.38	0.0	18.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	89.3	6.8	80	100					
STREAMFLOW (CUBIC FT/SEC)	12	82883.3	9095.1	73000	99000	10	-110.127	90894.313	-0.089*	8898.2
PH (STANDARD UNITS)	12	7.67	0.42	6.6	8.1	10	-0.0102	8.5194	-0.159*	0.46
PHOSPHORUS, TOTAL	12	0.012	0.021	0.00	0.06	10	-0.00093	0.09762	-0.290*	0.022
NITRITE + NITRATE, TOTAL	12	0.256	0.015	0.23	0.28	10	-0.00059	0.31032	-0.257*	0.016
NITROGEN, KJELDAHL, TOTAL	12	0.142	0.105	0.00	0.31	10	0.00542	-0.35174	0.352*	0.104
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	525.0	326.4	140	1100	6	25.649	-1832.941	0.555*	343.5
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	5.6	14.3	1	51					
STREPTOCOCCI, FECAL (COL/100 ML)	11	15.9	42.6	1	144					
SILICA, DISSOLVED	12	2.34	0.12	2.2	2.5	10	-0.0047	2.7682	-0.251*	0.13
CALCIUM, DISSOLVED	12	13.67	0.78	12.0	15.0	10	-0.0411	17.3699	-0.339*	0.82
MAGNESIUM, DISSOLVED	12	2.92	0.31	2.5	3.5	10	-0.0039	3.3318	-0.089*	0.32
SODIUM, DISSOLVED	12	1.13	0.30	0.3	1.5	10	0.0173	-0.4450	0.368*	0.32
POTASSIUM, DISSOLVED	12	0.54	0.05	0.5	0.6	10	-0.0032	0.8234	-0.418*	0.05
BICARBONATE, ION	12	54.8	3.5	50	60	10	-0.223	73.795	-0.477*	3.0
CARBONATE, ION	12	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.29	0.62	2.4	4.4	10	0.0139	2.1270	0.147*	0.68
CHLORIDE, DISSOLVED	12	1.17	0.35	0.5	1.8	10	-0.0102	2.0622	-0.191*	0.38
DISSOLVED SOLIDS, SUM OF CONST	12	51.5	1.4	49	54	10	-0.134	63.297	-0.683	1.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	55.5	5.9	46	64	9	-0.378	88.680	-0.383*	5.9
HARDNESS, TOTAL	12	46.2	2.0	43	49	10	-0.097	55.192	-0.338*	2.0
HARDNESS, NONCARBONATE	12	2.3	2.6	0	7	10	0.006	2.242	0.016*	2.8
TURBIDITY (JTU)	12	0.8	0.6	0	2	10	-0.023	2.817	-0.243*	0.7
FLUORIDE, DISSOLVED	12	0.11	0.12	0.0	0.4	10	0.0067	-0.5009	0.396*	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 363

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	91	90	90	90	89	87	86	83	82	81

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	7.96	8.65	2.25	92	1.82

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04045580 -- ST MARYS RIVER ABOVE SAULT STE MARIE, MICH. .

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	1	5	0	1
CADMIUM (CD), UG/L	3	0	1	5	0	1
CHROMIUM (CR), UG/L	5	0	<10	5	0	1
COBALT (CO), UG/L	5	0	2	5	0	0
COPPER (CU), UG/L	5	6	11	5	1	5
IRON (FE), UG/L	5	20	250	5	0	10
LEAD (PB), UG/L	4	0	12	5	0	8
MANGANESE (MN), UG/L	3	10	20	5	0	36
MERCURY (HG), UG/L	4	0.0	0.3	5	0.0	0.4
SELENIUM (SE), UG/L	5	0	0	5	0	0
ZINC (ZN), UG/L	4	40	70	5	30	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	1.50	3.50			
BIOMASS, ASH WT., G/SQ M	5	.79	2.09			
CHLOROPHYLL A, MG/SQ M	5	.1	4.1			
CHLOROPHYLL B, MG/SQ M	5	.0	.1			
ORGANIC CARBON, MG/L	5	1.6	8.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04057005 NAME: MANISTIQUE RIVER AT MANISTIQUE, MICH. .

LAT 45D57M06S LONG 086D14M54S
DRAINAGE AREA: 1450 SQ MI (3756 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	10.45	9.71	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	170.2	29.0	125	210					
STREAMFLOW (CUBIC FT/SEC)	10	1765.0	494.3	1020	2670	10	-11.638	3745.706	-0.682	383.6
PH (STANDARD UNITS)	10	7.57	0.34	7.0	8.0	10	-0.0002	7.6005	-0.015*	0.36
PHOSPHORUS, TOTAL	10	0.015	0.010	0.00	0.03	10	-0.00001	0.01635	-0.024*	0.010
NITRITE + NITRATE, TOTAL	10	0.164	0.145	0.06	0.55	10	-0.00203	0.51028	-0.406*	0.141
NITROGEN, KJELDAHL, TOTAL	10	0.461	0.305	0.23	1.30	10	-0.00445	1.21778	-0.422*	0.293
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2027.0	3015.0	130	10000	10	31.982	-3416.254	0.307*	3043.4
SEDIMENT, SUSPENDED	10	6.3	3.9	1	13					
SEDIMENT, CLAY-SILT (PERCENT)	10	98.9	3.5	89	100					
COLIFORM, FECAL (COL/100 ML)	7	14.9	8.5	6	30					
STREPTOCOCCI, FECAL (COL/100 ML)	8	27.6	52.1	3	156					
SILICA, DISSOLVED	10	6.48	0.95	4.6	7.6	10	0.0177	3.4651	0.539*	0.85
CALCIUM, DISSOLVED	10	25.80	3.33	20.0	30.0	10	0.0812	11.9829	0.707	2.50
MAGNESIUM, DISSOLVED	10	5.63	0.54	5.0	6.4	10	0.0163	2.8609	0.870	0.28
SODIUM, DISSOLVED	10	1.44	0.23	1.1	1.8	10	0.0047	0.6476	0.581*	0.20
POTASSIUM, DISSOLVED	10	0.64	0.07	0.5	0.7	10	0.0019	0.3102	0.802	0.04
BICARBONATE, ION	10	87.3	9.3	74	100	10	0.238	46.792	0.740	6.6
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	19.30	3.53	14.0	24.0	10	0.0471	11.2814	0.386*	3.45
CHLORIDE, DISSOLVED	10	1.77	0.26	1.5	2.3	10	0.0011	1.5746	0.127*	0.28
DISSOLVED SOLIDS, SUM OF CONST	10	104.7	10.0	88	119	10	0.285	56.245	0.821	6.1
DISSOLVED SOLIDS, ROE 180 DEG C	10	113.0	12.0	92	137	10	0.233	73.291	0.562*	10.5
HARDNESS, TOTAL	10	87.5	9.9	71	100	10	0.259	43.391	0.754	6.9
HARDNESS, NONCARBONATE	10	16.1	9.0	0	27	10	0.066	4.914	0.211*	9.4
TURBIDITY (JTU)	10	5.1	2.4	2	10	10	-0.021	8.714	-0.254*	2.5
FLOURIDE, DISSOLVED	10	0.22	0.10	0.1	0.4	10	-0.0004	0.2886	-0.113*	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 126

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	230	227	220	199	190	175	155	105	98	78

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
125	7.01	12.26	2.69	89	2.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04057005 -- MANISTIQUE RIVER AT MANISTIQUE, MICH. .

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	1	3		4	1	2
CHROMIUM (CR), UG/L	4	<10	<10	4	0	0
COBALT (CO), UG/L	4	0	3	4	0	1
COPPER (CU), UG/L	4	8	12	4	2	8
IRON (FE), UG/L	4	880	1500	4	400	690
LEAD (PB), UG/L	3	8	90	4	1	3
MANGANESE (MN), UG/L	4	18	70	4	0	40
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	40	110	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.69	6.09			
BIOMASS, ASH WT., G/SQ M	2	1.69	3.29			
CHLOROPHYLL A, MG/SQ M	2	1.1	5.8			
CHLOROPHYLL B, MG/SQ M	2	.2	1.0			
ORGANIC CARBON, MG/L	4	7.0	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04059000 NAME: ESCANABA RIVER AT CORNELL, MICH. .

.AT 45D54M31S LONG 087D12M49S
)RAINAGE AREA: 870 SQ MI (2253 SQ KM)
'ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	8.45	8.94	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	196.1	37.9	125	250					
STREAMFLOW (CUBIC FT/SEC)	10	662.5	456.9	233	1760	9	-9.772	2584.017	-0.765	333.7
PH (STANDARD UNITS)	10	7.81	0.53	6.9	8.5	9	-0.0010	7.9965	-0.067*	0.60
PHOSPHORUS, TOTAL	10	0.013	0.005	0.01	0.02	9	-0.00003	0.01988	-0.253*	0.005
NITRITE + NITRATE, TOTAL	10	0.174	0.116	0.00	0.37	9	0.00168	-0.14509	0.542*	0.106
NITROGEN, KJELDAHL, TOTAL	10	0.374	0.082	0.25	0.51	9	-0.00061	0.48774	-0.276*	0.086
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	1296.0	1575.7	510	5700	9	-13.721	4074.083	-0.316*	1668.9
SEDIMENT, SUSPENDED	10	3.6	3.0	0	10					
SEDIMENT, CLAY-SILT (PERCENT)	9	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	10	7.5	6.0	1	20					
STREPTOCOCCI, FECAL (COL/100 ML)	10	116.0	269.5	1	880					
SILICA, DISSOLVED	10	7.68	1.65	4.5	9.7	9	0.0452	-1.2546	0.880	0.99
CALCIUM, DISSOLVED	10	22.90	3.63	14.0	28.0	9	0.0730	8.7916	0.730	2.77
MAGNESIUM, DISSOLVED	10	9.09	1.57	5.6	11.0	9	0.0381	1.6976	0.883	0.82
SODIUM, DISSOLVED	10	3.19	0.91	1.6	4.3	9	0.0193	-0.4459	0.896	0.39
POTASSIUM, DISSOLVED	10	1.02	0.19	0.7	1.3	9	0.0029	0.4847	0.694	0.12
BICARBONATE, ION	10	107.2	19.4	66	132	9	0.454	18.982	0.844	11.7
CARBONATE, ION	10	0.6	1.3	0	4	9	-0.008	2.146	-0.202*	1.5
SULFATE, DISSOLVED	10	9.56	1.58	7.1	12.0	9	0.0202	5.3185	0.543*	1.27
CHLORIDE, DISSOLVED	10	2.72	0.50	1.8	3.5	9	0.0056	1.6206	0.401*	0.51
DISSOLVED SOLIDS, SUM OF CONST	10	108.8	17.8	68	130	9	0.432	24.554	0.872	9.8
DISSOLVED SOLIDS, ROE 180 DEG C	10	112.9	16.1	82	127	9	0.303	54.903	0.700	12.5
HARDNESS, TOTAL	10	94.8	15.9	58	120	9	0.347	27.673	0.793	10.8
HARDNESS, NONCARBONATE	10	6.4	5.6	0	16	9	-0.018	10.064	-0.114*	6.3
TURBIDITY (JTU)	10	1.8	0.8	1	3	9	-0.001	1.996	-0.051*	0.9
FLOURIDE, DISSOLVED	10	0.20	0.15	0.0	0.5	9	-0.0010	0.4048	-0.250*	0.16

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 233

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	332	282	269	250	238	210	200	160	145	125

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
227	10.13	15.08	2.67	87	3.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04059000 -- ESCANABA RIVER AT CORNELL, MICH. .

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	1	2	4	0	1
CHROMIUM (CR), UG/L	4	< 10	10	4	0	1
COBALT (CO), UG/L	3	0	0	4	0	1
COPPER (CU), UG/L	4	5	21	4	3	5
IRON (FE), UG/L	4	650	1700	4	380	550
LEAD (PB), UG/L	4	6	34	4	1	4
MANGANESE (MN), UG/L	4	10	55	4	0	55
MERCURY (HG), UG/L	3	0.1	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	100	4	3	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.19	5.29			
BIOMASS, ASH WT., G/SQ M	2	.79	3.09			
CHLOROPHYLL A, MG/SQ M	2	.0	7.5			
CHLOROPHYLL B, MG/SQ M	2	.0	1.0			
ORGANIC CARBON, MG/L	4	5.5	9.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04059500 NAME: FORD RIVER NR HYDE, MICH.

LAT 45D45M20S LONG 087D12M05S
DRAINAGE AREA: 450 SQ MI (1166 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	8.30	9.16	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	290.5	70.6	165	390					
STREAMFLOW (CUBIC FT/SEC)	10	313.2	272.0	35	847	10	-1.663	796.385	-0.432*	260.3
PH (STANDARD UNITS)	10	8.03	0.37	7.4	8.5	10	-0.0018	8.5554	-0.344*	0.37
PHOSPHORUS, TOTAL	10	0.006	0.005	0.00	0.01	10	-0.00002	0.01234	-0.299*	0.005
NITRITE + NITRATE, TOTAL	10	0.093	0.095	0.01	0.22	10	0.00073	-0.12021	0.545*	0.085
NITROGEN, KJELDAHL, TOTAL	10	0.379	0.111	0.28	0.56	10	-0.00066	0.57028	-0.417*	0.107
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	562.1	395.7	69	1300	9	-4.735	1990.358	-0.776	266.8
SEDIMENT, SUSPENDED	10	5.3	6.1	0	20					
SEDIMENT, CLAY-SILT (PERCENT)	10	95.3	14.9	53	100					
COLIFORM, FECAL (COL/100 ML)	9	15.9	19.8	2	64					
STREPTOCOCCI, FECAL (COL/100 ML)	10	45.8	66.9	2	220					
SILICA, DISSOLVED	10	7.51	2.13	3.8	10.0	10	0.0169	2.6096	0.560*	1.87
CALCIUM, DISSOLVED	10	42.30	6.80	28.0	49.0	10	0.0809	18.8095	0.840	3.92
MAGNESIUM, DISSOLVED	10	17.50	3.14	12.0	21.0	10	0.0261	9.9094	0.588*	2.69
SODIUM, DISSOLVED	10	1.16	0.29	0.7	1.8	10	0.0027	0.3754	0.655	0.23
POTASSIUM, DISSOLVED	10	0.74	0.20	0.5	1.2	10	0.0016	0.2622	0.594*	0.17
BICARBONATE, ION	10	203.1	30.7	140	236	10	0.333	106.448	0.765	21.0
CARBONATE, ION	10	1.0	2.2	0	6	10	0.005	-0.521	0.171*	2.3
SULFATE, DISSOLVED	10	9.65	3.84	5.9	19.0	10	0.0087	7.1107	0.161*	4.02
CHLORIDE, DISSOLVED	10	2.04	0.43	1.2	2.5	10	0.0013	1.6561	0.218*	0.44
DISSOLVED SOLIDS, SUM OF CONST	10	182.0	28.3	121	210	10	0.309	92.369	0.770	19.2
DISSOLVED SOLIDS, RUE 180 DEG C	10	181.4	30.8	130	221	10	0.297	95.213	0.680	24.0
HARDNESS, TOTAL	10	177.0	29.5	120	210	10	0.312	86.268	0.749	20.7
HARDNESS, NONCARBONATE	10	9.1	6.7	0	19	10	0.034	-0.834	0.358*	6.7
TURBIDITY (JTU)	10	1.6	1.1	0	3	10	-0.004	2.655	-0.239*	1.1
FLOURIDE, DISSOLVED	10	0.21	0.12	0.0	0.3	10	-0.0006	0.3819	-0.349*	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 302

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	395	380	370	360	354	322	284	224	199	174

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
292	9.65	11.28	2.66	89	3.07

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04059500 -- FORD RIVER NR HYDE, MICH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	3	0	3	4	0	2
CHROMIUM (CR), UG/L	4	< 10	< 10	4	0	0
COBALT (CO), UG/L	3	0	2	4	0	2
COPPER (CU), UG/L	3	5	7	4	1	4
IRON (FE), UG/L	4	120	260	4	70	160
LEAD (PB), UG/L	2	1	14	4	1	4
MANGANESE (MN), UG/L	4	14	40	4	0	30
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	3	30	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.39	11.00			
BIOMASS, ASH WT., G/SQ M	2	2.79	9.00			
CHLOROPHYLL A, MG/SQ M	2	.0	3.7			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	4	11.0	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04085000 NAME: FOX RIVER AT WRIGHTSTOWN, WIS.

LAT 44D19M36S LONG 088D09M54S
DRAINAGE AREA: 6210 SQ MI (16084 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.58	9.85	0.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	393.3	47.2	325	470					
STREAMFLOW (CUBIC FT/SEC)	12	4480.0	2897.3	1740	11700	12	-22.156	13194.805	-0.361*	2833.7
PH (STANDARD UNITS)	12	7.67	0.34	7.1	8.3	12	-0.0031	8.8945	-0.432*	0.32
PHOSPHORUS, TOTAL	12	0.113	0.067	0.01	0.23	12	-0.00038	0.26307	-0.267*	0.068
NITRITE + NITRATE, TOTAL	12	0.207	0.200	0.00	0.69	12	0.00130	-0.30430	0.307*	0.200
NITROGEN, KJELDAHL, TOTAL	11	1.201	0.527	0.69	2.20	11	-0.00146	1.77026	-0.131*	0.551
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	91829.1	162045.9	750	460000	12	-1172.696	553089.563	-0.342*	159726.7
SEDIMENT, SUSPENDED	12	16.0	12.1	5	48					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	493.4	590.6	57	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	103.1	58.4	0	180					
SILICA, DISSOLVED	12	7.44	2.76	2.8	13.0	12	0.0281	-3.6179	0.481*	2.54
CALCIUM, DISSOLVED	12	39.50	5.05	32.0	46.0	12	0.0671	13.1077	0.627	4.13
MAGNESIUM, DISSOLVED	12	19.50	2.32	16.0	23.0	12	0.0271	8.8308	0.553*	2.02
SODIUM, DISSOLVED	12	11.07	2.81	6.9	16.0	12	0.0131	5.9112	0.220*	2.88
POTASSIUM, DISSOLVED	12	2.47	0.30	2.0	2.9	12	-0.0008	2.7904	-0.131*	0.31
BICARBONATE, ION	12	185.8	25.0	142	216	12	0.260	83.607	0.490*	22.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	27.25	3.77	20.0	34.0	12	0.0296	15.6181	0.370*	3.67
CHLORIDE, DISSOLVED	12	14.42	3.15	10.0	20.0	12	0.0234	5.2181	0.351	3.09
DISSOLVED SOLIDS, SUM OF CONST	12	213.8	20.4	181	238	12	0.317	89.306	0.731	14.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	237.7	34.9	208	330	12	0.257	136.697	0.348*	34.3
HARDNESS, TOTAL	12	179.2	21.5	150	210	12	0.301	60.709	0.661*	16.9
HARDNESS, NONCARBONATE	12	27.3	6.2	20	38	12	0.081	-4.677	0.614*	5.2
TURBIDITY (JTU)	12	12.8	8.7	3	35	12	-0.086	46.683	-0.468*	8.1
FLOURIDE, DISSOLVED	12	0.33	0.13	0.1	0.5	12	-0.0004	0.4991	-0.153*	0.14

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 204

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	630	460	430	390	380	360	345	320	315	210

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
204	8.15	16.18	2.74	92	2.56

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04085000 -- FOX RIVER AT WRIGHTSTOWN, WIS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	0
CHROMIUM (CR), UG/L	4	< 10	10	4	0	3
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	6	12	4	1	2
IRON (FE), UG/L	4	180	400	4	10	160
LEAD (PB), UG/L	4	3	15	4	0	8
MANGANESE (MN), UG/L	4	0	90	4	10	70
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	60	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	5.19	12.00			
BIOMASS, ASH WT., G/SQ M	3	1.50	5.50			
CHLOROPHYLL A, MG/SQ M	3	1.0	4.5			
CHLOROPHYLL B, MG/SQ M	3	.1	.5			
ORGANIC CARBON, MG/L	4	8.0	22.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04087000 NAME: MILWAUKEE RIVER AT MILWAUKEE, WIS.

LAT 43D06M00S LONG 087D54M32S
DRAINAGE AREA: 686 SQ MI (1777 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.08	10.75	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	612.9	134.9	330	800					
STREAMFLOW (CUBIC FT/SEC)	23	725.6	1076.6	113	3850	12	-5.207	4006.205	-0.631	905.4
PH (STANDARD UNITS)	12	8.11	0.41	7.5	8.7	12	0.0006	7.7586	0.189*	0.42
PHOSPHORUS, TOTAL	12	0.174	0.064	0.09	0.32	12	-0.00012	0.24978	-0.260*	0.065
NITRITE + NITRATE, TOTAL	12	0.885	0.743	0.00	1.90	12	0.00165	-0.12485	0.299*	0.743
NITROGEN, KJELDAHL, TOTAL	12	1.416	0.336	0.93	2.00	12	-0.00034	1.62119	-0.135*	0.349
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	16435.8	17349.4	730	49000	12	-15.722	26072.004	-0.122*	18059.5
SEDIMENT, SUSPENDED	16	42.8	41.4	6	181					
SEDIMENT, CLAY-SILT (PERCENT)	4	59.5	24.4	34	90					
COLIFORM, FECAL (COL/100 ML)	11	7234.9	17556.2	1	58000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	3216.3	8922.6	20	30000					
SILICA, DISSOLVED	12	5.50	3.66	0.1	11.0	12	0.0096	-0.4141	0.356*	3.59
CALCIUM, DISSOLVED	12	60.33	13.04	33.0	75.0	12	0.0688	18.1451	0.712	9.60
MAGNESIUM, DISSOLVED	12	32.33	8.18	14.0	41.0	12	0.0460	4.1687	0.757	5.60
SODIUM, DISSOLVED	12	24.38	13.06	7.5	58.0	12	0.0654	-15.6809	0.675	10.10
POTASSIUM, DISSOLVED	12	3.09	0.68	2.0	4.0	12	0.0009	2.5488	0.177*	0.70
BICARBONATE, ION	12	277.3	68.3	130	379	12	0.351	62.131	0.693	51.6
CARBONATE, ION	12	4.8	9.7	0	30	12	0.002	3.514	0.030*	10.2
SULFATE, DISSOLVED	12	37.17	9.85	20.0	50.0	12	0.0546	3.6717	0.748	6.85
CHLORIDE, DISSOLVED	12	43.67	21.84	15.0	100.0	12	0.1102	-23.8999	0.681	16.78
DISSOLVED SOLIDS, SUM OF CONST	12	348.3	79.2	163	437	12	0.531	22.857	0.904	35.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	378.5	80.7	193	488	12	0.512	64.734	0.856	43.8
HARDNESS, TOTAL	12	283.3	63.4	140	360	12	0.355	65.528	0.756	43.6
HARDNESS, NONCARBONATE	12	48.3	14.9	29	70	12	0.070	5.058	0.637	12.1
TURBIDITY (JTU)	12	20.8	23.8	4	70	12	0.024	5.996	0.137*	24.7
FLOURIDE, DISSOLVED	12	0.30	0.10	0.2	0.5	12	-0.0000	0.3092	-0.021*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 142

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	913	902	873	790	760	681	528	422	394	382

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
142	11.10	12.92	2.69	92	2.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04087000 -- MILWAUKEE RIVER AT MILWAUKEE, WIS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	5	4	2	4
CADMIUM (CD), UG/L	3	0	1	4	0	0
CHROMIUM (CR), UG/L	3	0	< 10	4	0	1
COBALT (CO), UG/L	3	1	3	4	0	5
COPPER (CU), UG/L	3	8	20	4	1	4
IRON (FE), UG/L	3	410	3700	4	50	120
LEAD (PB), UG/L	3	14	22	4	0	4
MANGANESE (MN), UG/L	3	60	210	4	10	47
MERCURY (HG), UG/L	3	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	3	40	80	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.19	3.09			
BIOMASS, ASH WT., G/SQ M	3	.19	1.50			
CHLOROPHYLL A, MG/SQ M	3	.0	13.0			
CHLOROPHYLL B, MG/SQ M	3	.0	1.3			
ORGANIC CARBON, MG/L	4	13.0	18.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04108690 NAME: KALAMAZOO RIVER AT SAUGATUCK, MICH.

LAT 42D38M50S LONG 086D11M53S
DRAINAGE AREA: 2020 SQ MI (5232 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.96	9.37	0.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	525.6	54.7	448	610					
STREAMFLOW (CUBIC FT/SEC)	11	2094.5	837.0	1090	3560	11	-9.050	6876.973	-0.610	698.9
PH (STANDARD UNITS)	12	7.91	0.20	7.6	8.3	12	0.0012	7.2998	0.321*	0.20
PHOSPHORUS, TOTAL	12	0.097	0.028	0.06	0.14	12	-0.00018	0.19085	-0.347*	0.028
NITRITE + NITRATE, TOTAL	12	0.802	0.270	0.32	1.30	12	0.00055	0.51239	0.112*	0.281
NITROGEN, KJELDAHL, TOTAL	12	0.879	0.226	0.56	1.40	12	-0.00028	1.02785	-0.068*	0.237
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	9700.0	5978.3	2100	20000	11	11.974	3498.617	0.101*	6269.7
SEDIMENT, SUSPENDED	12	10.1	5.8	1	23					
SEDIMENT, CLAY-SILT (PERCENT)	12	95.8	14.4	50	100					
COLIFORM, FECAL (COL/100 ML)	12	190.2	276.0	10	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	158.6	212.4	2	600					
SILICA, DISSOLVED	12	6.86	2.05	2.8	10.0	12	-0.0024	8.1406	-0.065*	2.14
CALCIUM, DISSOLVED	12	65.67	5.84	56.0	76.0	12	0.0865	20.2076	0.811	3.58
MAGNESIUM, DISSOLVED	12	19.50	1.98	17.0	22.0	12	0.0317	2.8576	0.877	1.00
SODIUM, DISSOLVED	12	16.58	4.36	12.0	25.0	12	0.0580	-13.9092	0.729	3.13
POTASSIUM, DISSOLVED	12	2.16	0.34	1.7	2.9	12	-0.0001	2.2352	-0.023*	0.36
BICARBONATE, ION	12	246.8	36.5	200	325	12	0.509	-20.890	0.763	24.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	44.83	6.44	34.0	55.0	12	0.0697	8.1966	0.593	5.44
CHLORIDE, DISSOLVED	12	27.50	5.92	19.0	37.0	12	0.0837	-16.4784	0.774	3.93
DISSOLVED SOLIDS, SUM OF CONST	12	304.8	35.3	264	361	12	0.580	-0.084	0.899	16.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	330.2	49.6	274	466	12	0.686	-30.507	0.757	34.0
HARDNESS, TOTAL	12	243.3	21.5	220	280	12	0.345	61.880	0.880	10.7
HARDNESS, NONCARBONATE	12	41.5	18.4	0	59	12	-0.061	73.597	-0.182*	19.0
TURBIDITY (JTU)	12	6.3	3.6	1	15	12	-0.001	6.948	-0.020*	3.7
FLOURIDE, DISSOLVED	12	0.22	0.08	0.1	0.3	12	0.0001	0.1576	0.093*	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 363

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	581	572	569	559	548	525	500	464	447	347

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
160	11.41	14.23	2.91	84	2.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04108690 -- KALAMAZOO RIVER AT SAUGATUCK, MICH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	1	4	0	2
CADMIUM (CD), UG/L	3	0	4	4	0	1
CHROMIUM (CR), UG/L	4	< 10	< 10	4	0	4
COBALT (CO), UG/L	4	0	2	4	0	2
COPPER (CU), UG/L	2	6	12	4	1	9
IRON (FE), UG/L	4	360	530	4	10	290
LEAD (PB), UG/L	4	5	35	4	2	35
MANGANESE (MN), UG/L	4	50	68	4	20	63
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	70	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.50	31.00			
BIOMASS, ASH WT., G/SQ M	4	.79	31.00			
CHLOROPHYLL A, MG/SQ M	4	.0	120.0			
CHLOROPHYLL B, MG/SQ M	4	.0	23.0			
ORGANIC CARBON, MG/L	4	5.2	9.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04122030 NAME: MUSKEGON R NR BRIDGETON, MICH. .

LAT 43D19M05S LONG 086D02M11S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, A	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.38	8.31	1.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	356.7	55.5	244	410					
STREAMFLOW (CUBIC FT/SEC)	12	2332.5	1167.1	1240	5730	12	-14.185	7391.855	-0.675	903.2
PH (STANDARD UNITS)	12	8.11	0.22	7.7	8.3	12	0.0017	7.4877	0.449*	0.20
PHOSPHORUS, TOTAL	12	0.026	0.012	0.01	0.05	12	-0.00010	0.06133	-0.475*	0.011
NITRITE + NITRATE, TOTAL	12	0.244	0.124	0.07	0.44	12	0.00099	-0.10741	0.442*	0.117
NITROGEN, KJELDAHL, TOTAL	12	0.362	0.125	0.16	0.56	12	-0.00124	0.80483	-0.549*	0.110
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	1822.0	1316.3	240	4700	10	-13.788	6643.836	-0.612*	1103.7
SEDIMENT, SUSPENDED	12	20.5	8.8	8	40					
SEDIMENT, CLAY-SILT (PERCENT)	12	94.8	18.2	37	100					
COLIFORM, FECAL (COL/100 ML)	12	30.4	29.3	2	100					
STREPTOCOCCI, FECAL (COL/100 ML)	11	42.0	48.8	1	150					
SILICA, DISSOLVED	12	6.10	1.27	4.1	8.0	12	0.0028	5.1056	0.122*	1.33
CALCIUM, DISSOLVED	12	43.11	13.08	3.3	52.0	12	0.1909	-24.9921	0.811	8.04
MAGNESIUM, DISSOLVED	12	13.25	1.71	10.0	15.0	12	0.0296	2.6753	0.962	0.49
SODIUM, DISSOLVED	12	10.01	1.67	6.5	12.0	12	0.0285	-0.1662	0.947	0.56
POTASSIUM, DISSOLVED	12	1.37	0.37	0.9	2.4	12	-0.0000	1.3803	-0.002*	0.39
BICARBONATE, ION	12	185.8	30.5	146	242	12	0.395	45.027	0.719	22.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	19.17	2.82	15.0	23.0	12	0.0457	2.8666	0.899	1.30
CHLORIDE, DISSOLVED	12	18.50	3.03	12.0	24.0	12	0.0489	1.0507	0.897	1.41
DISSOLVED SOLIDS, SUM OF CONST	12	203.0	32.2	128	239	12	0.542	9.576	0.935	12.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	215.5	24.8	172	243	12	0.405	70.965	0.909	10.8
HARDNESS, TOTAL	12	163.3	38.5	49	190	12	0.593	-48.097	0.855	20.9
HARDNESS, NONCARBONATE	12	19.8	13.4	0	36	12	0.070	-5.257	0.292*	13.4
TURBIDITY (JTU)	12	21.7	56.9	1	200	12	0.169	-38.477	0.165*	58.9
FLOURIDE, DISSOLVED	12	0.20	0.10	0.0	0.4	12	-0.0002	0.2799	-0.119*	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 327

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	396	389	385	379	370	356	329	296	291	286

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
312	10.36	11.50	2.66	96	1.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04122030 -- MUSKEGON R NR BRIDGETON, MICH. .

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	1
CADMIUM (CD), UG/L	3	0	3	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	1
COBALT (CO), UG/L	3	0	3	4	0	2
COPPER (CU), UG/L	4	5	11	4	0	2
IRON (FE), UG/L	4	130	310	4	10	140
LEAD (PB), UG/L	3	10	16	4	0	9
MANGANESE (MN), UG/L	4	20	40	4	0	40
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	4	70	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.50	12.00			
BIOMASS, ASH WT., G/SQ M	4	.09	10.00			
CHLOROPHYLL A, MG/SQ M	4	.2	21.0			
CHLOROPHYLL B, MG/SQ M	4	.1	1.7			
ORGANIC CARBON, MG/L	4	5.5	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04126520 NAME: MANISTEE R AT MANISTEE, MICH. .

LAT 44D14M54S LONG 086D19M25S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.13	8.71	0.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	604.1	101.2	423	729					
STREAMFLOW (CUBIC FT/SEC)	11	2266.4	569.9	1140	2870	11	-0.864	2802.589	-0.133 *	595.4
PH (STANDARD UNITS)	12	7.91	0.34	7.0	8.3	12	-0.0009	8.4792	-0.284 *	0.34
PHOSPHORUS, TOTAL	12	0.019	0.011	0.01	0.04	12	-0.00005	0.04765	-0.440 *	0.010
NITRITE + NITRATE, TOTAL	12	0.215	0.105	0.03	0.35	12	0.00039	-0.02138	0.378 *	0.102
NITROGEN, KJELDAHL, TOTAL	12	0.316	0.096	0.20	0.45	12	-0.00041	0.56106	-0.427 *	0.091
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3120.6	5389.7	67	16000	12	-29.460	20916.867	-0.553 *	4709.8
SEDIMENT, SUSPENDED	12	6.0	3.2	0	11					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	74.1	47.8	13	160					
STREPTOCOCCI, FECAL (COL/100 ML)	12	40.5	43.9	3	140					
SILICA, DISSOLVED	12	7.80	0.83	6.4	8.9	12	0.0045	5.1108	0.541 *	0.73
CALCIUM, DISSOLVED	12	78.17	13.29	54.0	98.0	12	0.0625	40.4217	0.476 *	12.26
MAGNESIUM, DISSOLVED	12	12.32	1.11	9.8	14.0	12	0.0057	8.8846	0.516 *	1.00
SODIUM, DISSOLVED	12	17.17	3.21	13.0	23.0	12	0.0204	4.8217	0.643	2.58
POTASSIUM, DISSOLVED	12	2.30	0.45	1.5	3.0	12	0.0020	1.0815	0.456 *	0.42
BICARBONATE, ION	12	183.5	19.7	152	219	12	0.127	106.562	0.655	15.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	13.47	1.98	9.7	17.0	12	0.0111	6.7535	0.568 *	1.71
CHLORIDE, DISSOLVED	12	89.25	23.55	45.0	130.0	12	0.1092	23.2727	0.469 *	21.81
DISSOLVED SOLIDS, SUM OF CONST	12	310.8	42.0	259	385	12	0.281	141.088	0.676	32.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	392.6	88.0	286	586	12	0.342	186.207	0.393 *	84.9
HARDNESS, TOTAL	12	245.0	36.1	190	300	12	0.202	123.226	0.566 *	31.2
HARDNESS, NONCARBONATE	12	94.5	34.7	15	146	12	0.096	36.798	0.278 *	35.0
TURBIDITY (JTU)	12	4.3	1.1	3	6	12	0.000	4.219	0.005 *	1.2
FLOURIDE, DISSOLVED	12	0.14	0.11	0.0	0.4	12	-0.0004	0.3672	-0.349 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 325

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1040	839	758	653	587	505	432	371	349	329

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
330	10.84	11.50	2.68	96	1.67

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04126520 -- MANISTEE R AT MANISTEE, MICH. .

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	3	0	0	4	0	1
COPPER (CU), UG/L	4	2	14	4	1	2
IRON (FE), UG/L	4	160	480	4	10	140
LEAD (PB), UG/L	4	2	34	4	0	3
MANGANESE (MN), UG/L	4	10	40	4	0	40
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	8	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.79	22.00			
BIOMASS, ASH WT., G/SQ M	4	.79	21.00			
CHLOROPHYLL A, MG/SQ M	4	.5	25.0			
CHLOROPHYLL B, MG/SQ M	4	.0	2.0			
ORGANIC CARBON, MG/L	4	4.6	10.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04132052 NAME: CHEBOYGAN R AT LINCOLN AVE AT CHEBOYGAN, MICH.

LAT 45D38M02S LONG 084D28M52S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	10.82	9.55	1.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	273.0	32.0	190	305					
STREAMFLOW (CUBIC FT/SEC)	9	1831.1	584.0	1280	3250	9	-2.303	2457.487	-0.136*	618.5
PH (STANDARD UNITS)	11	8.25	0.24	7.8	8.5	11	-0.0004	8.3749	-0.058*	0.26
PHOSPHORUS, TOTAL	11	0.011	0.024	0.00	0.08	11	-0.00023	0.07315	-0.306*	0.024
NITRITE + NITRATE, TOTAL	11	0.050	0.031	0.01	0.09	11	-0.00011	0.07992	-0.113*	0.032
NITROGEN, KJELDAHL, TOTAL	11	0.248	0.067	0.16	0.38	11	-0.00135	0.61656	-0.643	0.054
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	1274.3	986.4	33	2900	10	1.601	834.424	0.054*	1044.7
SEDIMENT, SUSPENDED	10	3.4	2.5	1	9					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	11	52.3	40.8	20	140					
STREPTOCOCCI, FECAL (COL/100 ML)	10	35.4	29.3	3	100					
SILICA, DISSOLVED	11	7.59	0.62	6.4	8.4	11	-0.0001	7.6100	-0.004*	0.65
CALCIUM, DISSOLVED	11	45.27	2.45	42.0	48.0	11	-0.0062	46.9556	-0.080*	2.58
MAGNESIUM, DISSOLVED	11	12.36	0.92	11.0	14.0	11	0.0106	9.4787	0.365*	0.91
SODIUM, DISSOLVED	11	3.10	0.34	2.4	3.5	11	0.0018	2.5982	0.173*	0.35
POTASSIUM, DISSOLVED	11	0.85	0.08	0.7	1.0	11	-0.0003	0.9481	-0.134*	0.09
BICARBONATE, ION	11	186.8	9.5	176	212	11	0.096	160.533	0.326*	9.4
CARBONATE, ION	11	1.4	3.1	0	10	11	0.009	-1.174	0.096*	3.3
SULFATE, DISSOLVED	11	10.79	1.01	9.7	13.0	11	-0.0042	11.9289	-0.132*	1.06
CHLORIDE, DISSOLVED	11	3.27	0.49	2.4	3.9	11	0.0094	0.7140	0.606	0.41
DISSOLVED SOLIDS, SUM OF CONST	11	176.7	7.3	164	187	11	0.068	158.242	0.296*	7.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	175.3	9.8	164	200	11	0.041	164.054	0.134*	10.2
HARDNESS, TOTAL	11	162.7	10.1	150	180	11	-0.007	164.597	-0.022*	10.6
HARDNESS, NONCARBONATE	11	10.2	9.7	0	32	11	-0.045	22.496	-0.149*	10.1
TURBIDITY (JTU)	11	1.7	1.2	0	4	11	-0.008	3.998	-0.223*	1.2
FLOURIDE, DISSOLVED	11	0.25	0.10	0.1	0.4	11	0.0012	-0.0777	0.365*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 258

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	880	340	320	315	309	300	290	280	270	250

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
257	11.49	11.90	2.67	95	2.04

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04132052 -- CHEBOYGAN R AT LINCOLN AVE AT CHEBOYGAN, MICH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	0
CHROMIUM (CR), UG/L	4	< 10	< 10	3	0	0
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	5	9	4	0	5
IRON (FE), UG/L	4	90	150	4	0	40
LEAD (PB), UG/L	4	0	24	4	0	5
MANGANESE (MN), UG/L	4	0	20	3	0	10
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	40	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.09	9.19			
BIOMASS, ASH WT., G/SQ M	3	.09	7.50			
CHLOROPHYLL A, MG/SQ M	3	.0	3.5			
CHLOROPHYLL B, MG/SQ M	3	.0	.3			
ORGANIC CARBON, MG/L	4	5.3	8.8			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04142000 NAME: RIFLE RIVER NEAR STERLING, MICH.

LAT 44D04M21S LONG 084D01M12S
DRAINAGE AREA: 320 SQ MI (829 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.50	7.29	0.5	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	423.1	40.4	345	492					
STREAMFLOW (CUBIC FT/SEC)	12	272.3	112.9	157	560	12	-1.275	811.696	-0.456*	105.3
PH (STANDARD UNITS)	12	8.13	0.15	7.8	8.4	12	-0.0012	8.6276	-0.315*	0.15
PHOSPHORUS, TOTAL	12	0.028	0.026	0.00	0.10	12	0.00004	0.01011	0.067*	0.027
NITRITE + NITRATE, TOTAL	12	0.105	0.090	0.00	0.24	12	0.00098	-0.31007	0.441*	0.085
NITROGEN, KJELDAHL, TOTAL	12	0.389	0.166	0.05	0.68	12	-0.00296	1.64270	-0.720	0.121
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8720.0	22824.7	190	81000	12	-98.390	50347.152	-0.174*	23573.5
SEDIMENT, SUSPENDED	12	35.6	37.5	1	129					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	42.8	53.4	7	180					
STREPTOCOCCI, FECAL (COL/100 ML)	12	126.6	215.5	3	630					
SILICA, DISSOLVED	12	7.57	1.46	5.0	10.0	12	0.0183	-0.1684	0.507*	1.32
CALCIUM, DISSOLVED	12	58.17	3.33	52.0	63.0	12	0.0561	34.4359	0.681	2.56
MAGNESIUM, DISSOLVED	12	15.08	1.24	13.0	17.0	12	0.0190	7.0320	0.619	1.02
SODIUM, DISSOLVED	12	10.46	0.78	8.5	11.0	12	0.0078	7.1746	0.400*	0.75
POTASSIUM, DISSOLVED	12	1.14	0.22	0.9	1.5	12	0.0001	1.0884	0.024*	0.23
BICARBONATE, ION	12	218.3	15.5	186	232	12	0.070	188.664	0.182*	16.0
CARBONATE, ION	12	0.2	0.6	0	2	12	-0.001	0.737	-0.094*	0.6
SULFATE, DISSOLVED	12	29.17	2.69	24.0	32.0	12	0.0618	3.0270	0.926	1.06
CHLORIDE, DISSOLVED	12	16.25	1.14	14.0	18.0	12	0.0085	12.6426	0.302*	1.14
DISSOLVED SOLIDS, SUM OF CONST	12	245.3	13.8	214	265	12	0.215	154.535	0.626	11.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	252.0	16.6	221	292	12	0.049	231.359	0.118*	17.3
HARDNESS, TOTAL	12	207.5	14.2	180	230	12	0.241	105.417	0.685	10.9
HARDNESS, NONCARBONATE	12	28.6	13.0	11	59	12	0.182	-48.275	0.566*	11.2
TURBIDITY (JTU)	12	8.3	7.7	2	25	12	-0.099	50.261	-0.522*	6.9
FLOURIDE, DISSOLVED	12	0.23	0.09	0.1	0.4	12	-0.0005	0.4561	-0.239*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 302

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	479	451	442	436	430	421	408	367	347	320

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
314	10.07	11.19	2.82	94	2.19

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04142000 -- RIFLE RIVER NEAR STERLING, MICH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	2	4	4	1	4
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	<10	4	0	4
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	1	11	4	1	2
IRON (FE), UG/L	4	290	930	4	0	70
LEAD (PB), UG/L	4	2	13	4	0	2
MANGANESE (MN), UG/L	4	35	77	4	10	20
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	60	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.19	58.00			
BIOMASS, ASH WT., G/SQ M	4	.19	49.00			
CHLOROPHYLL A, MG/SQ M	4	.0	43.0			
CHLOROPHYLL B, MG/SQ M	4	.0	2.0			
ORGANIC CARBON, MG/L	4	3.5	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04157000 NAME: SAGINAW RIVER AT SAGINAW, MICH.

LAT 43D24M46S LONG 083D57M47S
DRAINAGE AREA: 6060 SQ MI (15695 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.96	8.86	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	701.5	152.9	518	953					
STREAMFLOW (CUBIC FT/SEC)	11	4515.5	2333.5	1180	8230	11	-10.063	11734.273	-0.645	1878.7
PH (STANDARD UNITS)	12	7.97	0.19	7.7	8.3	12	0.0007	7.5048	0.536*	0.17
PHOSPHORUS, TOTAL	11	0.264	0.124	0.09	0.46	11	0.00024	0.09716	0.302*	0.125
NITRITE + NITRATE, TOTAL	12	0.932	0.427	0.35	1.70	12	0.00032	0.70572	0.115*	0.444
NITROGEN, KJELDAHL, TOTAL	11	1.187	0.191	0.96	1.50	11	-0.00047	1.51324	-0.390*	0.186
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	13702.5	15527.7	530	50000	12	-6.547	18295.273	-0.064*	16251.5
SEDIMENT, SUSPENDED	12	53.9	53.9	5	176					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	965.5	2028.6	34	6900					
STREPTOCOCCI, FECAL (COL/100 ML)	12	263.2	334.2	34	1000					
SILICA, DISSOLVED	12	5.24	1.76	2.7	9.3	12	-0.0002	5.3530	-0.014*	1.85
CALCIUM, DISSOLVED	12	74.42	11.32	62.0	97.0	12	0.0599	32.4242	0.809	6.98
MAGNESIUM, DISSOLVED	12	20.42	2.84	17.0	24.0	12	0.0141	10.5004	0.760	1.94
SODIUM, DISSOLVED	12	37.17	13.85	17.0	55.0	12	0.0800	-18.9359	0.883	6.81
POTASSIUM, DISSOLVED	12	3.76	0.95	2.6	5.6	12	0.0037	1.1941	0.587	0.81
BICARBONATE, ION	12	231.3	32.9	192	310	12	0.072	180.879	0.334*	32.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	54.33	8.40	42.0	70.0	12	0.0445	23.0889	0.811	5.16
CHLORIDE, DISSOLVED	12	84.75	37.67	37.0	170.0	12	0.1957	-52.5356	0.795	23.99
DISSOLVED SOLIDS, SUM OF CONST	12	413.6	112.1	299	680	12	0.367	156.243	0.501*	101.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	419.9	98.6	160	560	12	0.458	98.979	0.710	72.9
HARDNESS, TOTAL	12	270.0	40.5	220	340	12	0.219	116.179	0.829	23.7
HARDNESS, NONCARBONATE	12	80.4	33.5	36	144	12	0.161	-32.193	0.733	23.9
TURBIDITY (JTU)	12	23.9	20.6	6	70	12	-0.067	70.883	-0.497*	18.8
FLOURIDE, DISSOLVED	12	0.38	0.17	0.2	0.8	12	-0.0002	0.5448	-0.207*	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 283

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1030	918	830	762	708	654	567	450	410	370

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
307	11.17	12.82	2.76	95	2.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04157000 -- SAGINAW RIVER AT SAGINAW, MICH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	5	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	10	4	0	1
COBALT (CO), UG/L	4	0	2	4	0	1
COPPER (CU), UG/L	4	5	16	4	3	4
IRON (FE), UG/L	4	590	2300	4	10	260
LEAD (PB), UG/L	4	1	22	4	0	2
MANGANESE (MN), UG/L	4	65	150	4	30	47
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	50	4	4	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.79	44.00			
BIOMASS, ASH WT., G/SQ M	4	.79	34.00			
CHLOROPHYLL A, MG/SQ M	4	1.3	66.0			
CHLOROPHYLL B, MG/SQ M	4	.1	15.0			
ORGANIC CARBON, MG/L	4	8.5	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04165500 NAME: CLINTON RIVER AT MOUNT CLEMENS, MICH. .

LAT 42D35M45S LONG 082D54M35S
DRAINAGE AREA: 734 SQ MI (1901 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.92	8.32	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	718.7	165.9	525	1080					
STREAMFLOW (CUBIC FT/SEC)	12	696.5	474.4	286	1750	12	-1.388	1693.732	-0.485 *	435.0
PH (STANDARD UNITS)	12	7.97	0.18	7.5	8.2	12	0.0004	7.6830	0.359 *	0.18
PHOSPHORUS, TOTAL	12	0.366	0.212	0.09	0.76	12	0.00081	-0.21596	0.633	0.172
NITRITE + NITRATE, TOTAL	12	1.942	0.904	1.10	3.50	12	-0.00138	2.93624	-0.254 *	0.917
NITROGEN, KJELDAHL, TOTAL	12	1.714	0.914	0.81	3.50	12	0.00301	-0.44987	0.547 *	0.803
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8941.7	8302.7	2100	31000	12	28.546	-11573.152	0.570 *	7153.1
SEDIMENT, SUSPENDED	13	35.9	20.4	13	74					
SEDIMENT, CLAY-SILT (PERCENT)	13	99.8	0.6	98	100					
COLIFORM, FECAL (COL/100 ML)	12	2337.5	4886.6	230	17000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	950.2	1132.5	64	3630					
SILICA, DISSOLVED	12	5.54	1.02	3.1	7.0	12	0.0022	3.9381	0.362 *	1.00
CALCIUM, DISSOLVED	12	70.33	6.21	63.0	84.0	12	0.0306	48.3199	0.818	3.75
MAGNESIUM, DISSOLVED	12	19.92	1.68	17.0	23.0	12	0.0080	14.1733	0.791	1.08
SODIUM, DISSOLVED	12	43.17	20.21	28.0	100.0	12	0.1119	-37.2676	0.919	8.38
POTASSIUM, DISSOLVED	12	4.50	1.56	3.2	9.0	12	0.0071	-0.6033	0.753	1.08
BICARBONATE, ION	12	237.7	32.4	188	309	12	0.114	155.831	0.583	27.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	55.33	5.61	50.0	65.0	12	0.0231	38.7079	0.684	4.30
CHLORIDE, DISSOLVED	12	77.33	32.63	56.0	170.0	12	0.1807	-52.5037	0.919	13.53
DISSOLVED SOLIDS, SUM OF CONST	12	393.6	71.6	322	574	12	0.419	92.255	0.971	18.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	445.6	102.8	346	670	12	0.361	186.302	0.582	87.7
HARDNESS, TOTAL	12	257.5	20.5	230	300	12	0.108	179.945	0.873	10.5
HARDNESS, NONCARBONATE	12	63.0	23.5	0	83	12	0.016	51.307	0.115 *	24.5
TURBIDITY (JTU)	12	31.4	62.7	8	230	12	-0.150	139.419	-0.398 *	60.3
FLOURIDE, DISSOLVED	12	0.49	0.18	0.3	0.9	12	0.0001	0.4442	0.060 *	0.19

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 323

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1280	1040	934	814	721	670	612	510	423	330

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
342	12.37	11.70	2.76	93	2.28

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04165500 -- CLINTON RIVER AT MOUNT CLEMENS, MICH. .

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	5	3	1	3
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	8
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	9	14	4	4	7
IRON (FE), UG/L	4	460	1400	4	10	250
LEAD (PB), UG/L	4	10	15	4	0	14
MANGANESE (MN), UG/L	4	65	80	4	10	51
MERCURY (HG), UG/L	4	0.0	0.6	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	40	70	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	12.00	90.00			
BIOMASS, ASH WT., G/SQ M	4	9.69	82.00			
CHLOROPHYLL A, MG/SQ M	4	.7	62.0			
CHLOROPHYLL B, MG/SQ M	4	.1	6.0			
ORGANIC CARBON, MG/L	4	7.5	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04165700 NAME: DETROIT R AT DETROIT, MICH. .

LAT 42D21M02S LONG 082D57M52S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	8	14.88	7.21	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	215.5	10.7	203	235					
STREAMFLOW (CUBIC FT/SEC)	12	231500.0	6112.6	219000	240000	12	-199.851	274567.813	-0.351*	6002.6
PH (STANDARD UNITS)	12	7.90	0.26	7.3	8.2	12	0.0041	7.0191	0.167*	0.27
PHOSPHORUS, TOTAL	12	0.012	0.010	0.00	0.04	12	-0.00029	0.07450	-0.304*	0.010
NITRITE + NITRATE, TOTAL	12	0.263	0.046	0.21	0.36	12	0.00030	0.19877	0.070*	0.048
NITROGEN, KJELDAHL, TOTAL	12	0.149	0.071	0.03	0.28	12	-0.00126	0.42175	-0.191*	0.073
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2145.8	1596.8	570	5900	12	43.014	-7123.773	0.289*	1603.1
SEDIMENT, SUSPENDED	12	10.3	8.1	1	24					
SEDIMENT, CLAY-SILT (PERCENT)	12	98.9	3.8	87	100					
COLIFORM, FECAL (COL/100 ML)	11	21.2	59.4	1	200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	8.1	15.1	1	52					
SILICA, DISSOLVED	12	0.97	0.38	0.4	1.5	12	0.0098	-1.1392	0.276*	0.38
CALCIUM, DISSOLVED	12	28.42	1.31	27.0	31.0	12	-0.0225	33.2565	-0.184*	1.35
MAGNESIUM, DISSOLVED	12	7.16	0.31	6.4	7.7	12	-0.0171	10.8360	-0.588	0.26
SODIUM, DISSOLVED	12	4.32	0.73	3.2	6.3	12	0.0304	-2.2369	0.449*	0.68
POTASSIUM, DISSOLVED	12	0.92	0.11	0.7	1.2	12	0.0016	0.5770	0.152*	0.12
BICARBONATE, ION	12	107.7	16.4	80	144	12	-0.095	128.045	-0.062*	17.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	16.50	1.51	15.0	20.0	12	0.0898	-2.8593	0.640	1.21
CHLORIDE, DISSOLVED	12	7.75	1.20	6.4	11.0	12	0.0570	-4.5274	0.510*	1.08
DISSOLVED SOLIDS, SUM OF CONST	12	119.3	7.3	112	135	12	0.095	98.955	0.139*	7.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	130.7	34.4	104	222	12	0.795	-40.680	0.248*	34.9
HARDNESS, TOTAL	12	100.3	4.8	96	110	12	-0.185	140.241	-0.417*	4.6
HARDNESS, NONCARBONATE	12	14.5	10.4	0	34	12	-0.036	22.312	-0.038*	10.9
TURBIDITY (JTU)	12	4.0	3.2	0	10	12	-0.097	24.888	-0.323*	3.2
FLOURIDE, DISSOLVED	12	0.27	0.27	0.1	1.0	12	-0.0018	0.6571	-0.070*	0.29

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	278	228	222	217	215	212	208	206	205	203

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	10.05	11.63	2.58	95	1.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04165700 -- DETROIT R AT DETROIT, MICH. .

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	2	0	2	4	0	1
CHROMIUM (CR), UG/L	3	< 10	< 10	4	0	18
COBALT (CO), UG/L	2	3	5	4	1	2
COPPER (CU), UG/L	4	9	15	4	3	5
IRON (FE), UG/L	4	160	3800	4	0	10
LEAD (PB), UG/L	3	9	29	4	0	9
MANGANESE (MN), UG/L	4	0	40	4	0	20
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	3	30	320	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	5.29	24.59			
BIOMASS, ASH WT., G/SQ M	2	3.89	14.00			
CHLOROPHYLL A, MG/SQ M	2	2.6	3.0			
CHLOROPHYLL B, MG/SQ M	2	.5	.7			
ORGANIC CARBON, MG/L	4	1.5	8.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04193500 NAME: MAUMEE R AT WATERVILLE OH

LAT 41D30M00S LONG 083D42M46S
DRAINAGE AREA: 6330 SQ MI (16395 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	10.72	10.30	0.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	552.1	137.6	405	840					
STREAMFLOW (CUBIC FT/SEC)	16	11375.6	13176.0	291	49200	12	-13.719	12808.027	-0.390 *	4671.5
PH (STANDARD UNITS)	12	7.76	0.70	6.2	9.0	12	0.0017	6.8263	0.330 *	0.70
PHOSPHORUS, TOTAL	12	0.312	0.129	0.10	0.50	12	-0.00030	0.48001	-0.326 *	0.127
NITRITE + NITRATE, TOTAL	12	5.074	3.489	0.02	9.80	12	-0.01126	11.28920	-0.444 *	3.279
NITROGEN, KJELDAHL, TOTAL	12	1.247	0.402	0.67	2.10	12	-0.00038	1.45964	-0.131 *	0.418
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	7860.9	8034.9	220	21000	11	35.077	-11575.070	0.629	6583.2
SEDIMENT, SUSPENDED	16	290.6	300.3	13	892					
SEDIMENT, CLAY-SILT (PERCENT)	4	98.8	1.0	98	100					
COLIFORM, FECAL (COL/100 ML)	12	736.0	859.5	15	2700					
STREPTOCOCCI, FECAL (COL/100 ML)	12	8427.3	22772.0	62	80000					
SILICA, DISSOLVED	4	5.05	3.36	0.1	7.2	4	-0.0174	15.0571	-0.956 *	1.20
CALCIUM, DISSOLVED	4	62.00	7.39	53.0	71.0	4	0.0072	57.8603	0.180 *	8.91
MAGNESIUM, DISSOLVED	4	17.25	5.68	13.0	25.0	4	0.0297	0.2054	0.964 *	1.85
SODIUM, DISSOLVED	4	28.50	29.67	13.0	73.0	4	0.1550	-60.4191	0.963 *	9.86
POTASSIUM, DISSOLVED	4	4.12	2.15	2.6	7.3	4	0.0112	-2.3190	0.963 *	0.71
BICARBONATE, ION	4	163.5	39.8	113	203	4	0.131	88.436	0.606 *	38.8
CARBONATE, ION	4	0.3	0.5	0	1	4	0.003	-1.250	0.963 *	0.2
SULFATE, DISSOLVED	4	89.25	47.35	60.0	160.0	4	0.2513	-54.9426	0.978 *	12.10
CHLORIDE, DISSOLVED	4	38.25	27.22	23.0	79.0	4	0.1429	-43.7625	0.968 *	8.41
DISSOLVED SOLIDS, SUM OF CONST	4	325.8	119.6	229	499	4	0.649	-46.506	1.000 *	4.0
DISSOLVED SOLIDS, ROE 180 DEG C	4	380.8	116.2	299	552	4	0.627	20.744	0.995 *	14.5
HARDNESS, TOTAL	4	227.5	33.0	190	260	4	0.148	142.805	0.823 *	23.0
HARDNESS, NONCARBONATE	4	91.0	7.0	85	100	4	0.026	75.877	0.696 *	6.1
TURBIDITY (JTU)	4	109.8	104.6	9	200	4	-0.443	363.856	-0.780 *	80.1
FLOURIDE, DISSOLVED	4	0.50	0.35	0.2	1.0	4	0.0019	-0.5729	0.995 *	0.04

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
16	13.17	13.17	2.70	94	2.73

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04193500 -- MAUMEE R AT WATERVILLE OH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	6	4	1	2
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	<10
COBALT (CO), UG/L	4	0	3	4	0	1
COPPER (CU), UG/L	4	10	20	4	0	20
IRON (FE), UG/L	4	400	10000	4	10	70
LEAD (PB), UG/L	4	5	14	4	0	4
MANGANESE (MN), UG/L	4	70	220	4	0	20
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	1	3	4	1	3
ZINC (ZN), UG/L	4	20	140	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	2.19				
BIOMASS, ASH WT., G/SQ M	2	.00	4.59			
CHLOROPHYLL A, MG/SQ M	2	10.0	29.0			
CHLOROPHYLL B, MG/SQ M	2	2.0	3.0			
ORGANIC CARBON, MG/L	4	3.3	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04208000 NAME: CUYAHOGA R AT INDEPENDENCE OH

LAT 41D23M43S LONG 081D37M48S
DRAINAGE AREA: 707 SQ MI (1831 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	11.77	7.96	1.5	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	604.2	145.4	400	800					
STREAMFLOW (CUBIC FT/SEC)	12	1309.0	754.0	264	2680	12	-4.438	3990.295	-0.856	409.0
PH (STANDARD UNITS)	12	7.45	0.09	7.3	7.6	12	0.0002	7.3499	0.266 *	0.09
PHOSPHORUS, TOTAL	12	0.403	0.182	0.13	0.76	12	0.00107	-0.24382	0.857	0.098
NITRITE + NITRATE, TOTAL	12	1.458	0.741	0.71	3.20	12	0.00361	-0.72467	0.709	0.548
NITROGEN, KJELDAHL, TOTAL	12	1.179	0.346	0.64	1.80	12	0.00142	0.31887	0.599	0.291
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4530.0	4323.1	330	13000	12	1.305	3741.784	0.044 *	4529.7
SEDIMENT, SUSPENDED	12	73.6	48.6	10	189					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	10950.0	8790.2	1500	31000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6721.7	15694.4	160	56000					
SILICA, DISSOLVED	4	7.12	2.33	4.7	10.0	4	0.0087	1.2969	0.650 *	2.17
CALCIUM, DISSOLVED	4	56.50	13.99	38.0	70.0	4	0.0787	3.6043	0.982 *	3.25
MAGNESIUM, DISSOLVED	4	14.25	5.12	9.0	20.0	4	0.0262	-3.3758	0.893 *	2.82
SODIUM, DISSOLVED	4	54.50	16.94	30.0	68.0	4	0.0953	-9.5703	0.982 *	3.92
POTASSIUM, DISSOLVED	4	4.80	2.13	3.1	7.7	4	0.0092	-1.3680	0.751 *	1.72
BICARBONATE, ION	4	140.3	43.3	88	189	4	0.233	-16.544	0.940 *	18.1
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	88.75	25.10	61.0	110.0	4	0.1348	-1.9153	0.938 *	10.68
CHLORIDE, DISSOLVED	4	81.25	25.05	44.0	98.0	4	0.1327	-7.9817	0.925 *	11.67
DISSOLVED SOLIDS, SUM OF CONST	4	377.0	105.0	235	459	4	0.600	-26.757	0.998 *	8.2
DISSOLVED SOLIDS, ROE 180 DEG C	4	417.0	122.0	260	530	4	0.687	-45.056	0.983 *	27.2
HARDNESS, TOTAL	4	197.5	53.2	130	240	4	0.300	-4.121	0.985 *	11.2
HARDNESS, NONCARBONATE	4	84.3	21.1	60	110	4	0.109	10.825	0.903 *	11.1
TURBIDITY (JTU)	4	15.0	10.2	8	30	4	-0.051	49.627	-0.879 *	6.0
FLOURIDE, DISSOLVED	4	0.32	0.17	0.1	0.5	4	0.0008	-0.2098	0.813 *	0.12

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	12.59	10.75	2.70	99	1.00

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04208000 -- CUYAHOGA R AT INDEPENDENCE OH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	6	4	1	5
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	10	20	4	0	<10
COBALT (CO), UG/L	4	0	2	4	0	0
COPPER (CU), UG/L	4	10	60	4	10	10
IRON (FE), UG/L	4	520	2800	4	30	90
LEAD (PB), UG/L	4	4	24	4	1	6
MANGANESE (MN), UG/L	4	110	290	4	70	120
MERCURY (HG), UG/L	4	<0.5	0.8	4	<0.5	0.6
SELENIUM (SE), UG/L	4	0	2	4	0	2
ZINC (ZN), UG/L	4	20	160	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	6.00	19.00			
BIOMASS, ASH WT., G/SQ M	4	3.89	12.00			
CHLOROPHYLL A, MG/SQ M	4	.0	46.0			
CHLOROPHYLL B, MG/SQ M	4	.0	7.0			
ORGANIC CARBON, MG/L	3	5.0	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04219640 NAME: NIAGARA R(L ONTARIO) AT FORT NIAGARA NY

LAT 43D15M40S LONG 079D03M47S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	102	14.40	7.42	0.5	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	102	317.1	14.1	285	350					
STREAMFLOW (CUBIC FT/SEC)	102	239026.8	23579.2	23900	252000	102	-449.458	381571.188	-0.269	22826.3
PH (STANDARD UNITS)	9	7.73	0.29	7.3	8.2	9	-0.0184	13.5587	-0.489*	0.27
PHOSPHORUS, TOTAL	9	0.030	0.007	0.02	0.04	9	-0.00056	0.20791	-0.616*	0.006
NITRITE + NITRATE, TOTAL	9	0.206	0.140	0.09	0.52	9	-0.00088	0.48355	-0.049*	0.150
NITROGEN, KJELDAHL, TOTAL	9	0.364	0.045	0.29	0.42	9	-0.00337	1.43067	-0.576*	0.040
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1485.8	1171.7	72	3900	9	11.002	-1995.842	0.073*	1249.2
SEDIMENT, SUSPENDED	8	7.9	3.4	4	15					
SEDIMENT, CLAY-SILT (PERCENT)	8	74.0	15.8	57	100					
COLIFORM, FECAL (COL/100 ML)	9	203.1	148.6	47	500					
STREPTOCOCCI, FECAL (COL/100 ML)	9	33.1	37.4	1	100					
SILICA, DISSOLVED	9	0.36	0.45	0.0	1.5	9	-0.0146	4.9831	-0.252*	0.47
CALCIUM, DISSOLVED	9	38.33	2.50	36.0	44.0	9	0.0410	25.3739	0.127*	2.65
MAGNESIUM, DISSOLVED	9	8.22	1.13	5.5	9.5	9	0.0596	-10.6312	0.409*	1.10
SODIUM, DISSOLVED	9	10.89	0.60	10.0	12.0	9	0.0030	9.9371	0.039*	0.64
POTASSIUM, DISSOLVED	9	1.41	0.06	1.3	1.5	9	0.0022	0.7158	0.283*	0.06
BICARBONATE, ION	9	112.9	2.6	108	117	9	-0.012	116.550	-0.035*	2.7
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	25.22	0.44	25.0	26.0	9	-0.0268	33.7154	-0.472*	0.42
CHLORIDE, DISSOLVED	9	24.00	2.06	22.0	29.0	9	-0.0729	47.0634	-0.274*	2.12
DISSOLVED SOLIDS, SUM OF CONST	9	164.2	2.6	160	168	9	-0.023	171.397	-0.067*	2.8
DISSOLVED SOLIDS, ROE 180 DEG C	9	191.8	12.7	167	209	9	0.200	128.591	0.121*	13.5
HARDNESS, TOTAL	9	131.1	3.3	130	140	9	0.178	74.734	0.414*	3.2
HARDNESS, NONCARBONATE	9	37.0	3.5	32	42	9	0.364	-78.317	0.799	2.3
TURBIDITY (JTU)	9	3.8	1.6	1	5	9	0.050	-11.964	0.247*	1.6
FLOURIDE, DISSOLVED	9	0.22	0.16	0.1	0.6	9	-0.0031	1.2032	-0.154*	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 188

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	364	360	357	354	350	333	315	309	308	306

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
190	11.02	13.11	2.34	96	1.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04219640 -- NIAGARA R(L ONTARIO) AT FORT NIAGARA NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	11	4	0	1
CADMIUM (CD), UG/L	5	0	8	5	0	5
CHROMIUM (CR), UG/L	5	0	10	5	0	10
COBALT (CO), UG/L	5	0	1	5	0	1
COPPER (CU), UG/L	5	0	20	5	0	10
IRON (FE), UG/L	5	130	280	5	10	30
LEAD (PB), UG/L	5	5	46	5	1	9
MANGANESE (MN), UG/L	5	0	20	5	0	10
MERCURY (HG), UG/L	5	<0.5	<0.5	5	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	5	10	60	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	5.19	35.00			
BIOMASS, ASH WT., G/SQ M	4	2.39	28.00			
CHLOROPHYLL A, MG/SQ M	4	9.5	31.0			
CHLOROPHYLL B, MG/SQ M	4	.0	8.2			
ORGANIC CARBON, MG/L	5	2.8	9.2			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04232006 NAME: GENESEE RIVER(CHARLOTTE DOCKS)AT ROCHESTER NY

.AT 43D13M26S LONG 077D36M59S
)RAINAGE AREA: 0 SQ MI (0 SQ KM)
'ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	88	16.14	7.76	1.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	88	620.5	149.1	418	950					
STREAMFLOW (CUBIC FT/SEC)	9	2641.1	2173.5	940	7780	9	-8.854	8130.313	-0.682	1699.3
PH (STANDARD UNITS)	9	7.60	0.17	7.4	8.0	9	0.0004	7.3312	0.419 *	0.17
PHOSPHORUS, TOTAL	9	0.150	0.059	0.06	0.25	9	-0.00005	0.18345	-0.154 *	0.062
NITRITE + NITRATE, TOTAL	9	0.604	0.257	0.38	1.20	9	-0.00061	0.98527	-0.400 *	0.252
NITROGEN, KJELDAHL, TOTAL	9	0.902	0.354	0.36	1.60	9	0.00110	0.22259	0.519 *	0.323
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	5531.1	7113.9	480	24000	9	19.828	-6761.996	0.467 *	6726.2
SEDIMENT, SUSPENDED	9	83.3	68.3	27	226					
SEDIMENT, CLAY-SILT (PERCENT)	9	91.3	8.9	72	99					
COLIFORM, FECAL (COL/100 ML)	9	14060.0	26102.9	50	72000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	1252.8	2798.7	20	8600					
SILICA, DISSOLVED	9	2.66	1.01	1.2	4.6	9	-0.0048	5.6339	-0.796	0.65
CALCIUM, DISSOLVED	9	59.89	10.02	45.0	80.0	9	0.0310	40.6882	0.518 *	9.16
MAGNESIUM, DISSOLVED	9	12.50	2.26	9.6	16.0	9	0.0092	6.8065	0.680	1.77
SODIUM, DISSOLVED	9	38.00	20.23	17.0	66.0	9	0.1050	-27.0749	0.869	10.71
POTASSIUM, DISSOLVED	9	3.03	0.59	2.0	3.7	9	0.0025	1.4675	0.720	0.44
BICARBONATE, ION	9	142.9	18.6	107	171	9	0.050	112.016	0.448 *	17.8
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	78.00	17.67	51.0	110.0	9	0.0931	20.2626	0.882	8.89
CHLORIDE, DISSOLVED	9	64.67	34.86	27.0	110.0	9	0.1796	-46.6723	0.862	18.87
DISSOLVED SOLIDS, SUM OF CONST	9	329.6	82.9	222	469	9	0.439	57.214	0.887	40.9
DISSOLVED SOLIDS, ROE 180 DEG C	9	369.0	85.6	235	525	9	0.436	98.431	0.853	47.7
HARDNESS, TOTAL	9	201.1	35.2	150	270	9	0.129	121.018	0.615 *	29.6
HARDNESS, NONCARBONATE	9	84.2	20.6	59	130	9	0.080	34.864	0.647 *	16.8
TURBIDITY (JTU)	9	36.6	33.5	10	100	9	-0.148	128.473	-0.740	24.1
FLOURIDE, DISSOLVED	9	0.19	0.06	0.1	0.3	9	0.0002	0.0750	0.512 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 154

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	770	701	672	630	597	542	484	374	347	293

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
154	11.98	11.79	2.75	94	1.52

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04232006 -- GENESEE RIVER(CHARLOTTE DOCKS)AT ROCHESTER NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	3	5	1	2
CADMIUM (CD), UG/L	5	0	5	5	0	3
CHROMIUM (CR), UG/L	5	0	10	5	0	< 10
COBALT (CO), UG/L	5	0	3	5	0	1
COPPER (CU), UG/L	5	10	50	5	0	20
IRON (FE), UG/L	5	820	7400	5	40	60
LEAD (PB), UG/L	5	12	29	5	0	4
MANGANESE (MN), UG/L	5	50	180	5	30	70
MERCURY (HG), UG/L	5	< 0.5	0.7	5	< 0.5	0.5
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	30	40	5	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	22.00	45.00			
BIOMASS, ASH WT., G/SQ M	3	16.00	37.00			
CHLOROPHYLL A, MG/SQ M	3	19.0	100.0			
CHLOROPHYLL B, MG/SQ M	3	.7	23.0			
ORGANIC CARBON, MG/L	5	3.7	7.7			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04249000 NAME: OSWEGO RIVER AT LOCK 7 AT OSWEGO NY

LAT 43D27M06S LONG 076D30M20S
DRAINAGE AREA: 5098 SQ MI (13204 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	18.20	6.59	5.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	20	1268.0	372.6	700	1800					
STREAMFLOW (CUBIC FT/SEC)	9	5883.3	3229.0	3400	11600	9	-5.476	12394.090	-0.702	2458.5
PH (STANDARD UNITS)	9	7.61	0.24	7.3	8.1	9	0.0000	7.5651	0.068 *	0.25
PHOSPHORUS, TOTAL	9	0.098	0.025	0.07	0.13	9	0.00004	0.04852	0.675	0.020
NITRITE + NITRATE, TOTAL	9	0.391	0.175	0.14	0.68	9	-0.00018	0.60164	-0.419 *	0.170
NITROGEN, KJELDAHL, TOTAL	9	0.807	0.183	0.57	1.00	9	0.00039	0.34702	0.877	0.094
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	21666.7	13527.7	12000	54000	9	17.313	1083.957	0.530 *	12266.3
SEDIMENT, SUSPENDED	7	16.3	4.8	12	26					
SEDIMENT, CLAY-SILT (PERCENT)	7	82.1	7.8	74	93					
COLIFORM, FECAL (COL/100 ML)	9	13487.3	26585.8	36	80000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	143.2	136.8	26	430					
SILICA, DISSOLVED	9	0.88	0.59	0.1	1.9	9	-0.0006	1.6362	-0.445 *	0.57
CALCIUM, DISSOLVED	9	92.67	23.78	70.0	140.0	9	0.0434	41.0798	0.755	16.66
MAGNESIUM, DISSOLVED	9	13.00	1.41	11.0	15.0	9	0.0014	11.2997	0.419 *	1.37
SODIUM, DISSOLVED	9	96.67	42.53	42.0	160.0	9	0.0982	-20.1036	0.956	13.36
POTASSIUM, DISSOLVED	9	3.34	1.00	2.0	4.8	9	0.0024	0.5160	0.982	0.20
BICARBONATE, ION	9	131.3	16.7	109	154	9	-0.006	138.019	-0.140 *	17.6
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	71.56	7.95	60.0	83.0	9	0.0178	50.4273	0.925	3.24
CHLORIDE, DISSOLVED	9	223.89	103.62	95.0	380.0	9	0.2258	-44.5894	0.902	47.81
DISSOLVED SOLIDS, SUM OF CONST	9	567.6	172.6	356	817	9	0.384	110.757	0.921	71.8
DISSOLVED SOLIDS, ROE 180 DEG C	9	690.7	232.2	433	1080	9	0.489	109.390	0.872	121.7
HARDNESS, TOTAL	9	285.6	59.8	230	400	9	0.111	153.561	0.768	40.9
HARDNESS, NONCARBONATE	9	178.9	67.5	110	310	9	0.115	42.268	0.704	51.3
TURBIDITY (JTU)	9	5.1	2.4	2	10	9	0.001	4.113	0.144 *	2.6
FLOURIDE, DISSOLVED	9	0.78	0.76	0.2	2.0	9	-0.0013	2.2822	-0.690	0.59

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
32	9.14	16.41	2.70	93	1.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04249000 -- OSWEGO RIVER AT LOCK 7 AT OSWEGO NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	2	5	0	2
CADMIUM (CD), UG/L	5	0	2	5	0	1
CHROMIUM (CR), UG/L	5	0	10	5	0	20
COBALT (CO), UG/L	5	0	3	5	0	3
COPPER (CU), UG/L	5	0	40	5	0	10
IRON (FE), UG/L	5	240	570	5	30	50
LEAD (PB), UG/L	5	2	24	5	0	3
MANGANESE (MN), UG/L	5	40	70	5	10	30
MERCURY (HG), UG/L	5	< 0.5	< 0.5	5	< 0.5	< 0.5
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	10	20	5	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	69.00				
BIOMASS, ASH WT., G/SQ M	1	68.00				
CHLOROPHYLL A, MG/SQ M	1	.2				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	5	4.2	6.8			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04260500 NAME: BLACK RIVER AT WATERTOWN, NY

LAT 43D59M08S LONG 075D55M30S
DRAINAGE AREA: 1876 SQ MI (4859 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	8.66	9.76	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	86.7	19.6	44	117					
STREAMFLOW (CUBIC FT/SEC)	16	5478.8	4928.9	1380	19000	16	-127.899	16565.980	-0.507	4396.3
PH (STANDARD UNITS)	16	7.44	0.64	6.6	8.5	16	-0.0006	7.4950	-0.018 *	0.67
PHOSPHORUS, TOTAL	16	0.028	0.014	0.01	0.06	16	-0.00019	0.04474	-0.272 *	0.014
NITRITE + NITRATE, TOTAL	16	0.545	0.417	0.14	1.60	16	0.01110	-0.41754	0.520	0.369
NITROGEN, KJELDAHL, TOTAL	16	0.333	0.094	0.13	0.58	16	0.00079	0.26428	0.165 *	0.096
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	1251.5	1689.8	25	5800	9	9.335	478.519	0.113 *	1898.5
SEDIMENT, SUSPENDED	11	8.7	12.7	1	43					
SEDIMENT, CLAY-SILT (PERCENT)	11	73.1	15.7	54	95					
COLIFORM, FECAL (COL/100 ML)	11	728.1	585.4	82	2200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	280.3	209.3	60	650					
SILICA, DISSOLVED	8	5.55	0.35	5.0	6.2	8	0.0039	5.1976	0.197 *	0.37
CALCIUM, DISSOLVED	8	13.13	2.23	11.0	18.0	8	0.0992	4.2610	0.778	1.52
MAGNESIUM, DISSOLVED	8	1.20	0.26	0.8	1.6	8	0.0083	0.4621	0.564 *	0.23
SODIUM, DISSOLVED	8	2.70	1.01	1.6	4.5	8	0.0445	-1.2813	0.774	0.69
POTASSIUM, DISSOLVED	8	0.74	0.19	0.5	1.1	8	-0.0011	0.8339	-0.098 *	0.21
BICARBONATE, ION	16	33.9	10.8	23	61	16	0.449	-5.023	0.812	6.5
CARBONATE, ION	16	0.0	0.0	0	0	16	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	16	9.28	2.32	4.5	13.0	16	0.0393	5.8759	0.332 *	2.26
CHLORIDE, DISSOLVED	16	2.27	1.01	0.6	4.2	16	0.0344	-0.7037	0.662	0.79
DISSOLVED SOLIDS, SUM OF CONST	8	53.4	10.8	46	77	8	0.470	11.400	0.762	7.5
DISSOLVED SOLIDS, ROE 180 DEG C	7	63.1	12.4	50	82	7	0.546	14.376	0.833	7.5
HARDNESS, TOTAL	8	37.8	6.1	32	50	8	0.291	11.747	0.840	3.6
HARDNESS, NONCARBONATE	8	8.6	4.1	0	14	8	-0.170	23.794	-0.730	3.0
TURBIDITY (JTU)	16	4.6	3.5	1	15	16	-0.067	10.427	-0.374 *	3.4
FLOURIDE, DISSOLVED	8	0.21	0.06	0.1	0.3	8	-0.0008	0.2849	-0.221 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	10.58	13.30	2.79	93	2.99

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04260500 -- BLACK RIVER AT WATERTOWN, NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	5
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	12	290	1300	4	120	240
LEAD (PB), UG/L	4	0	8	4	0	6
MANGANESE (MN), UG/L	12	30	70	4	20	40
MERCURY (HG), UG/L	4	< 0.5	< 0.5	4	< 0.5	< 0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	.19	4.79			
BIOMASS, ASH WT., G/SQ M	5	.09	2.29			
CHLOROPHYLL A, MG/SQ M	5	.0	11.0			
CHLOROPHYLL B, MG/SQ M	5	.0	2.5			
ORGANIC CARBON, MG/L	10	4.1	18.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04264331 NAME: ST LAWRENCE R AT CORNWALL ONT NR MASSENA, NY

LAT 45D00M22S LONG 074D47M43S
DRAINAGE AREA: 299000 SQ MI (774410 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.63	8.52	0.5	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	344.6	23.7	310	400					
STREAMFLOW (CUBIC FT/SEC)	12	283583.1	24418.5	230000	310000	12	-205.318	354332.125	-0.200 *	25094.9
PH (STANDARD UNITS)	12	7.84	0.34	7.4	8.4	12	-0.0052	9.6488	-0.361 *	0.34
PHOSPHORUS, TOTAL	12	0.022	0.008	0.01	0.04	12	-0.00002	0.03070	-0.075 *	0.008
NITRITE + NITRATE, TOTAL	12	0.191	0.190	0.06	0.76	12	0.00267	-0.72813	0.333 *	0.188
NITROGEN, KJELDAHL, TOTAL	12	0.287	0.064	0.21	0.44	12	0.00057	0.09071	0.211 *	0.066
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3340.0	1830.8	320	6000	11	4.775	1679.615	0.058 *	1926.6
SEDIMENT, SUSPENDED	10	4.8	6.1	0	20					
SEDIMENT, CLAY-SILT (PERCENT)	10	74.8	23.7	46	100					
COLIFORM, FECAL (COL/100 ML)	12	9.8	13.5	0	47					
STREPTOCOCCI, FECAL (COL/100 ML)	11	9.3	18.9	0	64					
SILICA, DISSOLVED	11	0.32	0.09	0.2	0.4	11	0.0001	0.2708	0.038 *	0.09
CALCIUM, DISSOLVED	12	37.50	1.45	35.0	40.0	12	-0.0091	40.6422	-0.150 *	1.50
MAGNESIUM, DISSOLVED	12	7.89	0.88	6.5	9.3	12	0.0022	7.1206	0.060 *	0.92
SODIUM, DISSOLVED	12	12.83	0.72	12.0	14.0	12	0.0071	10.3771	0.236 *	0.73
POTASSIUM, DISSOLVED	12	1.35	0.18	1.0	1.5	12	-0.0003	1.4586	-0.041 *	0.19
BICARBONATE, ION	12	109.6	5.1	100	116	12	0.141	60.926	0.652	4.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	27.08	1.24	26.0	30.0	12	-0.0012	27.5051	-0.023 *	1.30
CHLORIDE, DISSOLVED	12	27.00	1.04	26.0	29.0	12	0.0031	25.9433	0.070 *	1.09
DISSOLVED SOLIDS, SUM OF CONST	11	169.0	3.1	163	175	11	0.050	151.835	0.387 *	3.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	193.0	15.2	161	221	12	-0.029	202.844	-0.044 *	16.0
HARDNESS, TOTAL	12	124.2	5.1	120	130	12	-0.026	133.019	-0.118 *	5.4
HARDNESS, NONCARBONATE	12	36.3	5.7	29	47	12	-0.125	79.392	-0.524 *	5.1
TURBIDITY (JTU)	12	2.8	3.6	1	14	12	0.021	-4.522	0.139 *	3.7
FLOURIDE, DISSOLVED	12	0.15	0.08	0.0	0.2	12	0.0005	-0.0251	0.151 *	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	10.23	11.81	2.48	97	1.53

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04264331 -- ST LAWRENCE R AT CORNWALL ONT NR MASSENA, NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	2	3	0	1
CADMIUM (CD), UG/L	3	0	1	3	0	0
CHROMIUM (CR), UG/L	3	< 10	10	3	0	< 10
COBALT (CO), UG/L	3	0	1	3	0	1
COPPER (CU), UG/L	3	0	10	3	0	0
IRON (FE), UG/L	3	70	510	3	10	20
LEAD (PB), UG/L	3	2	9	3	1	2
MANGANESE (MN), UG/L	3	0	90	3	0	10
MERCURY (HG), UG/L	3	< 0.5	< 0.5	3	< 0.5	< 0.5
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	10	60	3	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	6	.69	52.00			
BIOMASS, ASH WT., G/SQ M	6	.50	41.00			
CHLOROPHYLL A, MG/SQ M	6	.0	43.0			
CHLOROPHYLL B, MG/SQ M	6	.0	8.3			
ORGANIC CARBON, MG/L	3	2.6	6.7			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04269000 NAME: ST REGIS RIVER AT BRASHER CENTER NY

LAT 44D51M49S LONG 074D46M45S
DRAINAGE AREA: 616 SQ MI (1595 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.33	9.49	0.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	73.8	18.3	52	100					
STREAMFLOW (CUBIC FT/SEC)	12	843.2	532.9	201	1940	12	-17.161	2110.240	-0.591	450.9
PH (STANDARD UNITS)	10	7.43	0.65	6.6	8.4	10	-0.0020	7.5729	-0.056*	0.69
PHOSPHORUS, TOTAL	12	0.016	0.007	0.01	0.03	12	0.00014	0.00523	0.394*	0.006
NITRITE + NITRATE, TOTAL	12	0.221	0.141	0.04	0.45	12	-0.00041	0.25090	-0.053*	0.147
NITROGEN, KJELDAHL, TOTAL	12	0.246	0.082	0.13	0.41	12	0.00062	0.20015	0.139*	0.085
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	790.0	766.9	260	2700	12	7.441	240.586	0.178*	791.5
SEDIMENT, SUSPENDED	12	3.9	3.4	1	11					
SEDIMENT, CLAY-SILT (PERCENT)	12	63.0	23.7	26	100					
COLIFORM, FECAL (COL/100 ML)	12	142.8	210.7	13	770					
STREPTOCOCCI, FECAL (COL/100 ML)	11	55.6	41.8	8	130					
SILICA, DISSOLVED	12	6.67	1.54	4.0	8.9	12	-0.0007	6.7299	-0.009*	1.61
CALCIUM, DISSOLVED	12	8.96	2.13	5.9	12.0	12	0.0856	2.6406	0.736	1.52
MAGNESIUM, DISSOLVED	12	2.64	0.82	1.5	3.5	12	0.0172	1.3721	0.386*	0.79
SODIUM, DISSOLVED	12	1.50	0.30	0.9	1.9	12	0.0114	0.6548	0.690	0.23
POTASSIUM, DISSOLVED	12	0.49	0.22	0.1	0.8	12	0.0016	0.3744	0.133*	0.23
BICARBONATE, ION	12	29.1	8.5	15	42	12	0.355	2.905	0.765	5.7
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.83	0.90	6.1	9.3	12	-0.0233	9.5566	-0.473*	0.84
CHLORIDE, DISSOLVED	12	1.32	0.52	0.3	2.0	12	0.0155	0.1797	0.548*	0.46
DISSOLVED SOLIDS, SUM OF CONST	12	44.2	7.7	29	52	12	0.292	22.610	0.694	5.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	52.4	14.4	21	72	12	0.327	28.239	0.417*	13.7
HARDNESS, TOTAL	12	33.3	8.0	21	44	12	0.284	12.308	0.652	6.3
HARDNESS, NONCARBONATE	12	9.3	3.7	2	14	12	-0.002	9.480	-0.010*	3.9
TURBIDITY (JTU)	12	1.8	0.6	1	3	12	-0.008	2.338	-0.235*	0.6
FLOURIDE, DISSOLVED	12	0.17	0.09	0.1	0.4	12	0.0009	0.1102	0.186*	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	9.45	12.75	2.79	89	3.19

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
†SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04269000 -- ST REGIS RIVER AT BRASHER CENTER NY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	< 10
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	0	40	4	0	20
IRON (FE), UG/L	4	230	520	4	170	320
LEAD (PB), UG/L	4	3	44	4	0	17
MANGANESE (MN), UG/L	4	10	40	4	0	20
MERCURY (HG), UG/L	4	< 0.5	< 0.5	4	< 0.5	< 0.5
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	3	10	30	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	3.39	11.00			
BIOMASS, ASH WT., G/SQ M	5	1.09	9.00			
CHLOROPHYLL A, MG/SQ M	5	.2	11.0			
CHLOROPHYLL B, MG/SQ M	5	.1	2.1			
ORGANIC CARBON, MG/L	4	4.0	6.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04295000 NAME: RICHELIEU RIVER AT ROUSES POINT, N.Y.

LAT 44D59M45S LONG 073D21M40S
DRAINAGE AREA: 8277 SQ MI (21437 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	13.17	8.18	2.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	48	141.6	3.8	135	150					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	8	7.55	0.33	7.1	8.1	8	-0.0212	10.5795	-0.321 *	0.33
PHOSPHORUS, TOTAL	9	0.020	0.012	0.00	0.04	9	-0.00034	0.06809	-0.130 *	0.013
NITRITE + NITRATE, TOTAL	9	0.352	0.458	0.00	1.20	9	0.02638	-3.41184	0.272 *	0.471
NITROGEN, KJELDAHL, TOTAL	9	0.321	0.096	0.21	0.49	9	-0.00268	0.70338	-0.132 *	0.102
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	2508.8	1667.7	170	5500	8	199.353	-25998.719	0.589 *	1455.6
SEDIMENT, SUSPENDED	8	2.8	2.1	0	7					
SEDIMENT, CLAY-SILT (PERCENT)	6	56.7	31.7	18	100					
COLIFORM, FECAL (COL/100 ML)	8	254.0	705.5	1	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	7	8.0	16.3	1	45					
SILICA, DISSOLVED	8	0.86	0.37	0.3	1.3	8	-0.0100	2.2927	-0.135 *	0.39
CALCIUM, DISSOLVED	8	16.38	0.74	15.0	17.0	8	-0.0059	17.2162	-0.039 *	0.80
MAGNESIUM, DISSOLVED	8	3.85	0.40	3.2	4.5	8	0.0059	3.0068	0.072 *	0.43
SODIUM, DISSOLVED	8	4.50	0.25	4.2	5.0	8	0.0224	1.3004	0.440 *	0.24
POTASSIUM, DISSOLVED	8	1.12	0.09	1.0	1.2	8	-0.0118	2.8082	-0.654 *	0.07
BICARBONATE, ION	9	52.1	2.8	49	57	9	-0.251	87.911	-0.416 *	2.8
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	12.22	0.97	11.0	14.0	9	-0.0019	12.4894	-0.009 *	1.04
CHLORIDE, DISSOLVED	9	6.24	0.96	4.7	7.2	9	0.0012	6.0663	0.006 *	1.02
DISSOLVED SOLIDS, SUM OF CONST	8	70.8	2.7	67	75	8	-0.076	81.685	-0.142 *	2.8
DISSOLVED SOLIDS, ROE 180 DEG C	8	83.5	8.7	75	98	8	0.382	28.824	0.217 *	9.1
HARDNESS, TOTAL	8	56.8	3.1	51	61	8	0.000	56.750	0.000 *	3.4
HARDNESS, NONCARBONATE	8	14.4	2.2	10	17	8	0.182	-11.701	0.409 *	2.2
TURBIDITY (JTU)	9	2.3	2.2	1	8	9	-0.129	20.768	-0.273 *	2.3
FLOURIDE, DISSOLVED	8	0.12	0.10	0.0	0.3	8	0.0065	-0.8002	0.308 *	0.11

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04295000 -- RICHELIEU RIVER AT ROUSES POINT, N.Y.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	1	5	0	1
CADMIUM (CD), UG/L	5	0	1	5	0	1
CHROMIUM (CR), UG/L	5	0	20	5	0	10
COBALT (CO), UG/L	5	0	0	5	0	1
COPPER (CU), UG/L	5	0	10	5	0	10
IRON (FE), UG/L	6	60	150	5	10	70
LEAD (PB), UG/L	5	7	57	5	0	42
MANGANESE (MN), UG/L	6	10	80	5	0	10
MERCURY (HG), UG/L	5	<0.5	<0.5	5	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	1	5	0	< 2
ZINC (ZN), UG/L	5	0	20	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	3.50	13.00			
BIOMASS, ASH WT., G/SQ M	5	1.00	12.00			
CHLOROPHYLL A, MG/SQ M	5	.1	17.0			
CHLOROPHYLL B, MG/SQ M	5	.1	2.7			
ORGANIC CARBON, MG/L	5	3.3	48.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 04296500 NAME: CLYDE RIVER AT NEWPORT, VT.

LAT 44D56M22S LONG 072D11M23S
DRAINAGE AREA: 142 SQ MI (368 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	9.09	9.82	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	134.9	19.2	103	163					
STREAMFLOW (CUBIC FT/SEC)	11	325.4	196.9	22	749	10	-7.054	1269.685	-0.656	164.9
PH (STANDARD UNITS)	9	7.48	0.32	6.8	7.9	9	-0.0069	8.4391	-0.354 *	0.32
PHOSPHORUS, TOTAL	11	0.022	0.010	0.01	0.04	10	-0.00006	0.02775	-0.135 *	0.009
NITRITE + NITRATE, TOTAL	11	0.248	0.134	0.04	0.44	10	0.00079	0.16107	0.120 *	0.132
NITROGEN, KJELDAHL, TOTAL	11	0.298	0.098	0.16	0.48	10	-0.00036	0.32896	-0.085 *	0.086
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2099.1	2589.6	110	8200	10	-12.647	3195.016	-0.142 *	1788.5
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	321.0	669.9	20	2100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	605.3	1168.3	8	3500					
SILICA, DISSOLVED	3	4.70	0.82	3.8	5.4	3	0.0865	-5.9154	0.880 *	0.55
CALCIUM, DISSOLVED	3	16.00	1.00	15.0	17.0	3	0.1154	1.8462	0.961 *	0.39
MAGNESIUM, DISSOLVED	3	1.70	0.26	1.5	2.0	3	0.0317	-2.1922	0.999 *	0.02
SODIUM, DISSOLVED	3	3.60	0.26	3.4	3.9	3	0.0288	0.0618	0.908 *	0.16
POTASSIUM, DISSOLVED	3	1.07	0.06	1.0	1.1	3	0.0019	0.8310	0.277 *	0.08
BICARBONATE, ION	3	50.0	2.6	48	53	3	-0.173	71.231	-0.545 *	3.1
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	3	6.50	1.39	4.9	7.3	3	0.1154	-7.6550	0.693 *	1.41
CHLORIDE, DISSOLVED	3	5.90	0.96	5.2	7.0	3	0.1067	-7.1918	0.922 *	0.53
DISSOLVED SOLIDS, SUM OF CONST	3	64.3	3.2	62	68	3	0.385	17.154	0.996 *	0.4
DISSOLVED SOLIDS, ROE 180 DEG C	3	74.7	3.5	71	78	3	0.135	58.154	0.319 *	4.7
HARDNESS, TOTAL	3	47.3	3.5	44	51	3	0.413	-3.385	0.980 *	1.0
HARDNESS, NONCARBONATE	3	6.0	5.6	0	11	3	0.606	-68.308	0.906 *	3.3
TURBIDITY (JTU)	3	2.3	0.6	2	3	3	0.067	-5.923	0.971 *	0.2
FLOURIDE, DISSOLVED	3	0.23	0.06	0.2	0.3	3	-0.0019	0.4692	-0.277 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 341

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	172	162	158	153	151	145	136	109	100	93

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
341	9.24	11.87	2.68	90	2.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

04296500 -- CLYDE RIVER AT NEWPORT, VT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	1	3	0	1
CADMIUM (CD), UG/L	3	0	0	3	0	1
CHROMIUM (CR), UG/L	3	0	10	3	0	20
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	0	0	3	0	0
IRON (FE), UG/L	3	170	340	3	50	70
LEAD (PB), UG/L	3	0	3	3	0	1
MANGANESE (MN), UG/L	3	20	50	3	0	30
MERCURY (HG), UG/L	3	<0.5	<0.5	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	0	10	3	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	13.0	20.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05054020 NAME: RED RIVER OF THE NORTH BELOW FARGO, ND

LAT 46D55M50S LONG 096D47M05S
DRAINAGE AREA: 6820 SQ MI (17664 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.08	9.55	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	467.2	63.5	391	585					
STREAMFLOW (CUBIC FT/SEC)	12	1074.2	1489.8	185	5000	12	-8.659	5119.543	-0.369*	1452.2
PH (STANDARD UNITS)	12	8.17	0.25	7.7	8.5	12	0.0002	8.0659	0.055*	0.26
PHOSPHORUS, TOTAL	12	0.342	0.087	0.24	0.55	12	0.00024	0.23110	0.172*	0.090
NITRITE + NITRATE, TOTAL	12	0.334	0.367	0.01	1.30	12	-0.00079	0.70313	-0.137*	0.381
NITROGEN, KJELDAHL, TOTAL	12	1.362	0.341	0.88	2.20	12	0.00173	0.55176	0.323*	0.338
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	10913.3	15037.1	200	46000	9	-63.296	40964.637	-0.293*	15368.3
SEDIMENT, SUSPENDED	12	118.3	141.6	4	436					
SEDIMENT, CLAY-SILT (PERCENT)	13	79.4	15.7	45	98					
COLIFORM, FECAL (COL/100 ML)	10	4115.3	7787.4	1	24000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	863.3	1081.4	1	3200					
SILICA, DISSOLVED	12	12.97	3.43	7.5	18.0	12	0.0123	7.2440	0.227*	3.50
CALCIUM, DISSOLVED	12	44.75	6.02	36.0	55.0	12	0.0585	17.4007	0.618	4.96
MAGNESIUM, DISSOLVED	12	30.50	5.18	18.0	38.0	12	0.0572	3.7563	0.702	3.87
SODIUM, DISSOLVED	12	15.23	3.47	9.8	21.0	12	0.0233	4.3598	0.426*	3.29
POTASSIUM, DISSOLVED	12	5.29	1.02	3.8	7.1	12	0.0046	3.1332	0.287*	1.03
BICARBONATE, ION	12	249.4	46.6	145	303	12	0.470	29.962	0.640	37.6
CARBONATE, ION	9	0.1	0.3	0	1	9	-0.002	1.198	-0.431*	0.3
SULFATE, DISSOLVED	12	55.00	32.00	26.0	110.0	12	0.0573	28.2353	0.114*	33.34
CHLORIDE, DISSOLVED	12	9.18	3.64	4.8	19.0	12	0.0194	0.1148	0.339*	3.59
DISSOLVED SOLIDS, SUM OF CONST	12	296.1	41.5	236	371	12	0.465	78.707	0.713	30.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	311.6	46.9	255	407	12	0.473	90.471	0.641	37.7
HARDNESS, TOTAL	12	237.5	34.4	160	290	12	0.408	46.797	0.753	23.7
HARDNESS, NONCARBONATE	12	33.2	28.8	0	88	12	0.005	30.684	0.012*	30.2
TURBIDITY (JTU)	12	39.8	43.7	3	120	12	-0.181	124.442	-0.264*	44.2
FLUORIDE, DISSOLVED	12	0.17	0.09	0.1	0.4	12	0.0001	0.1345	0.064*	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	9.11	12.90	2.82	92	2.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05054020 -- RED RIVER OF THE NORTH BELOW FARGO, ND

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	9	4	3	7
CADMIUM (CD), UG/L	4	< 10	20	4	0	1
CHROMIUM (CR), UG/L	3	0	20	4	0	< 10
COBALT (CO), UG/L	4	< 50	50	4	0	4
COPPER (CU), UG/L	4	< 10	40	4	5	9
IRON (FE), UG/L	3	230	2500	4	20	70
LEAD (PB), UG/L	4	< 100	<100	4	0	4
MANGANESE (MN), UG/L	4	20	260	4	0	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	< 0.1
SELENIUM (SE), UG/L	3	0	2	4	0	2
ZINC (ZN), UG/L	4	30	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.09	22.00			
BIOMASS, ASH WT., G/SQ M	3	1.69	21.00			
CHLOROPHYLL A, MG/SQ M	3	.0	7.5			
CHLOROPHYLL B, MG/SQ M	3	.0	3.0			
ORGANIC CARBON, MG/L	3	12.0	22.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05083500 NAME: RED RIVER OF THE NORTH AT OSLO, MN

LAT 48D11M00S LONG 097D09M00S
DRAINAGE AREA: 31200 SQ MI (80808 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	9.93	9.45	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	454.5	57.8	370	575					
STREAMFLOW (CUBIC FT/SEC)	14	8577.1	13838.7	1300	42400	13	-80.489	42554.387	-0.455 *	9523.1
PH (STANDARD UNITS)	13	8.02	0.22	7.7	8.4	13	-0.0001	8.0686	-0.031 *	0.23
PHOSPHORUS, TOTAL	13	0.252	0.132	0.08	0.54	13	0.00026	0.13357	0.114 *	0.137
NITRITE + NITRATE, TOTAL	13	0.422	0.716	0.00	2.70	13	-0.00436	2.40372	-0.352 *	0.700
NITROGEN, KJELDAHL, TOTAL	13	1.432	0.582	0.76	2.70	13	-0.00488	3.64736	-0.485 *	0.532
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	15354.5	18775.0	270	50000	11	20.869	5796.547	0.068 *	19744.5
SEDIMENT, SUSPENDED	14	110.3	94.7	12	318					
SEDIMENT, CLAY-SILT (PERCENT)	14	79.0	16.5	48	97					
COLIFORM, FECAL (COL/100 ML)	11	468.5	571.3	1	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	715.6	884.1	20	2500					
SILICA, DISSOLVED	13	10.34	3.21	4.4	16.0	13	0.0110	5.3440	0.198 *	3.29
CALCIUM, DISSOLVED	13	53.15	4.58	46.0	61.0	13	0.0609	25.4669	0.769	3.06
MAGNESIUM, DISSOLVED	13	22.69	3.12	19.0	29.0	13	0.0348	6.8750	0.645	2.49
SODIUM, DISSOLVED	13	15.62	3.40	10.0	21.0	13	0.0469	-5.6877	0.796	2.15
POTASSIUM, DISSOLVED	13	4.32	0.92	2.9	5.7	13	0.0033	2.8380	0.206 *	0.94
BICARBONATE, ION	13	233.4	33.9	162	269	13	0.427	39.553	0.728	24.2
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	13	50.92	19.86	30.0	90.0	13	0.0290	37.7485	0.084 *	20.66
CHLORIDE, DISSOLVED	13	11.72	4.39	5.5	20.0	13	0.0502	-11.0713	0.661	3.44
DISSOLVED SOLIDS, SUM OF CONST	13	283.8	33.1	224	343	13	0.447	80.872	0.779	21.7
DISSOLVED SOLIDS, ROE 180 DEG C	13	305.1	36.9	248	374	13	0.450	100.668	0.705	27.3
HARDNESS, TOTAL	13	225.4	24.0	190	270	13	0.309	84.777	0.745	16.7
HARDNESS, NONCARBONATE	13	34.5	21.9	6	76	13	-0.048	56.404	-0.128 *	22.7
TURBIDITY (JTU)	13	37.6	43.4	3	130	13	-0.177	117.919	-0.235 *	44.1
FLOURIDE, DISSOLVED	13	0.17	0.08	0.1	0.3	13	0.0004	-0.0174	0.316 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	8.98	12.47	2.84	92	2.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05083500 -- RED RIVER OF THE NORTH AT OSLO, MN

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	10	4	1	6
CADMIUM (CD), UG/L	4	<10	10	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	0	< 50	4	0	0
COPPER (CU), UG/L	4	<10	60	4	3	6
IRON (FE), UG/L	4	400	4800	4	10	30
LEAD (PB), UG/L	4	<100	<100	4	1	3
MANGANESE (MN), UG/L	4	40	210	4	0	30
MERCURY (HG), UG/L	4	0.0	0.6	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	90	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.50	58.00			
BIOMASS, ASH WT., G/SQ M	3	.50	55.00			
CHLOROPHYLL A, MG/SQ M	2	.1	12.0			
CHLOROPHYLL B, MG/SQ M	2	.0	16.0			
ORGANIC CARBON, MG/L	4	14.0	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05112000 NAME: ROSEAU RIVER BEL STATE DITCH 51 NR CARIBOU, MIN

LAT 48D58M54S LONG 096D27M46S
DRAINAGE AREA: 1570 SQ MI (4066 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	7.13	8.29	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	462.0	132.3	265	680					
STREAMFLOW (CUBIC FT/SEC)	15	549.5	738.5	15	2100	10	-4.272	2495.414	-0.719	579.9
PH (STANDARD UNITS)	10	7.82	0.36	7.4	8.5	10	-0.0017	8.5894	-0.604 *	0.31
PHOSPHORUS, TOTAL	9	0.067	0.021	0.04	0.09	9	-0.00009	0.10659	-0.569 *	0.019
NITRITE + NITRATE, TOTAL	9	0.120	0.190	0.00	0.58	9	-0.00046	0.32720	-0.329 *	0.192
NITROGEN, KJELDAHL, TOTAL	9	0.939	0.391	0.12	1.40	9	0.00065	0.64643	0.226 *	0.407
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	783.7	1310.6	26	4000	9	-4.614	2872.905	-0.482 *	1227.6
SEDIMENT, SUSPENDED	8	22.6	9.1	9	42					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	13.3	17.6	0	54					
STREPTOCOCCI, FECAL (COL/100 ML)	9	24.1	25.2	1	80					
SILICA, DISSOLVED	9	11.48	5.31	5.3	19.0	9	0.0259	-0.2402	0.668	4.22
CALCIUM, DISSOLVED	9	56.78	16.56	32.0	82.0	9	0.1184	3.1483	0.979	3.60
MAGNESIUM, DISSOLVED	9	23.44	7.78	12.0	34.0	9	0.0534	-0.7308	0.939	2.85
SODIUM, DISSOLVED	9	6.42	2.91	2.8	10.0	9	0.0182	-1.8400	0.858	1.60
POTASSIUM, DISSOLVED	9	2.16	0.99	1.3	4.5	9	-0.0015	2.8273	-0.205 *	1.04
BICARBONATE, ION	9	277.8	95.3	126	401	9	0.680	-30.233	0.977	21.9
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	16.53	6.25	5.8	26.0	9	0.0175	8.6028	0.384 *	6.17
CHLORIDE, DISSOLVED	9	2.83	1.27	1.6	5.5	9	-0.0011	3.3131	-0.114 *	1.35
DISSOLVED SOLIDS, SUM OF CONST	9	257.1	79.3	148	365	9	0.568	-0.055	0.981	16.6
DISSOLVED SOLIDS, ROE 180 DEG C	9	295.0	79.7	176	406	9	0.574	35.092	0.986	14.4
HARDNESS, TOTAL	9	237.8	70.1	130	340	9	0.498	12.135	0.973	17.4
HARDNESS, NONCARBONATE	9	11.3	8.5	0	26	9	-0.034	26.793	-0.547 *	7.6
TURBIDITY (JTU)	9	6.2	4.0	1	13	9	-0.011	11.283	-0.386 *	3.9
FLOURIDE, DISSOLVED	9	0.14	0.07	0.1	0.3	9	0.0002	0.0572	0.363 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05112000 -- ROSEAU RIVER BEL STATE DITCH 51 NR CARIBOU, MIN

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	4	4	1	2
CADMIUM (CD), UG/L	4	<10	20	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	3	10	13	4	3	13
IRON (FE), UG/L	9	150	620	4	40	290
LEAD (PB), UG/L	4	<100	100	4	0	4
MANGANESE (MN), UG/L	9	0	420	4	0	420
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.19	29.00			
BIOMASS, ASH WT., G/SQ M	3	.00	20.00			
CHLOROPHYLL A, MG/SQ M	3	.2	3.0			
CHLOROPHYLL B, MG/SQ M	3	.0	.7			
ORGANIC CARBON, MG/L	4	18.0	24.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05124000 NAME: SOURIS RIVER NR WESTHOPE, ND

LAT 48D59M47S LONG 100D57M29S
DRAINAGE AREA: 16900 SQ MI (43771 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	25	8.72	7.99	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	25	1076.2	561.6	475	2370					
STREAMFLOW (CUBIC FT/SEC)	25	1463.2	2204.2	20	6500	25	-2.104	3728.129	-0.536	1900.6
PH (STANDARD UNITS)	21	8.27	0.55	7.4	9.3	21	-0.0004	8.7511	-0.440	0.50
PHOSPHORUS, TOTAL	21	0.340	0.184	0.11	0.68	21	0.00015	0.17399	0.451	0.168
NITRITE + NITRATE, TOTAL	21	0.104	0.250	0.00	1.10	21	-0.00008	0.18849	-0.168 *	0.253
NITROGEN, KJELDAHL, TOTAL	21	2.414	0.855	1.30	4.30	21	0.00109	1.19976	0.711	0.616
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	20557.0	21633.5	670	66000	10	-11.474	35050.039	-0.333 *	21634.7
SEDIMENT, SUSPENDED	10	22.6	9.6	8	38					
SEDIMENT, CLAY-SILT (PERCENT)	8	61.6	29.7	11	92					
COLIFORM, FECAL (COL/100 ML)	18	45.3	161.2	1	690					
STREPTOCOCCI, FECAL (COL/100 ML)	16	276.0	841.1	1	3400					
SILICA, DISSOLVED	11	9.25	5.49	0.8	18.0	11	0.0080	-0.0197	0.850	3.04
CALCIUM, DISSOLVED	11	73.73	40.25	42.0	150.0	11	0.0680	-5.5124	0.991	5.56
MAGNESIUM, DISSOLVED	11	50.55	29.07	26.0	110.0	11	0.0494	-6.9340	0.996	2.76
SODIUM, DISSOLVED	11	122.45	74.53	51.0	270.0	11	0.1260	-24.2449	0.991	10.35
POTASSIUM, DISSOLVED	11	15.24	6.27	9.6	27.0	11	0.0104	3.1247	0.974	1.51
BICARBONATE, ION	11	469.5	277.3	181	1010	11	0.469	-77.181	0.993	34.2
CARBONATE, ION	9	6.8	10.3	0	24	9	-0.006	12.883	-0.295 *	10.5
SULFATE, DISSOLVED	11	220.00	129.07	130.0	470.0	11	0.2159	-31.4926	0.981	26.18
CHLORIDE, DISSOLVED	11	30.27	22.03	11.0	76.0	11	0.0371	-12.9430	0.988	3.61
DISSOLVED SOLIDS, SUM OF CONST	11	759.7	436.5	392	1610	11	0.742	-104.299	0.997	35.5
DISSOLVED SOLIDS, ROE 180 DEG C	21	761.3	419.6	302	1700	21	0.748	-75.479	0.998	26.2
HARDNESS, TOTAL	11	392.7	220.9	210	830	11	0.376	-44.616	0.997	17.8
HARDNESS, NONCARBONATE	11	17.0	25.0	0	64	11	0.002	14.596	0.049 *	26.3
TURBIDITY (JTU)	21	14.5	13.8	3	60	21	-0.005	20.676	-0.222 *	13.9
FLOURIDE, DISSOLVED	11	0.25	0.14	0.1	0.6	11	0.0002	-0.0113	0.930	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
25	8.03	10.88	2.73	84	3.35

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05124000 -- SOURIS RIVER NR WESTHOPE, ND

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	2	6	3	2	5
CADMIUM (CD), UG/L	3	<10	<10	3	0	1
CHROMIUM (CR), UG/L	3	0	<10	3	0	<10
COBALT (CO), UG/L	3	<50	<50	3	0	2
COPPER (CU), UG/L	3	<10	50	3	0	3
IRON (FE), UG/L	3	140	640	3	20	60
LEAD (PB), UG/L	3	<100	200	3	0	5
MANGANESE (MN), UG/L	3	70	130	3	0	5
MERCURY (HG), UG/L	2	0.0	0.2	3	0.0	0.2
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	6	60	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.00	4.69			
BIOMASS, ASH WT., G/SQ M	2	.29	1.39			
CHLOROPHYLL A, MG/SQ M	1	5.8				
CHLOROPHYLL B, MG/SQ M	1	2.0				
ORGANIC CARBON, MG/L	21	13.0	41.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05131500 NAME: LITTLE FORK RIVER AT LITTLEFORK, MINNESOTA

LAT 48D23M55S LONG 093D33M56S
DRAINAGE AREA: 1730 SQ MI (4481 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	78	11.05	7.05	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	78	115.7	34.4	80	227					
STREAMFLOW (CUBIC FT/SEC)	10	997.0	1312.3	199	4460	9	-21.937	4548.844	-0.782	910.5
PH (STANDARD UNITS)	9	7.83	0.46	7.5	8.9	9	-0.0013	8.0376	-0.138 *	0.48
PHOSPHORUS, TOTAL	9	0.042	0.020	0.01	0.08	9	-0.00017	0.06986	-0.428 *	0.019
NITRITE + NITRATE, TOTAL	9	0.090	0.076	0.02	0.23	9	0.00098	-0.06500	0.624 *	0.064
NITROGEN, KJELDAHL, TOTAL	9	0.836	0.260	0.43	1.10	9	-0.00285	1.28612	-0.533 *	0.235
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	3183.0	4492.2	6	11000	9	-15.458	5630.582	-0.168 *	4734.3
SEDIMENT, SUSPENDED	1	16.0	0.0	16						
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	22.1	40.0	1	120					
STREPTOCOCCI, FECAL (COL/100 ML)	8	19.4	25.7	1	71					
SILICA, DISSOLVED	9	8.43	3.27	3.7	13.0	9	0.0576	-0.6791	0.857	1.80
CALCIUM, DISSOLVED	9	21.11	5.71	12.0	27.0	9	0.1151	2.8889	0.982	1.15
MAGNESIUM, DISSOLVED	9	6.44	1.82	3.7	8.9	9	0.0369	0.6057	0.990	0.28
SODIUM, DISSOLVED	9	2.83	1.10	1.4	4.5	9	0.0213	-0.5375	0.939	0.41
POTASSIUM, DISSOLVED	9	1.47	0.33	0.9	2.0	9	0.0050	0.6792	0.739	0.24
BICARBONATE, ION	9	84.8	28.2	49	118	9	0.568	-5.194	0.983	5.5
CARBONATE, ION	6	0.2	0.4	0	1	6	-0.001	0.312	-0.116 *	0.5
SULFATE, DISSOLVED	9	9.20	3.27	6.1	17.0	9	0.0428	2.4167	0.639 *	2.69
CHLORIDE, DISSOLVED	9	2.36	0.24	2.0	2.7	9	0.0003	2.3069	0.064 *	0.25
DISSOLVED SOLIDS, SUM OF CONST	9	94.2	27.5	56	132	9	0.557	5.986	0.987	4.8
DISSOLVED SOLIDS, ROE 180 DEG C	9	132.9	24.8	87	166	9	0.480	56.944	0.943	8.8
HARDNESS, TOTAL	9	78.4	20.5	45	100	9	0.414	12.847	0.985	3.8
HARDNESS, NONCARBONATE	9	9.6	4.1	5	16	9	-0.026	13.653	-0.310 *	4.1
TURBIDITY (JTU)	8	13.9	9.4	5	33	8	-0.126	33.597	-0.697	7.2
FLOURIDE, DISSOLVED	9	0.13	0.10	0.1	0.4	9	0.0011	-0.0333	0.513 *	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
69	6.43	15.00	2.68	72	3.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05131500 -- LITTLE FORK RIVER AT LITTLEFORK, MINNESOTA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	1
COPPER (CU), UG/L	4	<10	40	4	1	5
IRON (FE), UG/L	9	700	1800	4	300	480
LEAD (PB), UG/L	4	<100	100	4	1	3
MANGANESE (MN), UG/L	9	20	80	4	0	40
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	2	4	0	0
ZINC (ZN), UG/L	4	20	110	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.59	2.38			
BIOMASS, ASH WT., G/SQ M	3	.50	.89			
CHLOROPHYLL A, MG/SQ M	3	.0	1.1			
CHLOROPHYLL B, MG/SQ M	3	.0	.1			
ORGANIC CARBON, MG/L	4	21.0	31.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05132000 NAME: BIG FORK RIVER AT BIG FALLS, MINN.

LAT 48D11M45S LONG 093D48M25S
DRAINAGE AREA: 1460 SQ MI (3781 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.00	8.42	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	222.8	62.6	135	325					
STREAMFLOW (CUBIC FT/SEC)	12	914.6	1030.6	218	3960	9	-13.504	4030.439	-0.723	864.2
PH (STANDARD UNITS)	9	7.72	0.47	6.6	8.3	9	-0.0022	8.2129	-0.291 *	0.48
PHOSPHORUS, TOTAL	9	0.030	0.010	0.02	0.05	9	0.00003	0.02396	0.170 *	0.011
NITRITE + NITRATE, TOTAL	9	0.107	0.130	0.01	0.41	9	0.00133	-0.18878	0.641 *	0.106
NITROGEN, KJELDAHL, TOTAL	9	0.816	0.323	0.34	1.30	9	-0.00075	0.98316	-0.146 *	0.342
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	349.9	291.4	58	950	8	-2.776	984.902	-0.611 *	249.2
SEDIMENT, SUSPENDED	9	14.9	6.9	6	26					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	34.7	58.3	0	170					
STREPTOCOCCI, FECAL (COL/100 ML)	8	25.9	50.6	0	150					
SILICA, DISSOLVED	9	9.31	3.00	4.6	13.0	9	0.0383	0.7731	0.801	1.92
CALCIUM, DISSOLVED	9	30.67	8.65	18.0	43.0	9	0.1358	0.4117	0.983	1.68
MAGNESIUM, DISSOLVED	8	9.20	2.62	5.6	13.0	8	0.0385	0.6609	0.983	0.51
SODIUM, DISSOLVED	9	3.00	1.09	1.8	4.5	9	0.0132	0.0693	0.755	0.76
POTASSIUM, DISSOLVED	9	1.64	0.51	0.8	2.3	9	0.0061	0.2847	0.745	0.37
BICARBONATE, ION	9	131.2	40.0	71	185	9	0.631	-9.273	0.986	7.0
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	5.64	1.04	4.5	7.2	9	0.0068	4.1319	0.408 *	1.02
CHLORIDE, DISSOLVED	9	2.07	0.74	1.4	3.9	9	0.0041	1.1584	0.343 *	0.75
DISSOLVED SOLIDS, SUM OF CONST	8	126.5	37.7	73	175	8	0.556	3.092	0.986	6.8
DISSOLVED SOLIDS, ROE 180 DEG C	9	158.0	32.1	103	201	9	0.489	49.153	0.954	10.3
HARDNESS, TOTAL	8	113.4	33.0	68	160	8	0.490	4.735	0.992	4.4
HARDNESS, NONCARBONATE	8	6.8	5.3	0	17	8	-0.020	11.261	-0.257 *	5.5
TURBIDITY (JTU)	9	5.8	3.6	3	12	9	-0.038	14.229	-0.667	2.8
FLOURIDE, DISSOLVED	9	0.09	0.06	0.0	0.2	9	0.0003	0.0159	0.341 *	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05132000 -- BIG FORK RIVER AT BIG FALLS, MINN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	10	30	4	1	8
IRON (FE), UG/L	4	170	660	4	70	240
LEAD (PB), UG/L	4	<100	<100	4	3	6
MANGANESE (MN), UG/L	3	30	50	4	10	30
MERCURY (HG), UG/L	4	0.0	0.0	3	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	110	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	1.79	16.00			
BIOMASS, ASH WT., G/SQ M	5	.89	15.00			
CHLOROPHYLL A, MG/SQ M	5	.1	15.0			
CHLOROPHYLL B, MG/SQ M	5	.0	1.7			
ORGANIC CARBON, MG/L	4	14.0	25.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05267000 NAME: MISSISSIPPI RIVER NEAR ROYALTON, MINN.

LAT 45D51M40S LONG 094D21M30S
DRAINAGE AREA: 11600 SQ MI (30044 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	11.62	11.03	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	7	276.3	53.5	190	354					
STREAMFLOW (CUBIC FT/SEC)	7	8390.0	6704.0	4070	22490	7	-109.266	38578.652	-0.872	3593.1
PH (STANDARD UNITS)	7	7.87	0.28	7.5	8.3	7	-0.0021	8.4448	-0.404 *	0.28
PHOSPHORUS, TOTAL	7	0.057	0.037	0.04	0.14	7	-0.00018	0.10787	-0.267 *	0.039
NITRITE + NITRATE, TOTAL	7	0.101	0.084	0.01	0.21	7	0.00085	-0.13333	0.540 *	0.078
NITROGEN, KJELDAHL, TOTAL	7	1.149	1.232	0.50	3.90	7	-0.00873	3.56152	-0.379 *	1.249
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1442.9	1160.6	250	3600	7	-6.830	3329.877	-0.315 *	1206.7
SEDIMENT, SUSPENDED	7	17.0	16.5	2	50					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	7	399.7	441.5	26	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	6	176.0	219.1	9	580					
SILICA, DISSOLVED	7	9.73	2.47	5.8	12.0	7	0.0343	0.2650	0.742 *	1.81
CALCIUM, DISSOLVED	7	35.29	5.74	26.0	42.0	7	0.1054	6.1698	0.983	1.15
MAGNESIUM, DISSOLVED	7	12.10	2.69	7.7	15.0	7	0.0481	-1.1936	0.957	0.85
SODIUM, DISSOLVED	7	4.34	1.06	2.8	5.5	7	0.0189	-0.8663	0.953	0.35
POTASSIUM, DISSOLVED	7	1.80	0.40	1.3	2.4	7	0.0040	0.6919	0.537 *	0.37
BICARBONATE, ION	7	161.4	35.0	100	195	7	0.629	-12.456	0.963	10.3
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	7	6.67	0.77	5.2	7.7	7	-0.0037	7.7031	-0.260 *	0.81
CHLORIDE, DISSOLVED	7	2.27	0.51	1.5	3.0	7	0.0012	1.9424	0.125 *	0.55
DISSOLVED SOLIDS, SUM OF CONST	7	151.9	28.3	104	182	7	0.516	9.347	0.976	6.8
DISSOLVED SOLIDS, ROE 180 DEG C	7	187.6	56.9	121	305	7	0.948	-74.359	0.891	28.3
HARDNESS, TOTAL	7	139.6	25.3	97	170	7	0.464	11.253	0.981	5.3
HARDNESS, NONCARBONATE	7	6.3	4.7	0	15	7	-0.047	19.289	-0.538 *	4.3
TURBIDITY (JTU)	7	5.0	3.1	2	10	7	-0.023	11.224	-0.388 *	3.1
FLOURIDE, DISSOLVED	7	0.13	0.05	0.1	0.2	7	0.0002	0.0603	0.271 *	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05267000 -- MISSISSIPPI RIVER NEAR ROYALTON, MINN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	2	3	0	2
CADMIUM (CD), UG/L	3	< 10	10	3	1	2
CHROMIUM (CR), UG/L	3	0	10	3	0	10
COBALT (CO), UG/L	3	< 50	100	3	0	1
COPPER (CU), UG/L	3	< 10	70	3	2	4
IRON (FE), UG/L	3	260	810	3	40	200
LEAD (PB), UG/L	3	100	200	3	6	23
MANGANESE (MN), UG/L	3	50	110	3	20	30
MERCURY (HG), UG/L	3	0.0	1.8	3	0.1	1.2
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	20	30	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	3.19				
BIOMASS, ASH WT., G/SQ M	1	2.50				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	3	6.7	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05330000 NAME: MINNESOTA RIVER NEAR JORDAN, MINN.

LAT 44D41M35S LONG 093D38M30S
DRAINAGE AREA: 16200 SQ MI (41958 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	10.20	11.18	0.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	839.3	177.6	500	1100					
STREAMFLOW (CUBIC FT/SEC)	15	3192.8	4569.4	259	14100	12	-20.019	19862.555	-0.769	3100.2
PH (STANDARD UNITS)	12	8.15	0.33	7.7	8.7	12	-0.0003	8.3825	-0.150 *	0.34
PHOSPHORUS, TOTAL	11	0.256	0.105	0.14	0.51	11	-0.00018	0.41381	-0.258 *	0.106
NITRITE + NITRATE, TOTAL	12	2.762	4.008	0.01	12.00	12	-0.01620	16.35672	-0.718	2.926
NITROGEN, KJELDAHL, TOTAL	12	1.384	0.615	0.16	2.30	12	-0.00145	2.59697	-0.418 *	0.586
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	60626.7	76142.3	680	230000	12	-88.050	134522.813	-0.205 *	78154.8
SEDIMENT, SUSPENDED	11	204.3	236.7	34	799					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	164.8	295.2	0	1020					
STREPTOCOCCI, FECAL (COL/100 ML)	12	139.5	196.3	0	664					
SILICA, DISSOLVED	12	18.75	6.06	10.0	31.0	12	0.0117	8.9501	0.342 *	5.97
CALCIUM, DISSOLVED	12	94.08	19.70	58.0	120.0	12	0.1035	7.1904	0.934	7.39
MAGNESIUM, DISSOLVED	12	41.25	10.13	22.0	54.0	12	0.0553	-5.1414	0.970	2.60
SODIUM, DISSOLVED	12	35.52	17.61	9.3	56.0	12	0.0913	-41.0696	0.921	7.21
POTASSIUM, DISSOLVED	12	5.14	0.93	3.6	6.3	12	0.0038	1.9513	0.725	0.67
BICARBONATE, ION	12	337.3	81.8	187	437	12	0.442	-33.905	0.960	24.0
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	139.42	49.11	54.0	220.0	12	0.2577	-76.8207	0.932	18.69
CHLORIDE, DISSOLVED	12	34.58	12.35	18.0	53.0	12	0.0607	-16.3807	0.873	6.32
DISSOLVED SOLIDS, SUM OF CONST	12	547.6	132.6	318	733	12	0.731	-65.996	0.980	27.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	568.3	137.9	324	782	12	0.756	-66.357	0.974	32.8
HARDNESS, TOTAL	12	404.2	87.5	240	520	12	0.483	-0.784	0.979	18.7
HARDNESS, NONCARBONATE	12	128.9	33.6	82	190	12	0.120	28.227	0.635	27.2
TURBIDITY (JTU)	12	36.1	49.4	2	170	12	-0.237	234.942	-0.852	27.1
FLOURIDE, DISSOLVED	12	0.25	0.07	0.1	0.3	12	-0.0000	0.2770	-0.085 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 213

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1280	1000	983	966	954	847	769	511	448	278

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
256	11.47	12.58	2.71	80	4.33

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05330000 -- MINNESOTA RIVER NEAR JORDAN, MINN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	3	6	4	2	4
CADMIUM (CD), UG/L	5	< 10	20	4	0	5
CHROMIUM (CR), UG/L	5	0	10	4	0	10
COBALT (CO), UG/L	5	< 50	50	4	0	1
COPPER (CU), UG/L	5	< 10	20	5	0	9
IRON (FE), UG/L	5	330	9500	5	0	40
LEAD (PB), UG/L	5	< 100	100	4	2	33
MANGANESE (MN), UG/L	4	260	530	5	5	380
MERCURY (HG), UG/L	5	0.0	0.7	4	0.0	0.7
SELENIUM (SE), UG/L	5	0	3	4	0	3
ZINC (ZN), UG/L	5	10	70	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	66.00				
BIOMASS, ASH WT., G/SQ M	1	60.00				
CHLOROPHYLL A, MG/SQ M	1	58.0				
CHLOROPHYLL B, MG/SQ M	1	5.7				
ORGANIC CARBON, MG/L	3	7.2	19.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05331000 NAME: MISSISSIPPI RIVER AT ST.PAUL,MINN.

LAT 44D56M40S LONG 093D05M20S
DRAINAGE AREA: 36800 SQ MI (95312 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, A	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	9.85	8.55	0.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	408.3	60.7	310	495					
STREAMFLOW (CUBIC FT/SEC)	11	13579.1	16179.2	2700	57200	11	-116.163	61005.137	-0.436*	15349.8
PH (STANDARD UNITS)	11	8.23	0.22	7.9	8.6	11	0.0003	8.1141	0.075*	0.24
PHOSPHORUS, TOTAL	10	0.160	0.065	0.05	0.25	10	-0.00001	0.16383	-0.009*	0.069
NITRITE + NITRATE, TOTAL	11	1.088	1.704	0.05	5.70	11	0.00675	-1.66941	0.241*	1.743
NITROGEN, KJELDAHL, TOTAL	11	1.130	0.368	0.72	1.90	11	0.00054	0.90817	0.090*	0.387
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	9000.0	9086.1	500	19000	7	15.519	2335.559	0.113*	9889.2
SEDIMENT, SUSPENDED	11	49.8	64.4	6	236					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	491.0	550.5	20	1650					
STREPTOCOCCI, FECAL (COL/100 ML)	10	190.6	197.2	0	664					
SILICA, DISSOLVED	10	10.50	2.99	5.8	14.0	10	0.0157	4.1960	0.305*	3.02
CALCIUM, DISSOLVED	11	50.00	6.13	40.0	61.0	11	0.0934	11.8746	0.924	2.47
MAGNESIUM, DISSOLVED	11	17.64	3.01	11.0	22.0	11	0.0467	-1.4495	0.943	1.06
SODIUM, DISSOLVED	11	10.83	4.28	4.7	21.0	11	0.0482	-8.8419	0.684	3.29
POTASSIUM, DISSOLVED	11	2.77	0.47	2.2	3.9	11	0.0037	1.2779	0.474*	0.44
BICARBONATE, ION	11	205.5	33.6	124	235	11	0.404	40.738	0.730	24.2
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	28.73	7.00	18.0	40.0	11	0.0686	0.7004	0.595*	5.93
CHLORIDE, DISSOLVED	11	12.24	5.36	7.0	26.0	11	0.0659	-14.6764	0.746	3.76
DISSOLVED SOLIDS, SUM OF CONST	10	234.2	33.0	183	288	10	0.556	11.634	0.978	7.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	250.1	38.4	186	314	11	0.618	-2.210	0.977	8.7
HARDNESS, TOTAL	11	198.2	26.8	150	240	11	0.431	22.013	0.979	5.8
HARDNESS, NONCARBONATE	11	28.8	18.6	1	70	11	0.097	-10.765	0.316*	18.6
TURBIDITY (JTU)	11	12.5	14.4	2	52	11	0.042	-4.637	0.178*	14.9
FLOURIDE, DISSOLVED	11	0.16	0.07	0.1	0.3	11	0.0005	-0.0215	0.408*	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	10.56	11.46	2.66	93	2.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05331000 -- MISSISSIPPI RIVER AT ST.PAUL,MINN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	3	0	2
CADMIUM (CD), UG/L	2	< 10	< 10	3	0	1
CHROMIUM (CR), UG/L	2	0	35	3	0	10
COBALT (CO), UG/L	2	< 50	< 50	3	0	1
COPPER (CU), UG/L	2	< 10	20	3	4	8
IRON (FE), UG/L	2	570	680	3	20	270
LEAD (PB), UG/L	2	<100	<100	3	2	11
MANGANESE (MN), UG/L	2	100	130	3	0	100
MERCURY (HG), UG/L	3	0.0	1.8	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	2	60	100	3	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	9.19	18.00			
BIOMASS, ASH WT., G/SQ M	2	6.19	14.00			
CHLOROPHYLL A, MG/SQ M	2	8.5	65.0			
CHLOROPHYLL B, MG/SQ M	2	2.1	3.6			
ORGANIC CARBON, MG/L	4	8.0	24.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05340500 NAME: ST. CROIX RIVER AT ST. CROIX FALLS, WIS.

LAT 45D24M25S LONG 092D38M49S
DRAINAGE AREA: 5930 SQ MI (15359 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.46	9.38	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	189.6	41.0	85	230					
STREAMFLOW (CUBIC FT/SEC)	12	5403.3	5371.9	1760	20900	12	-113.915	26999.664	-0.870	2776.0
PH (STANDARD UNITS)	11	7.52	0.34	7.0	8.0	11	-0.0035	8.2081	-0.262*	0.35
PHOSPHORUS, TOTAL	12	0.038	0.019	0.02	0.08	12	-0.00012	0.06042	-0.258*	0.019
NITRITE + NITRATE, TOTAL	12	0.279	0.152	0.09	0.56	12	0.00194	-0.08925	0.523*	0.136
NITROGEN, KJELDAHL, TOTAL	12	0.548	0.331	0.26	1.40	12	-0.00434	1.37184	-0.539*	0.292
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7627.6	13777.0	2	41000	12	67.559	-5180.496	0.201*	14153.7
SEDIMENT, SUSPENDED	11	9.1	9.8	2	35					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	25.7	22.3	2	67					
STREPTOCOCCI, FECAL (COL/100 ML)	12	91.2	107.3	2	345					
SILICA, DISSOLVED	12	13.17	3.08	6.9	17.0	12	0.0627	1.2855	0.836	1.77
CALCIUM, DISSOLVED	12	22.58	3.73	14.0	27.0	12	0.0814	7.1497	0.896	1.74
MAGNESIUM, DISSOLVED	12	7.09	1.42	3.7	8.9	12	0.0314	1.1355	0.906	0.63
SODIUM, DISSOLVED	12	2.97	0.53	1.7	3.5	12	0.0114	0.7987	0.886	0.26
POTASSIUM, DISSOLVED	12	1.07	0.19	0.9	1.5	12	-0.0029	1.6239	-0.637	0.15
BICARBONATE, ION	12	97.5	20.2	45	115	12	0.463	9.760	0.938	7.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.32	0.49	4.9	6.4	12	-0.0043	6.1245	-0.360*	0.48
CHLORIDE, DISSOLVED	12	2.84	0.65	2.1	4.4	12	0.0044	2.0106	0.276*	0.66
DISSOLVED SOLIDS, SUM OF CONST	12	103.7	17.8	61	120	12	0.402	27.381	0.930	6.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	114.4	16.9	78	136	12	0.224	71.869	0.546*	14.8
HARDNESS, TOTAL	12	85.4	14.8	50	100	12	0.331	22.706	0.918	6.1
HARDNESS, NONCARBONATE	12	5.6	3.1	3	13	12	-0.045	14.202	-0.598	2.6
TURBIDITY (JTU)	12	4.2	5.2	1	20	12	0.014	1.446	0.114*	5.4
FLUORIDE, DISSOLVED	12	0.37	0.65	0.1	2.4	12	-0.0130	2.8350	-0.827	0.38

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 113

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	310	240	230	210	205	195	180	115	110	95

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
106	9.01	13.79	2.65	90	2.53

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05340500 -- ST. CROIX RIVER AT ST. CROIX FALLS, WIS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	1
COBALT (CO), UG/L	4	0	4	4	0	2
COPPER (CU), UG/L	4	5	10	4	0	1
IRON (FE), UG/L	4	310	4000	4	80	780
LEAD (PB), UG/L	4	3	26	4	0	2
MANGANESE (MN), UG/L	4	10	140	4	0	40
MERCURY (HG), UG/L	4	0.2	0.6	4	0.0	0.4
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	10	380	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.29	1.50			
BIOMASS, ASH WT., G/SQ M	2	.79	1.09			
CHLOROPHYLL A, MG/SQ M	2	.0	.7			
CHLOROPHYLL B, MG/SQ M	2	.0	.0			
ORGANIC CARBON, MG/L	4	3.8	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05369500 NAME: CHIPPEWA RIVER AT DURAND, WIS.

LAT 44D37M40S LONG 091D58M10S
DRAINAGE AREA: 9010 SQ MI (23336 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	10.96	9.97	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	135.4	36.3	65	180					
STREAMFLOW (CUBIC FT/SEC)	14	8113.6	4991.4	3260	18600	12	-73.908	18080.898	-0.532*	4487.2
PH (STANDARD UNITS)	12	7.32	0.26	6.9	7.8	12	0.0010	7.1777	0.146*	0.26
PHOSPHORUS, TOTAL	12	0.117	0.093	0.06	0.40	12	0.00045	0.05637	0.174*	0.096
NITRITE + NITRATE, TOTAL	12	0.483	0.160	0.23	0.71	12	0.00152	0.27743	0.345*	0.158
NITROGEN, KJELDAHL, TOTAL	12	0.796	0.333	0.43	1.50	12	0.00022	0.76581	0.024*	0.349
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7319.3	11683.2	1	36000	12	-9.422	8595.199	-0.029*	12248.1
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1651.6	3460.3	13	12000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	444.7	560.8	5	1500					
SILICA, DISSOLVED	12	9.97	2.13	7.0	13.0	12	0.0179	7.5542	0.305*	2.13
CALCIUM, DISSOLVED	12	15.77	2.86	9.3	20.0	12	0.0355	10.9671	0.450*	2.68
MAGNESIUM, DISSOLVED	12	5.43	0.98	3.4	6.8	12	0.0118	3.8360	0.437*	0.92
SODIUM, DISSOLVED	12	2.85	0.53	1.7	3.5	12	0.0062	2.0085	0.425*	0.50
POTASSIUM, DISSOLVED	12	1.39	0.57	0.8	2.4	12	0.0011	1.2421	0.070*	0.60
BICARBONATE, ION	12	63.2	12.8	32	77	12	0.182	38.512	0.517*	11.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.47	0.82	5.4	8.4	12	0.0023	7.1529	0.103*	0.85
CHLORIDE, DISSOLVED	12	3.78	0.73	2.5	5.0	12	0.0018	3.5448	0.087*	0.76
DISSOLVED SOLIDS, SUM OF CONST	12	78.1	12.4	51	92	12	0.172	54.730	0.507*	11.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	91.4	12.8	70	112	12	0.030	87.333	0.086*	13.3
HARDNESS, TOTAL	12	61.8	10.7	37	75	12	0.138	43.177	0.466*	10.0
HARDNESS, NONCARBONATE	12	10.1	3.0	3	15	12	-0.010	11.439	-0.123*	3.1
TURBIDITY (JTU)	12	7.0	10.5	2	40	12	0.054	-0.366	0.189*	10.8
FLOURIDE, DISSOLVED	12	0.32	0.22	0.1	0.8	12	0.0015	0.1123	0.244*	0.23

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 185

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	280	240	210	190	180	155	135	110	105	100

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
185	9.51	16.28	2.75	94	2.32

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05369500 -- CHIPPEWA RIVER AT DURAND, WIS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	< 10	10	4	0	1
COBALT (CO), UG/L	3	0	5	4	0	0
COPPER (CU), UG/L	4	7	11	4	2	3
IRON (FE), UG/L	4	520	6500	4	170	420
LEAD (PB), UG/L	4	1	20	4	0	2
MANGANESE (MN), UG/L	4	30	1400	4	0	60
MERCURY (HG), UG/L	4	0.0	0.7	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	330	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.09	17.00			
BIOMASS, ASH WT., G/SQ M	3	.09	16.00			
CHLOROPHYLL A, MG/SQ M	3	.5	5.3			
CHLOROPHYLL B, MG/SQ M	3	.0	1.0			
ORGANIC CARBON, MG/L	4	7.0	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05378500 NAME: MISSISSIPPI RIVER AT WINONA, MINNESOTA

LAT 44D03M20S LONG 091D38M15S
DRAINAGE AREA: 59200 SQ MI (153328 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	10.70	10.40	0.2	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	307.0	19.7	270	330					
STREAMFLOW (CUBIC FT/SEC)	12	44658.3	47188.7	14100	165000	10	-594.912	222467.938	-0.257*	46883.6
PH (STANDARD UNITS)	10	8.08	0.48	7.3	9.0	10	0.0003	8.0024	0.010*	0.51
PHOSPHORUS, TOTAL	10	0.177	0.035	0.13	0.25	10	0.00015	0.13245	0.083*	0.037
NITRITE + NITRATE, TOTAL	10	0.745	0.519	0.22	2.10	10	-0.00651	2.74353	-0.248*	0.533
NITROGEN, KJELDAHL, TOTAL	10	1.333	1.036	0.71	4.20	10	0.02458	-6.21425	0.469*	0.970
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	13170.0	11389.7	330	38000	9	-101.895	44361.320	-0.185*	11964.8
SEDIMENT, SUSPENDED	1	62.0	0.0	62						
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	163.1	235.3	10	800					
STREPTOCOCCI, FECAL (COL/100 ML)	9	305.9	554.9	4	1600					
SILICA, DISSOLVED	10	10.76	3.54	3.0	14.0	10	-0.0642	30.4570	-0.358*	3.51
CALCIUM, DISSOLVED	10	37.40	3.44	31.0	42.0	10	0.1103	3.5513	0.633	2.82
MAGNESIUM, DISSOLVED	10	13.30	1.42	11.0	15.0	10	0.0439	-0.1695	0.611*	1.19
SODIUM, DISSOLVED	10	7.75	1.87	4.5	10.0	10	0.0160	2.8525	0.168*	1.96
POTASSIUM, DISSOLVED	10	2.24	0.44	1.8	3.2	10	0.0028	1.3921	0.125*	0.46
BICARBONATE, ION	10	149.6	18.1	109	173	10	0.420	20.765	0.457*	17.1
CARBONATE, ION	7	1.4	3.8	0	10	7	0.004	0.248	0.018*	4.1
SULFATE, DISSOLVED	10	19.90	5.51	15.0	33.0	10	0.1217	-17.4473	0.436*	5.26
CHLORIDE, DISSOLVED	10	10.09	2.41	7.2	15.0	10	0.0367	-1.1661	0.300*	2.44
DISSOLVED SOLIDS, SUM OF CONST	10	176.2	14.8	145	194	10	0.477	29.610	0.638	12.1
DISSOLVED SOLIDS, ROE 180 DEG C	10	198.2	17.7	172	230	10	0.462	56.420	0.516*	16.1
HARDNESS, TOTAL	10	147.0	13.4	120	160	10	0.444	10.556	0.656	10.7
HARDNESS, NONCARBONATE	10	23.7	9.1	11	39	10	0.110	-10.061	0.240*	9.3
TURBIDITY (JTU)	7	11.6	10.3	3	31	7	-0.091	39.146	-0.197*	11.0
FLOURIDE, DISSOLVED	10	0.15	0.07	0.1	0.3	10	0.0001	0.1063	0.040*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	10.66	13.43	2.60	94	2.68

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05378500 -- MISSISSIPPI RIVER AT WINONA, MINNESOTA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	3	2	0	2
CADMIUM (CD), UG/L	2	<10	20	2	0	0
CHROMIUM (CR), UG/L	2	0	10	2	0	0
COBALT (CO), UG/L	2	<50	<50	2	0	0
COPPER (CU), UG/L	2	10	20	2	3	6
IRON (FE), UG/L	9	280	2500	2	60	100
LEAD (PB), UG/L	2	<100	100	2	3	4
MANGANESE (MN), UG/L	9	70	170	2	10	20
MERCURY (HG), UG/L	2	0.1	0.4	2	0.1	0.4
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	20	60	2	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.30	6300.00			
BIOMASS, ASH WT., G/SQ M	3	.79	41.00			
CHLOROPHYLL A, MG/SQ M	3	.0	90.0			
CHLOROPHYLL B, MG/SQ M	3	.0	7.5			
ORGANIC CARBON, MG/L	2	15.0	15.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05407000 NAME: WISCONSIN RIVER AT MUSCODA, WIS.

LAT 43D11M54S LONG 090D26M26S
DRAINAGE AREA: 10300 SQ MI (26677 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	10.46	9.53	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	252.9	25.9	215	295					
STREAMFLOW (CUBIC FT/SEC)	12	7840.8	3002.7	3840	14800	12	-79.012	27824.293	-0.681	2305.4
PH (STANDARD UNITS)	12	7.67	0.42	7.1	8.3	12	0.0045	6.5307	0.280*	0.42
PHOSPHORUS, TOTAL	12	0.075	0.022	0.05	0.12	12	-0.00017	0.11702	-0.192*	0.023
NITRITE + NITRATE, TOTAL	12	0.398	0.215	0.13	0.74	12	-0.00291	1.13389	-0.349*	0.212
NITROGEN, KJELDAHL, TOTAL	12	0.790	0.156	0.59	1.10	12	0.00092	0.55674	0.153*	0.162
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	22687.5	35005.5	350	120000	12	-21.846	28212.645	-0.016*	36708.9
SEDIMENT, SUSPENDED	1	26.0	0.0	26						
SEDIMENT, CLAY-SILT (PERCENT)	1	86.0	0.0	86						
COLIFORM, FECAL (COL/100 ML)	12	216.4	594.3	5	2100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	230.4	621.3	14	2200					
SILICA, DISSOLVED	12	5.28	3.35	0.7	10.0	12	-0.0420	15.9151	-0.325*	3.32
CALCIUM, DISSOLVED	12	24.58	3.40	20.0	30.0	12	0.0271	17.7369	0.206*	3.49
MAGNESIUM, DISSOLVED	12	11.54	1.50	9.6	14.0	12	0.0275	4.5768	0.476*	1.38
SODIUM, DISSOLVED	12	6.78	2.15	3.5	9.3	12	0.0161	2.7160	0.194*	2.21
POTASSIUM, DISSOLVED	12	1.77	0.21	1.5	2.1	12	-0.0046	2.9274	-0.577	0.18
BICARBONATE, ION	12	111.7	14.6	92	135	12	0.178	66.672	0.315*	14.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	16.67	3.63	12.0	23.0	12	0.0497	4.0887	0.355*	3.56
CHLORIDE, DISSOLVED	12	9.11	2.41	5.3	12.0	12	0.0140	5.5683	0.150*	2.50
DISSOLVED SOLIDS, SUM OF CONST	12	131.2	18.8	101	161	12	0.174	87.115	0.240*	19.1
DISSOLVED SOLIDS, RCE 180 DEG C	12	146.5	19.8	113	179	12	0.158	106.451	0.207*	20.4
HARDNESS, TOTAL	12	108.8	14.0	91	130	12	0.156	69.356	0.289*	14.0
HARDNESS, NONCARBONATE	12	17.3	5.2	9	23	12	0.029	10.015	0.143*	5.4
TURBIDITY (JTU)	12	5.5	3.6	0	15	12	-0.044	16.734	-0.317*	3.6
FLOURIDE, DISSOLVED	12	0.19	0.09	0.0	0.4	12	-0.0008	0.3875	-0.223*	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
91	10.47	15.19	2.76	89	2.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05407000 -- WISCONSIN RIVER AT MUSCODA, WIS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	< 10	4	0	0
COBALT (CO), UG/L	4	0	7	4	0	7
COPPER (CU), UG/L	4	9	11	4	0	4
IRON (FE), UG/L	4	930	1500	4	220	520
LEAD (PB), UG/L	4	6	29	4	0	9
MANGANESE (MN), UG/L	4	80	140	4	10	53
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	80	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.50	140.00			
BIOMASS, ASH WT., G/SQ M	2	.79	130.00			
CHLOROPHYLL A, MG/SQ M	2	.2	13.0			
CHLOROPHYLL B, MG/SQ M	2	.0	1.7			
ORGANIC CARBON, MG/L	4	8.1	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05420500 NAME: MISSISSIPPI RIVER AT CLINTON, IOWA

LAT 41D46M53S LONG 090D15M04S
DRAINAGE AREA: 85600 SQ MI (221704 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.39	12.41	0.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	334.5	47.8	220	390					
STREAMFLOW (CUBIC FT/SEC)	12	58466.7	29124.0	21000	102000	11	-259.302	142966.250	-0.421*	28136.2
PH (STANDARD UNITS)	11	8.46	0.36	7.8	8.8	11	-0.0013	8.8905	-0.172*	0.37
PHOSPHORUS, TOTAL	10	0.207	0.208	0.02	0.76	10	-0.00347	1.37033	-0.840	0.120
NITRITE + NITRATE, TOTAL	10	0.592	0.426	0.08	1.20	10	-0.00319	1.66077	-0.378*	0.418
NITROGEN, KJELDAHL, TOTAL	9	1.578	0.987	0.70	3.90	9	-0.01074	5.19276	-0.578*	0.861
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	14681.8	10386.4	2800	34000	11	8.171	11948.094	0.038*	10940.4
SEDIMENT, SUSPENDED	9	59.0	59.1	8	162					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	528.1	571.3	20	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	8	307.3	573.8	7	1700					
SILICA, DISSOLVED	11	6.78	3.52	0.2	12.0	11	0.0088	3.8288	0.120*	3.69
CALCIUM, DISSOLVED	11	40.18	5.91	26.0	48.0	11	0.0936	8.8681	0.757	4.07
MAGNESIUM, DISSOLVED	11	15.64	2.11	11.0	18.0	11	0.0253	7.1797	0.573*	1.82
SODIUM, DISSOLVED	11	8.50	2.47	6.0	15.0	11	-0.0029	9.4801	-0.057*	2.60
POTASSIUM, DISSOLVED	11	2.54	0.89	1.7	5.0	11	-0.0153	7.6676	-0.824	0.53
BICARBONATE, ION	11	169.0	23.9	124	210	11	0.344	53.890	0.688	18.3
CARBONATE, ION	7	0.6	1.5	0	4	7	0.015	-4.359	0.302*	1.6
SULFATE, DISSOLVED	11	21.55	6.28	12.0	37.0	11	0.0469	5.8553	0.357*	6.19
CHLORIDE, DISSOLVED	11	9.74	1.06	8.4	12.0	11	0.0103	6.2967	0.462*	0.99
DISSOLVED SOLIDS, SUM OF CONST	11	189.0	21.7	140	219	11	0.339	75.646	0.747	15.2
DISSOLVED SOLIDS, ROE 180 DEG C	11	207.2	34.5	143	265	11	0.356	87.963	0.494*	31.6
HARDNESS, TOTAL	11	164.5	22.5	110	190	11	0.353	46.471	0.749	15.7
HARDNESS, NONCARBONATE	11	25.5	11.6	5	45	11	0.046	10.148	0.189*	12.0
TURBIDITY (JTU)	11	16.5	13.5	2	42	11	-0.015	21.321	-0.052*	14.2
FLOURIDE, DISSOLVED	11	0.33	0.20	0.2	0.9	11	-0.0001	0.3765	-0.036*	0.21

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
100	12.31	15.39	2.90	92	1.85

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05420500 -- MISSISSIPPI RIVER AT CLINTON, IOWA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	7	3	0	2
CADMIUM (CD), UG/L	2	0	0	4	0	3
CHROMIUM (CR), UG/L	2	10	20	2	0	0
COBALT (CO), UG/L	2	0	3	4	0	1
COPPER (CU), UG/L	2	7	21	4	4	19
IRON (FE), UG/L	2	1400	9700	4	70	190
LEAD (PB), UG/L	2	12	28	4	0	10
MANGANESE (MN), UG/L	2	190	1000	3	10	40
MERCURY (HG), UG/L	3	0.2	0.7	2	0.3	0.7
SELENIUM (SE), UG/L	3	0	0	2	0	0
ZINC (ZN), UG/L	2	30	130	3	10	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.09	66.00			
BIOMASS, ASH WT., G/SQ M	2	2.29	61.00			
CHLOROPHYLL A, MG/SQ M	2	.0	39.0			
CHLOROPHYLL B, MG/SQ M	2	.0	1.0			
ORGANIC CARBON, MG/L	2	13.0	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05446500 NAME: ROCK RIVER NEAR JOSLIN, IL

LAT 41D33M35S LONG 090D10M55S
DRAINAGE AREA: 9551 SQ MI (24737 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	12.38	9.68	0.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	630.5	88.9	485	786					
STREAMFLOW (CUBIC FT/SEC)	21	8785.7	7728.7	3080	33500	11	-22.522	21587.699	-0.411*	4682.4
PH (STANDARD UNITS)	11	7.89	0.32	7.4	8.3	11	-0.0008	8.3687	-0.208*	0.33
PHOSPHORUS, TOTAL	11	0.299	0.087	0.09	0.41	11	0.00029	0.11624	0.297*	0.087
NITRITE + NITRATE, TOTAL	11	2.474	0.886	0.11	3.40	11	0.00623	-1.45634	0.625	0.729
NITROGEN, KJELDAHL, TOTAL	11	1.173	0.270	0.73	1.60	11	-0.00202	2.44770	-0.664	0.213
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	37233.3	56481.4	7100	150000	6	-671.341	424372.875	-0.730*	43148.8
SEDIMENT, SUSPENDED	5	130.0	56.4	43	186					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	234.5	188.8	40	730					
STREPTOCOCCI, FECAL (COL/100 ML)	11	385.9	463.4	60	1500					
SILICA, DISSOLVED	11	6.02	2.26	0.1	8.1	11	0.0170	-4.7322	0.672	1.76
CALCIUM, DISSOLVED	11	61.91	9.49	42.0	75.0	11	0.0811	10.7728	0.759	6.51
MAGNESIUM, DISSOLVED	11	31.64	5.97	23.0	42.0	11	0.0284	13.6992	0.423*	5.70
SODIUM, DISSOLVED	11	13.13	3.51	8.1	18.0	11	0.0223	-0.9569	0.566*	3.05
POTASSIUM, DISSOLVED	11	2.75	0.41	2.2	3.4	11	-0.0022	4.1322	-0.470*	0.38
BICARBONATE, ION	11	292.5	40.2	218	352	11	0.325	87.649	0.719	29.5
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	39.00	5.60	31.0	49.0	11	0.0383	14.8355	0.608	4.69
CHLORIDE, DISSOLVED	11	23.91	4.72	18.0	32.0	11	0.0289	5.6895	0.544*	4.18
DISSOLVED SOLIDS, SUM OF CONST	11	322.7	42.9	260	400	11	0.375	86.434	0.776	28.5
DISSOLVED SOLIDS, ROE 180 DEG C	11	355.9	46.8	272	432	11	0.417	93.214	0.791	30.1
HARDNESS, TOTAL	11	283.6	37.0	240	360	11	0.324	79.309	0.779	24.4
HARDNESS, NONCARBONATE	11	44.7	20.1	5	71	11	0.053	11.358	0.234*	20.6
TURBIDITY (JTU)	11	22.1	16.6	5	50	11	-0.016	32.277	-0.087*	17.4
FLOURIDE, DISSOLVED	11	0.20	0.08	0.0	0.3	11	0.0005	-0.0867	0.522*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
46	10.53	12.04	2.70	87	2.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05446500 -- ROCK RIVER NEAR JOSLIN, IL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	3	3	0	1
CADMIUM (CD), UG/L	3	0	1	3	0	1
CHROMIUM (CR), UG/L	3	0	<10	3	<10	<10
COBALT (CO), UG/L	3	0	2	3	0	1
COPPER (CU), UG/L	3	0	10	3	0	20
IRON (FE), UG/L	3	440	3000	3	20	30
LEAD (PB), UG/L	3	4	15	3	0	3
MANGANESE (MN), UG/L	3	70	220	3	0	60
MERCURY (HG), UG/L	3	<0.5	0.9	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	50	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	7.5	9.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05474500 NAME: MISSISSIPPI RIVER AT KEOKUK, IOWA

LAT 40D23M37S LONG 091D22M27S
DRAINAGE AREA: 119000 SQ MI (308210 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	15.91	11.84	0.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	390.9	64.4	280	490					
STREAMFLOW (CUBIC FT/SEC)	11	73527.3	36488.0	40900	137000	11	-186.349	146372.875	-0.329*	36320.6
PH (STANDARD UNITS)	11	8.35	0.26	7.8	8.6	11	0.0034	7.0125	0.856	0.14
PHOSPHORUS, TOTAL	11	0.201	0.039	0.16	0.30	11	-0.00028	0.31028	-0.461*	0.037
NITRITE + NITRATE, TOTAL	11	1.345	0.838	0.15	3.00	11	0.00070	1.07186	0.054*	0.882
NITROGEN, KJELDAHL, TOTAL	11	1.375	0.530	0.89	2.80	11	0.00115	0.92668	0.139*	0.554
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	17581.8	8460.9	5600	29000	11	68.116	-9045.320	0.519*	7625.6
SEDIMENT, SUSPENDED	8	89.4	65.2	23	183					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	561.4	1167.1	7	3800					
STREPTOCOCCI, FECAL (COL/100 ML)	9	1168.0	3312.4	10	10000					
SILICA, DISSOLVED	11	6.31	3.72	0.4	11.0	11	0.0214	-2.0752	0.372*	3.64
CALCIUM, DISSOLVED	11	47.82	6.74	38.0	59.0	11	0.0552	26.2257	0.528*	6.03
MAGNESIUM, DISSOLVED	11	18.91	2.34	15.0	22.0	11	0.0203	10.9864	0.557*	2.05
SODIUM, DISSOLVED	11	10.05	2.12	7.2	13.0	11	0.0255	0.0729	0.774	1.42
POTASSIUM, DISSOLVED	11	2.47	0.32	1.9	2.9	11	-0.0022	3.3464	-0.450*	0.30
BICARBONATE, ION	11	195.8	23.6	160	229	11	0.255	96.215	0.696	17.8
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	29.27	3.07	24.0	36.0	11	0.0129	24.2108	0.272*	3.11
CHLORIDE, DISSOLVED	11	13.27	2.10	11.0	17.0	11	0.0248	3.5942	0.759	1.44
DISSOLVED SOLIDS, SUM OF CONST	11	225.2	23.6	186	261	11	0.277	116.945	0.755	16.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	250.9	32.6	181	316	11	0.135	198.234	0.266*	33.1
HARDNESS, TOTAL	11	197.3	23.3	160	230	11	0.232	106.569	0.642	18.8
HARDNESS, NONCARBONATE	11	36.6	12.1	13	56	11	0.014	31.326	0.073*	12.7
TURBIDITY (JTU)	11	19.5	15.4	6	60	11	-0.123	67.458	-0.513*	13.9
FLOURIDE, DISSOLVED	11	0.25	0.09	0.2	0.5	11	-0.0002	0.3351	-0.142*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 331

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	515	482	477	450	432	399	376	342	331	290

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
331	12.52	14.58	2.68	97	1.94

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05474500 -- MISSISSIPPI RIVER AT KEOKUK, IOWA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	2	3	3	0	2
CADMIUM (CD), UG/L	3	0	3	4	0	3
CHROMIUM (CR), UG/L	3	<10	<10	3	0	2
COBALT (CO), UG/L	3	0	2	4	0	2
COPPER (CU), UG/L	3	5	20	4	4	19
IRON (FE), UG/L	3	650	4700	3	100	2200
LEAD (PB), UG/L	3	10	41	4	0	12
MANGANESE (MN), UG/L	3	140	210	3	10	200
MERCURY (HG), UG/L	3	0.3	0.4	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	40	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.69	38.00			
BIOMASS, ASH WT., G/SQ M	3	.50	22.00			
CHLOROPHYLL A, MG/SQ M	3	.3	32.0			
CHLOROPHYLL B, MG/SQ M	3	.0	1.8			
ORGANIC CARBON, MG/L	3	11.0	20.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05490600 NAME: DES MOINES RIVER AT ST. FRANCISVILLE, MO.

LAT 40D27M45S LONG 091D34M00S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.54	11.18	0.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	559.8	117.8	328	840					
STREAMFLOW (CUBIC FT/SEC)	12	9226.7	9854.4	960	28700	12	-42.218	32861.953	-0.505*	8922.2
PH (STANDARD UNITS)	12	8.33	0.37	7.8	8.8	12	0.0015	7.5007	0.467*	0.35
PHOSPHORUS, TOTAL	12	0.207	0.113	0.06	0.44	12	-0.00030	0.37678	-0.316*	0.112
NITRITE + NITRATE, TOTAL	11	2.187	2.338	0.00	7.00	11	-0.00072	2.59474	-0.037*	2.463
NITROGEN, KJELDAHL, TOTAL	11	1.635	0.679	0.90	3.00	11	0.00023	1.50267	0.042*	0.715
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	53000.0	78142.2	1400	230000	12	-15.431	61638.949	-0.023*	81933.1
SEDIMENT, SUSPENDED	11	453.3	649.3	18	1750					
SEDIMENT, CLAY-SILT (PERCENT)	11	56.5	27.2	2	93					
COLIFORM, FECAL (COL/100 ML)	12	1219.2	2056.4	4	7100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2049.3	3452.1	4	12000					
SILICA, DISSOLVED	12	8.67	3.90	1.9	14.0	12	0.0071	4.7010	0.215 *	3.99
CALCIUM, DISSOLVED	12	62.67	16.86	39.0	97.0	12	0.1187	-3.7856	0.829	9.88
MAGNESIUM, DISSOLVED	12	24.08	6.72	10.0	35.0	12	0.0428	0.1087	0.751	4.66
SODIUM, DISSOLVED	12	15.04	6.51	6.7	27.0	12	0.0426	-8.8309	0.772	4.34
POTASSIUM, DISSOLVED	12	3.84	0.80	2.8	5.2	12	0.0008	3.3925	0.118 *	0.83
BICARBONATE, ION	12	185.8	41.2	130	248	12	0.261	39.967	0.745	28.9
CARBONATE, ION	12	5.7	7.9	0	24	12	0.038	-15.863	0.573 *	6.8
SULFATE, DISSOLVED	12	88.33	36.75	36.0	160.0	12	0.2306	-40.7759	0.739	25.95
CHLORIDE, DISSOLVED	12	19.78	6.10	9.4	30.0	12	0.0401	-2.6900	0.775	4.05
DISSOLVED SOLIDS, SUM OF CONST	12	320.4	78.7	180	513	12	0.649	-43.083	0.973	19.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	339.8	72.2	191	499	12	0.592	8.358	0.966	19.7
HARDNESS, TOTAL	12	258.3	58.3	140	390	12	0.480	-10.399	0.970	14.8
HARDNESS, NONCARBONATE	12	93.5	29.4	27	140	12	0.189	-12.410	0.758	20.1
TURBIDITY (JTU)	5	27.4	24.1	12	70	5	0.002	25.991	0.013 *	27.8
FLOURIDE, DISSOLVED	12	0.34	0.07	0.2	0.4	12	-0.0001	0.3806	-0.123 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
73	12.36	15.09	2.74	83	2.75

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05490600 -- DES MOINES RIVER AT ST. FRANCISVILLE, MO.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	6	4	1	4
CADMIUM (CD), UG/L	4	0	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	4	0	2
COPPER (CU), UG/L	4	< 10	460	4	2	3
IRON (FE), UG/L	4	370	4100	11	20	1800
LEAD (PB), UG/L	4	<100	<100	4	1	6
MANGANESE (MN), UG/L	4	100	180	11	0	160
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.4
SELENIUM (SE), UG/L	4	1	3	4	0	3
ZINC (ZN), UG/L	4	40	140	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.89	18.00			
BIOMASS, ASH WT., G/SQ M	3	.50	49.00			
CHLOROPHYLL A, MG/SQ M	3	.1	12.0			
CHLOROPHYLL B, MG/SQ M	3	.0	2.0			
ORGANIC CARBON, MG/L	4	5.3	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05543500 NAME: ILLINOIS RIVER AT MARSEILLES, IL

LAT 41D19M40S LONG 088D43M10S
DRAINAGE AREA: 8259 SQ MI (21391 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, a	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	12.92	9.74	2.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	787.4	73.3	700	918					
STREAMFLOW (CUBIC FT/SEC)	6	10296.7	2808.4	7510	14100					
PH (STANDARD UNITS)	10	7.46	0.28	7.1	7.9	10	0.0021	5.7653	0.562 *	0.25
PHOSPHORUS, TOTAL	11	0.690	0.284	0.37	1.40	11	0.00140	-0.40857	0.360 *	0.280
NITRITE + NITRATE, TOTAL	11	4.073	1.029	2.20	6.00	11	0.00051	3.67395	0.036 *	1.084
NITROGEN, KJELDAHL, TOTAL	10	1.980	0.725	1.10	3.70	10	0.00627	-2.89209	0.599 *	0.616
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	13450.0	9414.0	2400	26000	6	4.199	10233.844	0.026 *	10521.7
SEDIMENT, SUSPENDED	5	69.2	33.5	36	109					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	252.6	149.6	9	490					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1098.2	3284.7	4	11000					
SILICA, DISSOLVED	11	6.71	1.24	4.7	8.2	11	-0.0113	15.5744	-0.665	0.98
CALCIUM, DISSOLVED	11	68.64	7.72	56.0	83.0	11	-0.0008	69.2306	-0.007 *	8.14
MAGNESIUM, DISSOLVED	11	24.55	3.39	20.0	32.0	11	0.0162	11.7686	0.351 *	3.34
SODIUM, DISSOLVED	11	43.73	12.28	28.0	62.0	11	0.0844	-22.7510	0.504 *	11.18
POTASSIUM, DISSOLVED	11	4.25	1.08	3.2	6.2	11	-0.0001	4.3424	-0.008 *	1.13
BICARBONATE, ION	11	206.7	15.4	182	230	11	0.042	173.537	0.200 *	15.9
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	102.27	14.10	80.0	130.0	11	0.0459	66.1631	0.238 *	14.43
CHLORIDE, DISSOLVED	11	63.45	18.64	42.0	98.0	11	0.1412	-47.7387	0.555 *	16.33
DISSOLVED SOLIDS, SUM OF CONST	11	416.1	42.6	344	483	11	0.297	182.585	0.510 *	38.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	466.4	34.9	411	519	11	0.178	326.354	0.373 *	34.2
HARDNESS, TOTAL	11	271.8	31.9	220	340	11	0.061	223.855	0.140 *	33.3
HARDNESS, NONCARBONATE	11	102.6	25.2	65	160	11	0.034	75.664	0.100 *	26.4
TURBIDITY (JTU)	11	24.4	12.4	3	40	11	-0.018	38.425	-0.106 *	13.0
FLOURIDE, DISSOLVED	11	0.52	0.22	0.2	0.9	11	0.0004	0.1939	0.138 *	0.23

*Not significant at the 95 percent confidence level

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
106	15.17	13.25	2.76	95	1.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05543500 -- ILLINOIS RIVER AT MARSEILLES, IL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	3	4	3	1	5
CADMIUM (CD), UG/L	3	0	1	3	0	1
CHROMIUM (CR), UG/L	3	0	10	3	0	10
COBALT (CO), UG/L	3	0	2	3	0	2
COPPER (CU), UG/L	3	0	10	3	0	10
IRON (FE), UG/L	3	970	1500	3	20	50
LEAD (PB), UG/L	3	10	15	3	1	4
MANGANESE (MN), UG/L	3	60	70	3	10	50
MERCURY (HG), UG/L	3	<0.5	<0.5	3	< 0.5	< 0.5
SELENIUM (SE), UG/L	3	0	2	3	0	2
ZINC (ZN), UG/L	3	40	60	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	7.8	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05586100 NAME: ILLINOIS RIVER AT VALLEY CITY, IL

LAT 39D42M10S LONG 090D38M40S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	14.10	10.54	3.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	638.6	37.6	581	720					
STREAMFLOW (CUBIC FT/SEC)	10	28577.0	15032.6	8980	51100	10	-39.548	53832.531	-0.099 *	15866.1
PH (STANDARD UNITS)	10	7.87	0.47	7.0	8.9	10	0.0029	6.0127	0.235 *	0.48
PHOSPHORUS, TOTAL	10	0.413	0.178	0.22	0.72	10	0.00253	-1.20416	0.535 *	0.159
NITRITE + NITRATE, TOTAL	10	4.300	1.695	2.20	7.80	10	0.02344	-10.66875	0.521 *	1.535
NITROGEN, KJELDAHL, TOTAL	10	1.031	0.198	0.78	1.50	10	-0.00018	1.14618	-0.034 *	0.210
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	9766.7	3768.6	5300	15000	6	20.191	-3189.348	0.223 *	4107.7
SEDIMENT, SUSPENDED	4	259.5	108.3	148	387					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	652.8	685.1	15	2100					
STREPTOCOCCI, FECAL (COL/100 ML)	9	436.7	404.8	120	1400					
SILICA, DISSOLVED	11	6.21	1.11	3.9	7.4	10	0.0020	4.8351	0.067 *	1.21
CALCIUM, DISSOLVED	10	62.80	4.29	56.0	70.0	10	0.0784	12.7116	0.688	3.30
MAGNESIUM, DISSOLVED	10	25.70	2.98	21.0	30.0	10	0.0116	18.2984	0.146 *	3.13
SODIUM, DISSOLVED	10	25.00	7.35	16.0	35.0	10	0.0760	-23.5260	0.389 *	7.18
POTASSIUM, DISSOLVED	10	2.94	0.72	2.1	4.2	10	-0.0005	3.2630	-0.027 *	0.76
BICARBONATE, ION	10	220.6	16.6	199	244	10	0.055	185.225	0.125 *	17.5
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	68.60	22.50	11.0	93.0	10	0.3478	-153.5178	0.582 *	19.41
CHLORIDE, DISSOLVED	10	36.60	8.64	27.0	51.0	10	0.1380	-51.5079	0.601 *	7.33
DISSOLVED SOLIDS, SUM OF CONST	10	336.9	45.3	250	393	10	0.686	-101.066	0.570 *	39.5
DISSOLVED SOLIDS, ROE 180 DEG C	10	390.6	44.2	324	446	10	0.577	22.344	0.491 *	40.8
HARDNESS, TOTAL	10	262.0	20.4	230	300	10	0.230	115.370	0.423 *	19.6
HARDNESS, NONCARBONATE	10	81.9	15.3	66	120	10	0.210	-51.990	0.516 *	13.9
TURBIDITY (JTU)	10	51.6	24.6	10	100	10	0.127	-29.397	0.194 *	25.6
FLOURIDE, DISSOLVED	10	0.36	0.07	0.3	0.5	10	0.0001	0.3279	0.027 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 118

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	720	704	700	660	650	624	600	530	520	440

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
113	14.06	14.34	2.73	91	1.63

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05586100 -- ILLINOIS RIVER AT VALLEY CITY, IL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	5	4	1	2
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	4	0	3	4	0	1
COPPER (CU), UG/L	4	10	10	4	10	10
IRON (FE), UG/L	4	810	4500	4	20	70
LEAD (PB), UG/L	3	2	10	4	0	4
MANGANESE (MN), UG/L	3	40	220	3	0	30
MERCURY (HG), UG/L	3	<0.5	1.6	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	2	3	0	1
ZINC (ZN), UG/L	3	10	50	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	7.3	9.7			

STATION NUMBER: 05587550 NAME: MISSISSIPPI RIVER BELOW ALTON,ILL

LAT 38D51M41S LONG 090D08M15S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	12.84	10.52	1.0	33.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	472.3	69.1	350	610					
STREAMFLOW (CUBIC FT/SEC)	21	119366.6	74922.2	33500	283000	21	-574.215	389794.563	-0.540	64677.6
PH (STANDARD UNITS)	19	8.05	0.45	7.3	8.9	19	0.0027	6.7609	0.426 *	0.42
PHOSPHORUS, TOTAL	9	0.328	0.135	0.17	0.53	9	0.00090	-0.07891	0.397 *	0.132
NITRITE + NITRATE, TOTAL	7	2.857	0.757	1.50	3.70	7	0.00551	0.29986	0.382 *	0.766
NITROGEN, KJELDAHL, TOTAL	7	1.360	0.530	0.66	2.10	7	0.00618	-1.50884	0.612 *	0.459
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	13114.3	10620.0	5200	36000	5	-153.794	84627.375	-0.489 *	12072.5
SEDIMENT, SUSPENDED	8	329.0	326.2	33	920					
SEDIMENT, CLAY-SILT (PERCENT)	8	80.5	17.7	49	96					
COLIFORM, FECAL (COL/100 ML)	17	412.8	588.1	67	2100					
STREPTOCOCCI, FECAL (COL/100 ML)	7	550.3	613.0	92	1800					
SILICA, DISSOLVED	9	9.73	10.24	0.3	36.0	9	0.1049	-37.6066	0.607 *	8.70
CALCIUM, DISSOLVED	9	47.00	6.84	36.0	58.0	9	0.1018	1.0681	0.882	3.44
MAGNESIUM, DISSOLVED	9	18.11	2.32	15.0	22.0	9	0.0352	2.2294	0.901	1.07
SODIUM, DISSOLVED	9	11.88	2.42	8.1	16.0	9	0.0170	4.2135	0.416 *	2.35
POTASSIUM, DISSOLVED	9	3.02	0.47	2.5	3.8	9	-0.0061	5.7723	-0.776	0.31
BICARBONATE, ION	20	187.3	25.2	144	224	20	0.267	61.108	0.765	16.6
CARBONATE, ION	19	0.8	2.1	0	8	19	0.015	-6.526	0.524	1.9
SULFATE, DISSOLVED	9	41.00	7.26	29.0	53.0	9	0.0723	8.3980	0.590 *	6.27
CHLORIDE, DISSOLVED	9	17.22	2.64	13.0	20.0	9	0.0288	4.2492	0.647 *	2.15
DISSOLVED SOLIDS, SUM OF CONST	9	236.4	34.1	191	305	9	0.545	-9.204	0.946	11.8
DISSOLVED SOLIDS, ROE 180 DEG C	9	259.4	25.8	221	300	9	0.417	71.291	0.957	8.0
HARDNESS, TOTAL	9	192.2	27.3	150	240	9	0.430	-1.748	0.934	10.4
HARDNESS, NONCARBONATE	9	43.9	17.6	12	69	9	0.144	-20.851	0.484 *	16.4
TURBIDITY (JTU)	7	115.0	84.2	3	220	7	0.148	46.078	0.093 *	91.9
FLOURIDE, DISSOLVED	9	0.42	0.59	0.2	2.0	9	0.0071	-2.7702	0.707	0.45

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 326

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	625	595	580	560	545	520	495	440	420	390

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
325	15.14	13.20	2.74	96	1.81

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05587550 -- MISSISSIPPI RIVER BELOW ALTON,ILL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	31	4	0	3
CADMIUM (CD), UG/L	4	10	20	4	1	3
CHROMIUM (CR), UG/L	4	20	40	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	0	2
COPPER (CU), UG/L	4	30	70	4	5	11
IRON (FE), UG/L	4	2000	15000	4	30	360
LEAD (PB), UG/L	4	<100	100	4	4	38
MANGANESE (MN), UG/L	4	130	540	4	0	40
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	130	4	20	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	20.00	52.00			
BIOMASS, ASH WT., G/SQ M	2	19.00	39.00			
CHLOROPHYLL A, MG/SQ M	2	.5	43.0			
CHLOROPHYLL B, MG/SQ M	2	.0	12.0			
ORGANIC CARBON, MG/L	4	8.2	17.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05594100 NAME: KASKASKIA RIVER NEAR VENEDY STATION, IL

LAT 38D27M02S LONG 089D37M39S
DRAINAGE AREA: 4393 SQ MI (11378 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	13.36	9.69	1.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	413.9	51.4	314	476					
STREAMFLOW (CUBIC FT/SEC)	11	4130.9	3834.0	665	13000	11	-24.951	14458.523	-0.334 *	3808.5
PH (STANDARD UNITS)	11	7.52	0.33	6.9	7.9	11	0.0040	5.8521	0.625	0.27
PHOSPHORUS, TOTAL	11	0.209	0.106	0.10	0.44	11	-0.00139	0.78541	-0.672	0.083
NITRITE + NITRATE, TOTAL	11	1.337	0.633	0.55	2.70	11	0.00179	0.59692	0.145 *	0.661
NITROGEN, KJELDAHL, TOTAL	11	0.740	0.249	0.52	1.40	11	-0.00337	2.13577	-0.697	0.188
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	7200.0	7149.5	1300	20000	6	-11.993	12266.949	-0.094 *	7957.8
SEDIMENT, SUSPENDED	5	194.2	109.3	100	382					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	558.9	495.5	30	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	9	1056.7	1215.5	40	3700					
SILICA, DISSOLVED	11	4.68	1.17	2.8	6.7	11	0.0059	2.2410	0.260 *	1.19
CALCIUM, DISSOLVED	11	40.45	4.74	30.0	45.0	11	0.0718	10.7549	0.778	3.14
MAGNESIUM, DISSOLVED	11	15.91	2.59	11.0	19.0	11	0.0305	3.2814	0.606	2.17
SODIUM, DISSOLVED	11	17.18	2.60	12.0	22.0	11	0.0291	5.1453	0.575 *	2.24
POTASSIUM, DISSOLVED	11	2.97	0.64	2.4	4.2	11	-0.0053	5.1778	-0.428 *	0.61
BICARBONATE, ION	11	151.5	26.4	93	181	11	0.322	18.116	0.627	21.7
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	46.09	5.61	39.0	59.0	11	0.0594	21.5050	0.544 *	4.96
CHLORIDE, DISSOLVED	11	21.45	3.56	15.0	27.0	11	0.0334	7.6431	0.482 *	3.29
DISSOLVED SOLIDS, SUM OF CONST	11	223.6	25.2	164	257	11	0.381	65.919	0.776	16.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	248.0	28.3	175	280	11	0.345	105.163	0.628	23.2
HARDNESS, TOTAL	11	166.4	22.0	120	190	11	0.306	39.659	0.714	16.3
HARDNESS, NONCARBONATE	11	42.1	6.1	35	54	11	0.040	25.716	0.334 *	6.1
TURBIDITY (JTU)	11	62.9	45.6	10	170	11	-0.583	304.054	-0.657	36.3
FLOURIDE, DISSOLVED	11	0.25	0.09	0.1	0.4	11	0.0006	0.0129	0.309 *	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
91	13.69	12.68	2.61	92	1.56

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05594100 -- KASKASKIA RIVER NEAR VENEDY STATION, IL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	5	3	0	1
CADMIUM (CD), UG/L	3	0	0	3	0	1
CHROMIUM (CR), UG/L	3	0	10	3	0	<10
COBALT (CO), UG/L	3	2	4	3	0	1
COPPER (CU), UG/L	3	0	10	3	0	10
IRON (FE), UG/L	3	660	7500	3	40	100
LEAD (PB), UG/L	3	3	11	3	0	6
MANGANESE (MN), UG/L	3	90	450	3	10	30
MERCURY (HG), UG/L	3	<0.5	0.8	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	10	40	3	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	8.3	17.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 05599500 NAME: BIG MUDDY RIVER AT MURPHYSBORO, IL

LAT 37D44M55S LONG 089D20M45S
DRAINAGE AREA: 2162 SQ MI (5600 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, ---A---	CONSTANT, ---B---	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	13.39	9.17	2.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	589.4	158.2	330	805					
STREAMFLOW (CUBIC FT/SEC)	11	3723.4	4555.9	303	11100					
PH (STANDARD UNITS)	11	7.05	0.32	6.4	7.4	11	0.0002	6.9594	0.079 *	0.34
PHOSPHORUS, TOTAL	11	0.187	0.080	0.09	0.36	11	0.00002	0.17471	0.042 *	0.084
NITRITE + NITRATE, TOTAL	11	0.516	0.219	0.29	1.10	11	0.00053	0.20442	0.382 *	0.213
NITROGEN, KJELDAHL, TOTAL	11	0.713	0.156	0.49	0.98	11	0.00032	0.52151	0.329 *	0.155
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	14883.3	16739.1	1900	47000	6	47.114	-13855.918	0.441 *	16798.4
SEDIMENT, SUSPENDED	5	166.0	103.7	67	330					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	616.7	685.9	44	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	2779.5	4310.4	35	14000					
SILICA, DISSOLVED	11	4.96	1.12	3.4	6.8	11	0.0004	4.7379	0.054 *	1.18
CALCIUM, DISSOLVED	10	47.20	14.94	28.0	70.0	10	0.0650	9.2953	0.719	11.02
MAGNESIUM, DISSOLVED	10	18.66	6.68	9.6	30.0	10	0.0293	1.5824	0.725	4.88
SODIUM, DISSOLVED	10	38.30	16.95	17.0	62.0	10	0.0763	-6.1694	0.743	12.03
POTASSIUM, DISSOLVED	10	4.27	1.33	3.1	7.6	10	-0.0015	5.1369	-0.185 *	1.39
BICARBONATE, ION	11	73.9	24.1	49	133	11	0.106	11.297	0.697	18.2
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	195.00	80.72	85.0	330.0	11	0.3692	-22.5946	0.724	58.73
CHLORIDE, DISSOLVED	11	21.18	9.81	14.0	48.0	11	0.0124	13.8915	0.200 *	10.13
DISSOLVED SOLIDS, SUM OF CONST	10	366.6	136.6	187	566	10	0.612	9.778	0.740	97.4
DISSOLVED SOLIDS, RUE 180 DEG C	11	401.2	136.8	196	593	11	0.679	1.068	0.785	89.4
HARDNESS, TOTAL	10	194.0	64.7	110	300	10	0.277	32.856	0.706	48.6
HARDNESS, NONCARBONATE	10	135.9	53.4	66	230	10	0.203	17.752	0.627 *	44.1
TURBIDITY (JTU)	11	54.9	24.9	28	94	11	0.062	18.085	0.398 *	24.0
FLOURIDE, DISSOLVED	11	0.24	0.08	0.1	0.4	11	-0.0001	0.3239	-0.290 *	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
101	14.27	13.59	2.84	94	1.82

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

05599500 -- BIG MUDDY RIVER AT MURPHYSBORO, IL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	5	3	0	1
CADMIUM (CD), UG/L	3	0	1	3	0	1
CHROMIUM (CR), UG/L	3	<10	20	3	0	<10
COBALT (CO), UG/L	3	1	7	3	1	1
COPPER (CU), UG/L	3	0	10	3	0	10
IRON (FE), UG/L	3	280	7100	3	40	190
LEAD (PB), UG/L	3	2	10	3	0	7
MANGANESE (MN), UG/L	3	300	1900	3	240	1200
MERCURY (HG), UG/L	3	<0.5	2.1	3	<0.5	<0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	50	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	7.6	10.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06054500 NAME: MISSOURI RIVER AT TOSTON, MT.

LAT 46D08M46S LONG 111D25M18S
DRAINAGE AREA: 14669 SQ MI (37993 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.21	6.74	0.5	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	370.9	64.6	205	430					
STREAMFLOW (CUBIC FT/SEC)	12	6259.2	4364.4	3500	19300	12	-64.098	30034.137	-0.949	1438.1
PH (STANDARD UNITS)	12	8.09	0.34	7.5	8.5	12	-0.0014	8.6283	-0.275 *	0.34
PHOSPHORUS, TOTAL	12	0.044	0.033	0.00	0.12	12	-0.00041	0.19560	-0.789	0.022
NITRITE + NITRATE, TOTAL	12	0.127	0.086	0.00	0.26	12	0.00068	-0.12628	0.510 *	0.078
NITROGEN, KJELDAHL, TOTAL	12	0.507	0.450	0.14	1.80	12	-0.00275	1.52796	-0.395 *	0.434
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3596.7	2060.4	860	7500	12	-7.963	6550.117	-0.250 *	2092.4
SEDIMENT, SUSPENDED	12	51.5	52.1	10	155					
SEDIMENT, CLAY-SILT (PERCENT)	12	60.0	17.1	32	82					
COLIFORM, FECAL (COL/100 ML)	12	36.2	60.0	2	220					
STREPTOCOCCI, FECAL (COL/100 ML)	12	46.8	50.6	9	180					
SILICA, DISSOLVED	12	22.58	3.55	16.0	28.0	12	0.0450	5.9071	0.818	2.14
CALCIUM, DISSOLVED	12	39.50	7.05	21.0	46.0	12	0.1031	1.2628	0.945	2.42
MAGNESIUM, DISSOLVED	12	11.42	2.33	6.1	14.0	12	0.0322	-0.5245	0.893	1.10
SODIUM, DISSOLVED	12	18.84	4.55	9.1	25.0	12	0.0643	-5.0213	0.914	1.94
POTASSIUM, DISSOLVED	12	3.82	0.75	2.1	5.4	12	0.0045	2.1625	0.386 *	0.73
BICARBONATE, ION	12	165.8	25.9	98	186	12	0.392	20.445	0.978	5.7
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	38.50	8.68	16.0	48.0	12	0.1298	-9.6627	0.967	2.32
CHLORIDE, DISSOLVED	12	9.69	2.89	3.8	13.0	12	0.0364	-3.8013	0.812	1.77
DISSOLVED SOLIDS, SUM OF CONST	12	227.1	39.8	123	260	12	0.612	0.258	0.993	5.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	229.8	36.5	135	263	12	0.548	26.651	0.970	9.3
HARDNESS, TOTAL	12	146.5	26.5	78	170	12	0.386	3.440	0.940	9.5
HARDNESS, NONCARBONATE	12	10.0	8.4	0	23	12	0.059	-11.925	0.454 *	7.9
TURBIDITY (JTU)	12	7.8	9.5	2	32	12	-0.036	20.962	-0.242 *	9.7
FLOURIDE, DISSOLVED	12	0.95	0.31	0.5	1.3	12	0.0033	-0.2600	0.689	0.23

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	448	420	413	405	397	385	361	246	232	212

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	7.88	9.43	2.70	93	1.77

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06054500 -- MISSOURI RIVER AT TOSTON, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	15	31	5	16	28
CADMIUM (CD), UG/L	5	<10	<10	5	0	1
CHROMIUM (CR), UG/L	5	0	10	5	0	10
COBALT (CO), UG/L	5	<50	<50	5	0	1
COPPER (CU), UG/L	5	10	190	5	0	10
IRON (FE), UG/L	5	230	2400	5	10	40
LEAD (PB), UG/L	5	<100	<100	5	0	2
MANGANESE (MN), UG/L	5	20	190	5	0	20
MERCURY (HG), UG/L	5	0.0	0.2	5	0.0	0.2
SELENIUM (SE), UG/L	5	0	2	5	0	0
ZINC (ZN), UG/L	5	10	80	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	66.00				
BIOMASS, ASH WT., G/SQ M	1	57.00				
CHLOROPHYLL A, MG/SQ M	1	33.0				
CHLOROPHYLL B, MG/SQ M	1	2.3				
ORGANIC CARBON, MG/L	5	2.7	7.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06109500 NAME: MISSOURI RIVER AT VIRGELLE, MT.

LAT 48D00M14S LONG 110D15M19S
DRAINAGE AREA: 34379 SQ MI (89042 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	9.73	6.56	0.5	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	418.2	38.8	373	520					
STREAMFLOW (CUBIC FT/SEC)	11	13586.4	9607.0	5400	29700	11	-69.964	42843.902	-0.283*	9713.3
PH (STANDARD UNITS)	11	8.46	0.30	8.0	8.9	11	-0.0021	9.3381	-0.273*	0.30
PHOSPHORUS, TOTAL	11	0.175	0.271	0.00	0.78	11	0.00499	-1.90976	0.715	0.199
NITRITE + NITRATE, TOTAL	11	0.192	0.212	0.00	0.68	11	0.00342	-1.23865	0.626	0.174
NITROGEN, KJELDAHL, TOTAL	11	0.532	0.515	0.08	1.90	11	0.01130	-4.19308	0.853	0.283
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	6035.5	5156.1	790	16000	11	-38.709	22222.996	-0.291*	5198.9
SEDIMENT, SUSPENDED	10	283.5	439.9	6	1180					
SEDIMENT, CLAY-SILT (PERCENT)	10	67.1	19.7	38	95					
COLIFORM, FECAL (COL/100 ML)	11	35.8	41.0	1	130					
STREPTOCOCCI, FECAL (COL/100 ML)	11	54.0	70.0	5	180					
SILICA, DISSOLVED	11	13.89	2.54	9.8	18.0	11	0.0203	5.4074	0.310*	2.55
CALCIUM, DISSOLVED	11	43.45	1.86	40.0	47.0	11	0.0376	27.7510	0.782	1.22
MAGNESIUM, DISSOLVED	11	15.82	1.78	14.0	20.0	11	0.0435	-2.3618	0.949	0.59
SODIUM, DISSOLVED	11	20.18	4.21	16.0	32.0	11	0.1051	-23.7486	0.968	1.12
POTASSIUM, DISSOLVED	11	3.10	0.55	2.3	4.4	11	0.0125	-2.1402	0.885	0.27
BICARBONATE, ION	11	165.0	12.2	144	183	11	0.165	96.176	0.522*	11.0
CARBONATE, ION	11	1.7	2.7	0	8	11	-0.014	7.454	-0.195*	2.8
SULFATE, DISSOLVED	11	66.82	14.74	52.0	100.0	11	0.2872	-53.2794	0.757	10.16
CHLORIDE, DISSOLVED	11	7.25	2.61	4.1	13.0	11	0.0476	-12.6601	0.709	1.94
DISSOLVED SOLIDS, SUM OF CONST	11	254.3	24.7	221	317	11	0.623	-6.110	0.979	5.3
DISSOLVED SOLIDS, RCE 180 DEG C	11	260.9	28.8	226	336	11	0.721	-40.799	0.974	6.9
HARDNESS, TOTAL	11	174.5	11.3	160	200	11	0.251	69.385	0.865	6.0
HARDNESS, NONCARBONATE	11	35.5	10.3	26	59	11	0.160	-31.652	0.605	8.6
TURBIDITY (JTU)	10	71.1	112.1	0	300	10	1.988	-759.714	0.726	81.8
FLOURIDE, DISSOLVED	11	0.62	0.18	0.4	1.0	11	0.0007	0.3418	0.144*	0.19

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 357

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	594	521	467	440	431	418	406	387	378	180

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
354	8.13	9.94	2.62	95	1.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06109500 -- MISSOURI RIVER AT VIRGELLE, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	10	16	4	7	16
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	30	80	4	3	13
IRON (FE), UG/L	4	120	4100	4	10	20
LEAD (PB), UG/L	4	<100	<100	4	0	3
MANGANESE (MN), UG/L	4	20	120	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	260.00				
BIOMASS, ASH WT., G/SQ M	2	1.50	250.00			
CHLOROPHYLL A, MG/SQ M	2	44.0	61.0			
CHLOROPHYLL B, MG/SQ M	2	7.3	9.5			
ORGANIC CARBON, MG/L	3	4.3	6.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06130500 NAME: MUSSELSHELL RIVER AT MOSBY, MT.

LAT 46D59M41S LONG 107D53M18S
DRAINAGE AREA: 7846 SQ MI (20321 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	9.15	8.13	0.5	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1754.2	553.3	1020	2650					
STREAMFLOW (CUBIC FT/SEC)	13	878.2	1114.2	50	3500	12	-1.444	3309.795	-0.726	792.8
PH (STANDARD UNITS)	12	8.30	0.27	7.8	8.6	12	-0.0004	8.9372	-0.755	0.18
PHOSPHORUS, TOTAL	12	0.223	0.335	0.00	1.20	12	-0.00027	0.69925	-0.448 *	0.314
NITRITE + NITRATE, TOTAL	12	0.156	0.122	0.01	0.40	12	0.00000	0.14968	0.016 *	0.127
NITROGEN, KJELDAHL, TOTAL	12	0.916	0.861	0.15	3.20	12	-0.00065	2.05387	-0.417 *	0.821
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2756.7	2596.1	570	8100	11	-1.297	4573.242	-0.360 *	2038.8
SEDIMENT, SUSPENDED	12	901.6	1405.9	36	4880					
SEDIMENT, CLAY-SILT (PERCENT)	12	83.3	8.7	69	92					
COLIFORM, FECAL (COL/100 ML)	12	85.5	97.0	0	290					
STREPTOCOCCI, FECAL (COL/100 ML)	12	130.2	135.6	14	520					
SILICA, DISSOLVED	12	6.40	2.00	3.4	9.6	12	-0.0023	10.4579	-0.639	1.62
CALCIUM, DISSOLVED	12	114.83	36.89	78.0	200.0	12	0.0530	21.8093	0.795	23.45
MAGNESIUM, DISSOLVED	12	74.83	31.48	42.0	140.0	12	0.0495	-12.0025	0.870	16.26
SODIUM, DISSOLVED	12	201.67	93.61	77.0	360.0	12	0.1584	-76.2037	0.936	34.47
POTASSIUM, DISSOLVED	12	5.37	1.12	3.7	7.2	12	-0.0004	6.0620	-0.194 *	1.15
BICARBONATE, ION	12	295.9	77.3	183	468	12	0.096	127.194	0.688	58.8
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	727.50	340.11	310.0	1400.0	12	0.5534	-243.3384	0.900	155.20
CHLORIDE, DISSOLVED	12	16.32	7.10	6.8	27.0	12	0.0122	-5.0983	0.952	2.29
DISSOLVED SOLIDS, SUM OF CONST	12	1292.5	536.8	660	2370	12	0.872	-236.610	0.898	247.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	1401.5	593.3	705	2540	12	0.975	-308.273	0.909	259.3
HARDNESS, TOTAL	12	597.5	224.3	380	1100	12	0.336	7.427	0.830	131.3
HARDNESS, NONCARBONATE	12	352.5	163.2	170	690	12	0.259	-101.075	0.877	82.3
TURBIDITY (JTU)	12	169.3	225.4	10	750	12	-0.232	576.068	-0.569	194.3
FLOURIDE, DISSOLVED	12	0.36	0.07	0.3	0.5	12	0.0000	0.3463	0.057 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 321

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	3110	2770	2600	2370	2200	1620	1280	1040	993	950

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
329	8.65	10.78	2.72	93	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06130500 -- MUSSELSHELL RIVER AT MOSBY, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	52	5	0	1
CADMIUM (CD), UG/L	5	<10	10	5	0	1
CHROMIUM (CR), UG/L	5	0	90	5	0	40
COBALT (CO), UG/L	5	<50	100	5	0	2
COPPER (CU), UG/L	5	<10	130	5	2	13
IRON (FE), UG/L	5	460	110000	5	0	80
LEAD (PB), UG/L	5	<100	100	5	0	7
MANGANESE (MN), UG/L	4	30	1200	5	0	30
MERCURY (HG), UG/L	5	0.1	1.4	5	0.0	1.0
SELENIUM (SE), UG/L	5	1	4	5	1	2
ZINC (ZN), UG/L	5	40	430	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	5	2.5	32.0			

STATION NUMBER: 06132000 NAME: MISSOURI RIVER BELOW FORT PECK DAM, MT.

LAT 48D02M39S LONG 106D21M21S
DRAINAGE AREA: 57556 SQ MI (149070 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFFICIENT, R	CONSTANT, b	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	7.13	4.61	0.5	13.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	637.7	66.9	540	822					
STREAMFLOW (CUBIC FT/SEC)	12	13529.2	7739.0	6950	35000	12	-2.821	15328.023	-0.024*	8114.3
PH (STANDARD UNITS)	12	8.37	0.35	7.5	8.7	12	-0.0037	10.7204	-0.704	0.26
PHOSPHORUS, TOTAL	12	0.019	0.027	0.00	0.10	12	-0.00001	0.02815	-0.034*	0.029
NITRITE + NITRATE, TOTAL	12	0.024	0.036	0.00	0.11	12	0.00000	0.02162	0.008*	0.037
NITROGEN, KJELDAHL, TOTAL	12	0.264	0.142	0.10	0.57	12	0.00110	-0.43414	0.514*	0.128
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	440.6	494.1	39	1400	11	-0.58A	812.996	-0.083*	519.1
SEDIMENT, SUSPENDED	10	34.5	52.9	4	176					
SEDIMENT, CLAY-SILT (PERCENT)	10	44.8	17.5	21	82					
COLIFORM, FECAL (COL/100 ML)	12	0.8	1.3	0	4					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3.6	4.6	0	14					
SILICA, DISSOLVED	12	7.91	0.48	7.3	8.8	12	-0.0006	8.3015	-0.085*	0.51
CALCIUM, DISSOLVED	12	55.67	1.23	54.0	58.0	12	-0.0045	58.5348	-0.244*	1.25
MAGNESIUM, DISSOLVED	12	20.75	1.14	19.0	23.0	12	-0.0020	22.0070	-0.116*	1.19
SODIUM, DISSOLVED	12	42.75	0.45	42.0	43.0	12	-0.0048	45.7823	-0.703	0.34
POTASSIUM, DISSOLVED	12	3.69	0.54	2.0	4.0	12	-0.0022	5.0877	-0.271*	0.55
BICARBONATE, ION	12	187.8	5.3	180	196	12	0.030	168.603	0.379*	5.2
CARBONATE, ION	8	1.3	2.5	0	7	8	-0.090	57.256	-0.448*	2.5
SULFATE, DISSOLVED	12	145.00	9.05	130.0	160.0	12	0.0195	132.5597	0.144*	9.39
CHLORIDE, DISSOLVED	12	8.35	0.83	7.4	10.0	12	-0.0014	9.2531	-0.114*	0.87
DISSOLVED SOLIDS, SUM OF CONST	12	378.3	9.9	361	391	12	0.013	370.060	0.087*	10.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	382.5	7.5	371	393	12	0.030	363.632	0.264*	7.6
HARDNESS, TOTAL	12	223.3	6.5	220	240	12	-0.034	244.810	-0.346*	6.4
HARDNESS, NONCARBONATE	12	68.9	5.1	62	76	12	-0.033	90.134	-0.433*	4.9
TURBIDITY (JTU)	12	3.3	2.4	1	10	12	-0.002	4.675	-0.062*	2.5
FLOURIDE, DISSOLVED	12	0.77	0.13	0.6	1.0	12	-0.0000	0.7907	-0.013*	0.14

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 361

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	749	656	642	628	618	606	600	592	589	580

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	6.98	5.30	2.64	94	0.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06132000 -- MISSOURI RIVER BELOW FORT PECK DAM, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	3	6	5	2	6
CADMIUM (CD), UG/L	5	< 10	<10	5	0	1
CHROMIUM (CR), UG/L	5	0	10	5	0	10
COBALT (CO), UG/L	5	0	<50	5	0	0
COPPER (CU), UG/L	5	<10	60	5	2	16
IRON (FE), UG/L	5	40	880	5	10	200
LEAD (PB), UG/L	5	<100	100	5	0	5
MANGANESE (MN), UG/L	5	0	20	5	0	10
MERCURY (HG), UG/L	5	0.0	2.4	5	0.0	1.8
SELENIUM (SE), UG/L	5	1	1	5	1	1
ZINC (ZN), UG/L	5	10	120	5	6	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	2.29				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.1				
ORGANIC CARBON, MG/L	5	2.5	4.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06174500 NAME: MILK RIVER AT NASHUA, MT.

LAT 48D07M52S LONG 106D21M50S
DRAINAGE AREA: 22332 SQ MI (57840 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.54	9.92	0.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1095.8	310.2	730	1700					
STREAMFLOW (CUBIC FT/SEC)	12	1212.3	2227.6	127	7920	12	-3.875	5459.109	-0.540*	1966.9
PH (STANDARD UNITS)	12	8.17	0.31	7.6	8.6	12	-0.0004	8.6454	-0.433*	0.29
PHOSPHORUS, TOTAL	12	0.279	0.487	0.02	1.70	12	-0.00089	1.25144	-0.565*	0.421
NITRITE + NITRATE, TOTAL	12	0.089	0.107	0.00	0.29	12	-0.00014	0.23736	-0.394*	0.103
NITROGEN, KJELDAHL, TOTAL	12	0.789	0.817	0.06	2.70	12	-0.00142	2.34679	-0.539*	0.722
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5320.0	7170.0	110	25000	12	-3.998	9700.609	-0.173*	7406.5
SEDIMENT, SUSPENDED	12	428.8	783.6	12	2230					
SEDIMENT, CLAY-SILT (PERCENT)	12	76.0	22.3	38	100					
COLIFORM, FECAL (COL/100 ML)	12	135.8	154.7	2	500					
STREPTOCOCCI, FECAL (COL/100 ML)	0									
SILICA, DISSOLVED	12	5.02	2.65	0.9	9.8	12	-0.0061	11.7264	-0.716	1.94
CALCIUM, DISSOLVED	12	63.56	21.29	34.0	100.0	12	0.0628	-5.2825	0.916	8.98
MAGNESIUM, DISSOLVED	12	30.83	11.26	16.0	49.0	12	0.0349	-7.4633	0.963	3.18
SODIUM, DISSOLVED	12	126.75	44.32	74.0	190.0	12	0.1318	-17.6698	0.922	17.95
POTASSIUM, DISSOLVED	12	6.17	1.26	2.6	7.6	12	0.0003	5.8172	0.080*	1.32
BICARBONATE, ION	12	294.0	96.0	126	453	12	0.285	-17.939	0.920	39.4
CARBONATE, ION	7	0.3	0.8	0	2	7	-0.000	0.645	-0.136*	0.8
SULFATE, DISSOLVED	12	292.50	105.41	160.0	470.0	12	0.3159	-53.6194	0.929	40.78
CHLORIDE, DISSOLVED	12	19.20	9.87	5.0	38.0	12	0.0303	-14.0044	0.952	3.16
DISSOLVED SOLIDS, SUM OF CONST	12	689.9	234.1	405	1080	12	0.712	-90.440	0.944	81.1
DISSOLVED SOLIDS, RUE 180 DEG C	12	706.8	231.8	429	1090	12	0.704	-65.069	0.943	81.1
HARDNESS, TOTAL	12	285.8	98.4	150	450	12	0.300	-43.273	0.947	33.2
HARDNESS, NONCARBONATE	12	44.3	24.9	11	80	12	0.068	-30.717	0.853	13.6
TURBIDITY (JTU)	12	160.9	285.3	2	740	12	-0.618	837.733	-0.672	221.7
FLOURIDE, DISSOLVED	12	0.28	0.11	0.0	0.4	12	0.0000	0.2832	0.000*	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1540	1490	1460	1420	1340	935	844	632	598	532

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE

FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.99	12.77	2.74	92	2.58

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06174500 -- MILK RIVER AT NASHUA, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	17	5	0	2
CADMIUM (CD), UG/L	5	< 10	< 10	5	0	1
CHROMIUM (CR), UG/L	5	0	30	5	0	10
COBALT (CO), UG/L	5	< 50	100	5	0	0
COPPER (CU), UG/L	5	< 10	55	5	0	10
IRON (FE), UG/L	5	290	24000	5	20	60
LEAD (PB), UG/L	5	< 100	100	5	0	3
MANGANESE (MN), UG/L	5	60	490	5	0	130
MERCURY (HG), UG/L	5	0.0	11.0	5	0.0	9.0
SELENIUM (SE), UG/L	5	0	2	5	0	1
ZINC (ZN), UG/L	5	20	100	5	0	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	4.09				
BIOMASS, ASH WT., G/SQ M	2	.79	2.50			
CHLOROPHYLL A, MG/SQ M	2	.0	1.1			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	5	5.0	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06185500 NAME: MISSOURI RIVER NEAR CULBERTSON, MT.

LAT 48D07M24S LONG 104D28M30S
DRAINAGE AREA: 91557 SQ MI (237133 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	7.76	6.91	0.5	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	652.1	41.3	580	725					
STREAMFLOW (CUBIC FT/SEC)	17	16685.3	8844.1	5200	36800	12	-113.123	90286.250	-0.466*	9305.0
PH (STANDARD UNITS)	12	8.21	0.28	7.8	8.6	12	-0.0032	10.2994	-0.471*	0.26
PHOSPHORUS, TOTAL	12	0.067	0.069	0.01	0.21	12	-0.00052	0.40595	-0.313*	0.068
NITRITE + NITRATE, TOTAL	12	0.066	0.071	0.00	0.25	12	-0.00127	0.89593	-0.743	0.050
NITROGEN, KJELDAHL, TOTAL	12	0.456	0.339	0.12	1.40	12	-0.00568	4.16033	-0.693	0.256
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1222.9	1616.4	22	5400	11	-24.757	17367.063	-0.629	1383.5
SEDIMENT, SUSPENDED	15	510.7	560.5	31	2150					
SEDIMENT, CLAY-SILT (PERCENT)	7	44.4	11.4	27	62					
COLIFORM, FECAL (COL/100 ML)	12	17.5	17.6	0	56					
STREPTOCOCCI, FECAL (COL/100 ML)	12	31.6	34.9	2	100					
SILICA, DISSOLVED	12	7.90	0.62	6.8	8.6	12	0.0089	2.0810	0.594	0.52
CALCIUM, DISSOLVED	12	52.92	5.92	38.0	62.0	12	0.1130	-20.7982	0.789	3.81
MAGNESIUM, DISSOLVED	12	21.08	1.83	16.0	24.0	12	0.0324	-0.0339	0.730	1.31
SODIUM, DISSOLVED	12	48.83	4.06	41.0	57.0	12	-0.0246	65.0150	-0.252*	4.12
POTASSIUM, DISSOLVED	12	4.15	0.86	1.8	5.4	12	-0.0091	10.0812	-0.436*	0.81
BICARBONATE, ION	12	192.3	13.4	162	218	12	0.273	14.434	0.638	7.7
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	147.50	9.65	130.0	160.0	12	0.1338	60.2233	0.573*	8.30
CHLORIDE, DISSOLVED	12	8.40	1.01	6.8	9.8	12	0.0174	-2.9586	0.712	0.74
DISSOLVED SOLIDS, SUM OF CONST	12	386.3	20.7	341	430	12	0.405	122.240	0.810	12.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	396.8	21.1	346	438	12	0.364	159.232	0.714	15.5
HARDNESS, TOTAL	12	220.0	21.7	160	250	12	0.413	-49.188	0.784	14.1
HARDNESS, NONCARBONATE	12	61.2	12.9	28	75	12	0.193	-64.958	0.619	10.6
TURBIDITY (JTU)	12	67.7	82.9	0	270	12	-1.345	944.833	-0.671	64.5
FLOURIDE, DISSOLVED	12	0.75	0.16	0.4	1.1	12	0.0030	-1.1862	0.755	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	709	661	650	632	625	615	607	598	594	556

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(Q) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	7.21	9.40	2.62	93	1.84

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06185500 -- MISSOURI RIVER NEAR CULBERTSON, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	4	15	5	1	4
CADMIUM (CD), UG/L	5	<10	10	5	0	3
CHROMIUM (CR), UG/L	5	0	30	5	0	10
COBALT (CO), UG/L	5	<50	<50	5	0	2
COPPER (CU), UG/L	5	<10	170	5	3	14
IRON (FE), UG/L	5	740	20000	5	20	250
LEAD (PB), UG/L	5	<100	400	5	1	8
MANGANESE (MN), UG/L	5	20	370	5	0	5
MERCURY (HG), UG/L	5	0.0	1.6	5	0.0	0.7
SELENIUM (SE), UG/L	5	1	2	5	0	1
ZINC (ZN), UG/L	5	50	180	5	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	2.6	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06214500 NAME: YELLOWSTONE RIVER AT BILLINGS MT

LAT 45D47M48S LONG 108D28M12S
DRAINAGE AREA: 11795 SQ MI (30549 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.50	7.13	0.0	19.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	393.2	142.3	138	620					
STREAMFLOW (CUBIC FT/SEC)	12	10652.5	13439.3	1830	39500	12	-79.671	41976.348	-0.843	7572.4
PH (STANDARD UNITS)	12	8.23	0.28	7.7	8.7	12	0.0013	7.7299	0.649	0.22
PHOSPHORUS, TOTAL	11	0.083	0.101	0.00	0.33	11	-0.00025	0.18652	-0.302 *	0.102
NITRITE + NITRATE, TOTAL	11	0.244	0.185	0.02	0.53	11	0.00076	-0.07396	0.507 *	0.169
NITROGEN, KJELDAHL, TOTAL	11	0.464	0.374	0.12	1.20	11	-0.00121	0.96660	-0.398 *	0.362
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2936.0	2810.4	690	10000	10	3.730	1522.992	0.203 *	2918.9
SEDIMENT, SUSPENDED	12	204.4	270.9	4	741					
SEDIMENT, CLAY-SILT (PERCENT)	12	48.3	20.3	6	79					
COLIFORM, FECAL (COL/100 ML)	12	228.1	285.7	3	900					
STREPTOCOCCI, FECAL (COL/100 ML)	12	151.0	134.2	17	480					
SILICA, DISSOLVED	12	13.75	2.83	10.0	19.0	12	0.0116	9.1847	0.583	2.41
CALCIUM, DISSOLVED	12	38.17	10.92	16.0	53.0	12	0.0722	9.7814	0.941	3.89
MAGNESIUM, DISSOLVED	12	12.82	4.15	4.9	18.0	12	0.0277	1.9439	0.948	1.39
SODIUM, DISSOLVED	12	25.30	9.09	8.1	37.0	12	0.0606	1.4707	0.949	3.01
POTASSIUM, DISSOLVED	12	3.20	1.50	0.7	6.2	12	0.0029	2.0689	0.273 *	1.51
BICARBONATE, ION	12	146.1	40.5	60	201	12	0.274	38.277	0.963	11.5
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	70.42	26.71	16.0	110.0	12	0.1743	1.9026	0.928	10.43
CHLORIDE, DISSOLVED	12	6.56	2.24	1.9	9.2	12	0.0127	1.5628	0.807	1.39
DISSOLVED SOLIDS, SUM OF CONST	12	242.8	74.2	105	350	12	0.497	47.372	0.954	23.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	245.0	78.7	100	352	12	0.512	43.663	0.925	31.3
HARDNESS, TOTAL	12	148.1	44.4	64	210	12	0.297	31.328	0.952	14.3
HARDNESS, NONCARBONATE	12	28.3	13.3	8	50	12	0.070	0.826	0.750	9.2
TURBIDITY (JTU)	12	36.2	52.1	3	170	12	-0.136	89.764	-0.372 *	50.7
FLOURIDE, DISSOLVED	12	0.46	0.16	0.2	0.7	12	0.0007	0.1755	0.654	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	586	545	506	482	464	435	388	206	167	143

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	7.89	9.83	2.62	92	2.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06214500 -- YELLOWSTONE RIVER AT BILLINGS MT

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	9	13	4	2	10
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	<10	50	4	1	12
IRON (FE), UG/L	4	200	12000	4	20	40
LEAD (PB), UG/L	4	<100	<100	4	1	5
MANGANESE (MN), UG/L	4	10	390	4	0	20
MERCURY (HG), UG/L	4	0.0	1.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	40	100	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	170.00				
BIOMASS, ASH WT., G/SQ M	1	160.00				
CHLOROPHYLL A, MG/SQ M	1	13.0				
CHLOROPHYLL B, MG/SQ M	1	1.3				
ORGANIC CARBON, MG/L	3	3.2	17.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06294700 NAME: BIGHORN RIVER AT BIGHORN, MT.

LAT 46D08M50S LONG 107D28M00S
DRAINAGE AREA: 22885 SQ MI (59272 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.08	6.84	0.0	19.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	822.9	118.8	630	975					
STREAMFLOW (CUBIC FT/SEC)	12	5530.8	1892.3	3300	10000	12	-3.442	8363.477	-0.216*	1937.8
PH (STANDARD UNITS)	12	8.27	0.31	7.4	8.5	12	0.0014	7.1086	0.537*	0.28
PHOSPHORUS, TOTAL	12	0.109	0.095	0.01	0.33	12	0.00023	-0.08192	0.290*	0.095
NITRITE + NITRATE, TOTAL	12	0.270	0.103	0.03	0.38	12	0.00044	-0.09255	0.507*	0.093
NITROGEN, KJELDAHL, TOTAL	12	0.516	0.202	0.23	0.82	12	0.00034	0.23624	0.200*	0.207
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1516.7	1023.5	620	3600	9	-3.789	4646.906	-0.418*	993.8
SEDIMENT, SUSPENDED	12	177.1	191.5	21	555					
SEDIMENT, CLAY-SILT (PERCENT)	12	57.3	22.5	3	89					
COLIFORM, FECAL (COL/100 ML)	12	67.1	82.2	3	310					
STREPTOCOCCI, FECAL (COL/100 ML)	12	215.1	373.0	7	1300					
SILICA, DISSOLVED	12	9.11	0.95	7.3	11.0	12	0.0051	4.9427	0.630	0.78
CALCIUM, DISSOLVED	12	73.25	10.15	53.0	90.0	12	0.0709	14.8773	0.830	5.94
MAGNESIUM, DISSOLVED	12	27.17	5.72	19.0	38.0	12	0.0329	0.1331	0.683	4.38
SODIUM, DISSOLVED	12	73.58	11.33	52.0	94.0	12	0.0766	10.5321	0.804	7.06
POTASSIUM, DISSOLVED	12	3.56	0.64	2.6	4.6	12	0.0026	1.3950	0.485*	0.59
BICARBONATE, ION	12	202.9	26.5	155	256	12	0.152	77.590	0.683	20.3
CARBONATE, ION	10	0.9	1.9	0	5	10	0.002	-0.448	0.109*	2.0
SULFATE, DISSOLVED	12	262.50	51.72	170.0	350.0	12	0.3457	-21.9861	0.794	32.95
CHLORIDE, DISSOLVED	12	9.95	1.83	6.1	13.0	12	0.0117	0.3609	0.758	1.25
DISSOLVED SOLIDS, SUM OF CONST	12	560.3	91.3	388	693	12	0.622	48.768	0.810	56.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	588.3	100.3	419	750	12	0.677	31.113	0.803	62.7
HARDNESS, TOTAL	12	294.2	48.3	210	380	12	0.313	36.734	0.769	32.4
HARDNESS, NONCARBONATE	12	126.5	29.7	83	170	12	0.187	-27.108	0.748	20.7
TURBIDITY (JTU)	12	41.9	45.4	3	120	12	0.158	-87.701	0.413*	43.3
FLUORIDE, DISSOLVED	12	0.38	0.08	0.3	0.6	12	0.0003	0.0995	0.491*	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1140	1040	1010	952	870	828	794	660	627	583

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.61	9.02	2.40	93	1.69

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06294700 -- BIGHORN RIVER AT BIGHORN, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	3	4	1	2
CADMIUM (CD), UG/L	4	<10	20	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	<10	50	4	1	3
IRON (FE), UG/L	4	500	8200	4	10	40
LEAD (PB), UG/L	4	<100	100	4	1	3
MANGANESE (MN), UG/L	4	20	220	4	0	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	2	4	4	1	3
ZINC (ZN), UG/L	4	30	50	4	2	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.00	5.19			
BIOMASS, ASH WT., G/SQ M	2	1.39	4.79			
CHLOROPHYLL A, MG/SQ M	2	.5	8.0			
CHLOROPHYLL B, MG/SQ M	2	.0	.8			
ORGANIC CARBON, MG/L	4	4.7	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06308500 NAME: TONGUE RIVER AT MILES CITY, MT.

LAT 46D21M30S LONG 105D48M24S
DRAINAGE AREA: 5379 SQ MI (13932 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.58	8.85	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	764.2	199.7	440	990					
STREAMFLOW (CUBIC FT/SEC)	12	903.3	1094.6	140	4140	12	-3.318	3438.492	-0.605	913.8
PH (STANDARD UNITS)	12	8.32	0.17	8.0	8.5	12	-0.0001	8.3809	-0.096 *	0.18
PHOSPHORUS, TOTAL	12	0.262	0.371	0.01	1.00	12	-0.00087	0.92282	-0.466 *	0.344
NITRITE + NITRATE, TOTAL	12	0.091	0.101	0.00	0.32	12	-0.00004	0.12521	-0.089 *	0.105
NITROGEN, KJELDAHL, TOTAL	12	0.972	0.905	0.19	2.90	12	-0.00183	2.37137	-0.404 *	0.868
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	7065.6	7243.7	260	20000	9	-12.390	15848.801	-0.345 *	7269.0
SEDIMENT, SUSPENDED	12	762.8	1331.2	9	4360					
SEDIMENT, CLAY-SILT (PERCENT)	12	73.8	13.1	53	96					
COLIFORM, FECAL (COL/100 ML)	11	301.6	832.5	4	2800					
STREPTOCOCCI, FECAL (COL/100 ML)	11	542.4	1010.8	16	3400					
SILICA, DISSOLVED	12	5.83	1.71	3.6	8.2	12	-0.0050	9.6175	-0.579	1.46
CALCIUM, DISSOLVED	12	58.17	14.84	27.0	79.0	12	0.0660	7.7437	0.888	7.15
MAGNESIUM, DISSOLVED	12	39.92	12.47	14.0	55.0	12	0.0562	-3.0230	0.900	5.70
SODIUM, DISSOLVED	12	56.50	15.01	29.0	80.0	12	0.0466	20.8811	0.620	12.34
POTASSIUM, DISSOLVED	12	4.73	0.97	3.2	6.0	12	0.0027	2.6510	0.559 *	0.85
BICARBONATE, ION	12	258.7	62.4	142	353	12	0.283	42.287	0.906	27.6
CARBONATE, ION	10	0.9	1.9	0	5	10	0.001	0.296	0.089 *	2.0
SULFATE, DISSOLVED	12	205.67	60.99	98.0	280.0	12	0.2763	-5.4821	0.905	27.23
CHLORIDE, DISSOLVED	12	3.84	1.38	1.8	6.3	12	0.0059	-0.6717	0.852	0.76
DISSOLVED SOLIDS, SUM OF CONST	12	503.3	127.4	290	658	12	0.589	53.537	0.922	51.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	524.5	134.5	296	704	12	0.603	63.979	0.895	62.9
HARDNESS, TOTAL	12	310.0	86.9	130	420	12	0.397	6.923	0.912	37.4
HARDNESS, NONCARBONATE	12	95.3	38.3	9	140	12	0.161	-27.419	0.837	22.0
TURBIDITY (JTU)	12	191.8	359.2	1	1200	12	-0.977	938.303	-0.543 *	316.3
FLOURIDE, DISSOLVED	12	0.29	0.08	0.2	0.5	12	0.0000	0.2631	0.094 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 298

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1150	1110	1060	1010	961	857	800	446	394	368

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
299	7.85	9.99	2.82	89	2.22

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06308500 -- TONGUE RIVER AT MILES CITY, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	26	4	0	1
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	80	4	0	10
COBALT (CO), UG/L	4	<50	100	4	0	1
COPPER (CU), UG/L	4	<10	170	4	1	7
IRON (FE), UG/L	4	250	74000	4	20	150
LEAD (PB), UG/L	4	<100	<100	4	1	4
MANGANESE (MN), UG/L	3	30	680	4	0	10
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	1	2	4	0	1
ZINC (ZN), UG/L	4	40	340	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.50	13.00			
BIOMASS, ASH WT., G/SQ M	2	.39	12.00			
CHLOROPHYLL A, MG/SQ M	2	.0	.0			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	4	8.6	27.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06326500 NAME: POWDER RIVER NEAR LOCATE, MT.

LAT 46D27M00S LONG 105D19M00S
DRAINAGE AREA: 13194 SQ MI (34172 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY*				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	8.65	7.85	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1786.7	520.2	920	2370					
STREAMFLOW (CUBIC FT/SEC)	13	1687.5	2990.1	33	10800	12	-1.649	3874.917	-0.683	961.1
PH (STANDARD UNITS)	12	8.20	0.23	7.7	8.5	12	0.0001	7.9577	0.307 *	0.23
PHOSPHORUS, TOTAL	12	0.514	0.485	0.01	1.50	12	-0.00063	1.64164	-0.677	0.374
NITRITE + NITRATE, TOTAL	12	0.290	0.228	0.00	0.74	12	-0.00013	0.51434	-0.286 *	0.229
NITROGEN, KJELDAHL, TOTAL	12	1.542	1.615	0.44	5.80	12	-0.00173	4.63690	-0.558 *	1.405
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	4406.0	4467.0	120	13000	10	-2.984	9475.105	-0.353 *	4433.0
SEDIMENT, SUSPENDED	12	5209.3	6763.6	31	19000					
SEDIMENT, CLAY-SILT (PERCENT)	7	70.9	28.5	18	95					
COLIFORM, FECAL (COL/100 ML)	12	194.6	370.0	3	1300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	289.8	343.8	31	970					
SILICA, DISSOLVED	12	8.93	2.35	5.5	12.0	12	0.0010	7.1143	0.226 *	2.40
CALCIUM, DISSOLVED	12	110.50	28.81	64.0	150.0	12	0.0515	18.4907	0.930	11.13
MAGNESIUM, DISSOLVED	12	49.92	14.99	26.0	74.0	12	0.0266	2.3080	0.925	5.98
SODIUM, DISSOLVED	12	239.17	79.02	110.0	350.0	12	0.1357	-3.2788	0.893	37.27
POTASSIUM, DISSOLVED	12	7.09	1.48	4.3	8.7	12	0.0019	3.7237	0.665	1.16
BICARBONATE, ION	12	273.3	87.0	158	454	12	0.135	31.463	0.809	53.6
CARBONATE, ION	9	0.2	0.7	0	2	9	0.000	-0.493	0.350 *	0.7
SULFATE, DISSOLVED	12	609.17	195.75	320.0	970.0	12	0.3109	53.6589	0.826	115.66
CHLORIDE, DISSOLVED	12	107.50	51.49	31.0	220.0	12	0.0760	-28.3744	0.768	34.56
DISSOLVED SOLIDS, SUM OF CONST	12	1268.0	381.9	642	1760	12	0.672	67.417	0.915	161.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	1350.8	411.1	668	1870	12	0.736	34.964	0.932	156.4
HARDNESS, TOTAL	12	481.7	132.5	270	680	12	0.238	56.727	0.934	49.8
HARDNESS, NONCARBONATE	12	258.3	77.8	140	370	12	0.125	34.938	0.836	44.8
TURBIDITY (JTU)	12	468.2	505.0	4	1200	12	-0.621	1577.597	-0.640	407.1
FLOURIDE, DISSOLVED	12	0.40	0.06	0.3	0.5	12	-0.0000	0.4330	-0.159 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 362

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2870	2740	2630	2460	2280	1980	1550	898	782	708

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	8.13	11.17	2.89	88	2.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06326500 -- POWDER RIVER NEAR LOCATE, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	60	4	0	2
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	100	4	0	10
COBALT (CO), UG/L	4	<50	150	4	0	1
COPPER (CU), UG/L	4	20	200	4	3	8
IRON (FE), UG/L	4	1600	170000	4	20	150
LEAD (PB), UG/L	4	<100	200	4	0	2
MANGANESE (MN), UG/L	4	30	3500	4	0	10
MERCURY (HG), UG/L	4	0.1	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	1	5	4	1	3
ZINC (ZN), UG/L	4	60	670	4	20	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.79	8.39			
BIOMASS, ASH WT., G/SQ M	2	.50	6.19			
CHLOROPHYLL A, MG/SQ M	2	.0	.1			
CHLOROPHYLL B, MG/SQ M	2	.0	.0			
ORGANIC CARBON, MG/L	4	6.5	53.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06329500 NAME: YELLOWSTONE RIVER NEAR SIDNEY, MT.

LAT 47D40M42S LONG 104D09M22S
DRAINAGE AREA: 69103 SQ MI (178977 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	9.79	8.52	0.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	711.7	178.9	320	980					
STREAMFLOW (CUBIC FT/SEC)	24	17201.7	14175.0	3600	50100	23	-51.595	54270.988	-0.641	11298.1
PH (STANDARD UNITS)	22	8.31	0.36	7.3	8.9	22	-0.0006	8.7054	-0.282 *	0.36
PHOSPHORUS, TOTAL	24	0.198	0.283	0.00	1.00	23	0.00010	0.13481	0.062 *	0.294
NITRITE + NITRATE, TOTAL	24	0.224	0.202	0.00	0.58	23	0.00054	-0.16217	0.472	0.186
NITROGEN, KJELDAHL, TOTAL	24	0.927	1.080	0.14	5.00	23	0.00170	-0.24891	0.278 *	1.074
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6514.2	9064.0	160	27000	11	-6.120	11360.242	-0.122 *	9768.7
SEDIMENT, SUSPENDED	14	1080.0	1109.1	20	3230					
SEDIMENT, CLAY-SILT (PERCENT)	6	46.8	7.6	41	61					
COLIFORM, FECAL (COL/100 ML)	21	221.9	554.4	0	2500					
STREPTOCOCCI, FECAL (COL/100 ML)	22	92.4	162.5	5	700					
SILICA, DISSOLVED	13	10.17	1.51	8.3	13.0	13	0.0010	9.3903	0.131 *	1.56
CALCIUM, DISSOLVED	13	54.77	13.52	27.0	73.0	13	0.0628	7.9919	0.878	6.75
MAGNESIUM, DISSOLVED	13	22.35	5.54	9.5	28.0	13	0.0277	1.6996	0.946	1.87
SODIUM, DISSOLVED	13	62.54	20.47	22.0	91.0	13	0.1008	-12.5409	0.931	7.81
POTASSIUM, DISSOLVED	13	3.98	0.99	2.1	5.5	13	0.0032	1.5986	0.609	0.82
BICARBONATE, ION	13	184.5	39.3	94	232	13	0.180	50.541	0.866	20.5
CARBONATE, ION	8	0.1	0.4	0	1	8	-0.000	0.460	-0.295 *	0.4
SULFATE, DISSOLVED	13	193.23	57.73	72.0	260.0	13	0.2874	-20.7483	0.941	20.47
CHLORIDE, DISSOLVED	13	10.68	3.81	4.0	17.0	13	0.0190	-3.4659	0.943	1.32
DISSOLVED SOLIDS, SUM OF CONST	13	449.2	117.3	194	562	13	0.590	9.681	0.951	37.9
DISSOLVED SOLIDS, ROE 180 DEG C	24	452.3	119.6	200	587	23	0.645	-10.036	0.952	38.1
HARDNESS, TOTAL	13	229.2	56.8	110	300	13	0.274	24.931	0.913	24.2
HARDNESS, NONCARBONATE	13	77.2	25.4	29	110	13	0.124	-14.896	0.919	10.5
TURBIDITY (JTU)	24	146.7	254.6	4	920	23	0.411	-139.776	0.284 *	253.8
FLOURIDE, DISSOLVED	13	0.38	0.10	0.2	0.6	13	0.0002	0.2144	0.438 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	958	925	891	843	790	720	635	445	368	316

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.63	11.38	2.73	93	2.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06329500 -- YELLOWSTONE RIVER NEAR SIDNEY, MT.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	4	34	5	1	5
CADMIUM (CD), UG/L	5	< 10	10	5	0	3
CHROMIUM (CR), UG/L	5	0	50	5	0	10
COBALT (CO), UG/L	2	< 50	< 50	2	0	0
COPPER (CU), UG/L	5	< 10	140	5	2	10
IRON (FE), UG/L	5	400	53000	9	20	120
LEAD (PB), UG/L	5	< 100	100	5	0	15
MANGANESE (MN), UG/L	5	20	970	5	0	10
MERCURY (HG), UG/L	4	0.1	0.8	5	0.0	4.6
SELENIUM (SE), UG/L	5	1	3	5	1	2
ZINC (ZN), UG/L	5	10	330	5	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	23	2.0	22.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06337000 NAME: LITTLE MISSOURI RIVER NR WATFORD CITY, ND

LAT 47D35M25S LONG 103D15M05S
DRAINAGE AREA: 8310 SQ MI (21523 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	11.67	6.60	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	2104.4	1290.6	790	5000					
STREAMFLOW (CUBIC FT/SEC)	9	1228.3	2012.1	5	6100	9	-0.925	3174.295	-0.593*	1731.8
PH (STANDARD UNITS)	9	8.34	0.21	7.9	8.6	9	-0.0001	8.5662	-0.639*	0.17
PHOSPHORUS, TOTAL	9	1.244	2.448	0.02	7.50	9	-0.00088	3.09211	-0.463*	2.320
NITRITE + NITRATE, TOTAL	9	0.361	0.381	0.01	1.10	9	-0.00016	0.70000	-0.545*	0.342
NITROGEN, KJELDAHL, TOTAL	9	2.670	2.790	0.55	8.90	9	-0.00132	5.45422	-0.612*	2.359
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	2296.3	1973.7	0	5900	8	2.023	-1228.712	0.764	1374.6
SEDIMENT, SUSPENDED	10	5314.8	6587.6	81	14600					
SEDIMENT, CLAY-SILT (PERCENT)	4	81.5	23.8	46	96					
COLIFORM, FECAL (COL/100 ML)	9	341.2	639.9	1	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	242.8	367.0	10	1180					
SILICA, DISSOLVED	9	9.56	2.36	6.1	14.0	9	0.0013	6.8067	0.713	1.77
CALCIUM, DISSOLVED	9	72.56	35.43	24.0	140.0	9	0.0264	16.9260	0.963	10.23
MAGNESIUM, DISSOLVED	9	36.44	19.62	12.0	61.0	9	0.0129	9.2316	0.851	11.02
SODIUM, DISSOLVED	9	313.67	195.64	83.0	710.0	9	0.1499	-1.7969	0.989	31.10
POTASSIUM, DISSOLVED	9	10.61	3.67	5.6	17.0	9	0.0027	4.9533	0.945	1.29
BICARBONATE, ION	9	380.3	254.1	127	947	9	0.195	-29.083	0.988	41.8
CARBONATE, ION	8	0.1	0.4	0	1	8	0.000	-0.259	0.465*	0.3
SULFATE, DISSOLVED	9	673.33	363.28	170.0	1300.0	9	0.2679	109.6172	0.952	119.31
CHLORIDE, DISSOLVED	9	9.88	5.41	4.4	22.0	9	0.0042	1.1167	0.993	0.66
DISSOLVED SOLIDS, SUM OF CONST	9	1312.9	739.2	368	2730	9	0.561	132.694	0.979	160.6
DISSOLVED SOLIDS, ROE 180 DEG C	8	1459.9	815.2	412	2980	8	0.610	98.119	0.986	148.9
HARDNESS, TOTAL	9	331.1	165.4	110	600	9	0.119	81.040	0.927	66.3
HARDNESS, NONCARBONATE	9	40.9	41.6	0	110	9	-0.004	48.845	-0.117*	44.2
TURBIDITY (JTU)	9	1009.3	2225.2	2	6800	9	-0.681	2441.946	-0.395*	2185.6
FLOURIDE, DISSOLVED	9	0.34	0.09	0.2	0.5	9	0.0000	0.3027	0.290*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 272

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	4400	3900	3690	2760	2400	1950	1500	895	705	640

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
214	7.48	13.01	2.74	81	2.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06337000 -- LITTLE MISSOURI RIVER NR WATFORD CITY, ND

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	240	4	1	2
CADMIUM (CD), UG/L	4	<10	30	4	0	2
CHROMIUM (CR), UG/L	4	10	250	4	0	< 10
COBALT (CO), UG/L	4	<50	300	4	0	0
COPPER (CU), UG/L	4	20	610	4	6	30
IRON (FE), UG/L	4	610	410000	4	20	340
LEAD (PB), UG/L	4	< 100	500	4	1	3
MANGANESE (MN), UG/L	4	50	11000	4	0	50
MERCURY (HG), UG/L	3	< 0.1	0.8	4	< 0.1	0.7
SELENIUM (SE), UG/L	4	0	5	4	0	2
ZINC (ZN), UG/L	4	20	1900	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	7.69	18.00			
BIOMASS, ASH WT., G/SQ M	2	6.19	15.00			
CHLOROPHYLL A, MG/SQ M	2	.2	1.2			
CHLOROPHYLL B, MG/SQ M	2	.0	0.8			
ORGANIC CARBON, MG/L	4	13.0	78.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06338490 NAME: MISSOURI RIVER AT GARRISON DAM, ND

LAT 47030M08S LONG 101025M50S
DRAINAGE AREA: 181400 SQ MI (469826 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	6.73	5.34	0.0	16.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	660.0	18.4	630	685					
STREAMFLOW (CUBIC FT/SEC)	13	38926.9	13530.7	21600	65000	13	-348.907	269205.438	-0.474 *	12445.8
PH (STANDARD UNITS)	13	8.22	0.23	7.9	8.6	13	0.0054	4.6295	0.433 *	0.22
PHOSPHORUS, TOTAL	13	0.019	0.018	0.00	0.05	13	-0.00020	0.14962	-0.197 *	0.019
NITRITE + NITRATE, TOTAL	13	0.134	0.050	0.08	0.23	13	-0.00074	0.62268	-0.272 *	0.050
NITROGEN, KJELDAHL, TOTAL	13	0.482	0.607	0.10	2.40	13	-0.00929	6.61079	-0.281 *	0.608
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	88.9	89.9	0	240	11	-2.806	1930.414	-0.550 *	79.2
SEDIMENT, SUSPENDED	1	5.0	0.0	5						
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	0.9	0.3	0	1					
STREPTOCOCCI, FECAL (COL/100 ML)	13	1.0	0.4	0	2					
SILICA, DISSOLVED	13	7.38	0.32	6.7	7.8	13	0.0036	5.0212	0.208 *	0.32
CALCIUM, DISSOLVED	13	52.15	2.15	49.0	57.0	13	0.0543	16.2952	0.463 *	1.99
MAGNESIUM, DISSOLVED	13	20.46	1.39	18.0	22.0	13	0.0506	-12.9522	0.668	1.08
SODIUM, DISSOLVED	13	58.31	3.30	54.0	64.0	13	0.1185	-19.9294	0.660	2.59
POTASSIUM, DISSOLVED	13	4.07	0.19	3.8	4.4	13	-0.0020	5.3747	-0.192 *	0.19
BICARBONATE, ION	13	185.9	6.3	175	201	13	0.180	66.963	0.527 *	5.6
CARBONATE, ION	10	0.4	1.0	0	3	10	0.032	-21.033	0.563 *	0.8
SULFATE, DISSOLVED	13	170.00	7.07	160.0	180.0	13	0.1112	96.5775	0.289 *	7.07
CHLORIDE, DISSOLVED	13	9.45	0.56	8.6	10.0	13	0.0192	-3.2423	0.635	0.45
DISSOLVED SOLIDS, SUM OF CONST	13	415.2	11.7	395	433	13	0.458	112.915	0.719	8.5
DISSOLVED SOLIDS, ROE 180 DEG C	13	423.5	11.3	408	440	13	0.462	118.738	0.748	7.9
HARDNESS, TOTAL	13	213.1	8.5	200	230	13	0.272	33.733	0.584	7.2
HARDNESS, NONCARBONATE	13	61.9	5.6	53	71	13	0.161	-44.023	0.530 *	4.9
TURBIDITY (JTU)	11	2.2	1.8	1	7	11	-0.021	16.416	-0.206 *	1.8
FLOURIDE, DISSOLVED	13	0.50	0.06	0.4	0.6	13	0.0002	0.3374	0.078 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	700	695	690	687	681	671	649	632	632	631

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	6.07	7.11	2.04	95	1.12

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06338490 -- MISSOURI RIVER AT GARRISON DAM, ND

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	6	1	4	13	0	4
CADMIUM (CD), UG/L	6	<10	<10	13	0	1
CHROMIUM (CR), UG/L	6	0	10	6	0	0
COBALT (CO), UG/L	4	<50	50	6	0	0
COPPER (CU), UG/L	6	<10	40	6	1	4
IRON (FE), UG/L	6	40	200	6	10	60
LEAD (PB), UG/L	6	<100	<100	6	0	5
MANGANESE (MN), UG/L	4	0	20	6	0	10
MERCURY (HG), UG/L	6	0.0	0.1	6	0.0	0.1
SELENIUM (SE), UG/L	6	1	1	6	1	1
ZINC (ZN), UG/L	5	20	70	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.00				
BIOMASS, ASH WT., G/SQ M	1	.59				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	4	3.0	4.0			

STATION NUMBER: 06340500 NAME: KNIFE RIVER AT HAZEN, ND

LAT 47D17M06S LONG 101D37M26S
DRAINAGE AREA: 2350 SQ MI (6087 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	6.88	8.03	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	25	1651.2	812.4	300	3100					
STREAMFLOW (CUBIC FT/SEC)	25	846.1	2003.4	8	6300	25	-1.579	3452.832	-0.640	1572.1
PH (STANDARD UNITS)	21	8.46	0.28	7.7	8.7	21	-0.0001	8.6052	-0.204*	0.28
PHOSPHORUS, TOTAL	11	0.072	0.048	0.02	0.16	11	-0.00002	0.11672	-0.369*	0.047
NITRITE + NITRATE, TOTAL	11	0.168	0.167	0.00	0.45	11	0.00002	0.12406	0.103*	0.175
NITROGEN, KJELDAHL, TOTAL	11	1.465	1.889	0.58	7.10	11	-0.00176	4.69254	-0.668	1.482
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	30444.5	49864.0	430	150000	11	-15.031	58060.668	-0.216*	51314.2
SEDIMENT, SUSPENDED	12	597.2	1183.2	25	3780					
SEDIMENT, CLAY-SILT (PERCENT)	7	75.7	16.9	52	96					
COLIFORM, FECAL (COL/100 ML)	9	460.1	788.2	11	2500					
STREPTOCOCCI, FECAL (COL/100 ML)	10	1831.1	3838.3	28	12000					
SILICA, DISSOLVED	9	13.01	3.45	9.1	19.0	9	0.0047	3.9122	0.827	2.08
CALCIUM, DISSOLVED	12	66.50	20.28	30.0	113.0	12	0.0256	20.9958	0.873	10.38
MAGNESIUM, DISSOLVED	12	40.58	12.82	10.0	60.0	12	0.0176	9.2109	0.952	4.13
SODIUM, DISSOLVED	12	241.42	92.98	65.0	400.0	12	0.1324	6.0858	0.984	17.12
POTASSIUM, DISSOLVED	12	8.77	1.04	7.6	11.0	12	0.0011	6.8457	0.720	0.76
BICARBONATE, ION	1	459.0	0.0	459						
CARBONATE, ION	1	0.0	0.0	0						
SULFATE, DISSOLVED	12	412.92	133.44	124.0	625.0	12	0.1744	102.8191	0.904	59.85
CHLORIDE, DISSOLVED	12	5.91	3.62	2.0	15.0	12	0.0024	1.6850	0.454*	3.38
DISSOLVED SOLIDS, SUM OF CONST	1	884.0	0.0	884						
DISSOLVED SOLIDS, ROE 180 DEG C	12	1052.5	332.2	382	1610	12	0.404	334.570	0.841	188.7
HARDNESS, TOTAL	12	334.0	100.5	117	530	12	0.137	91.071	0.941	35.7
HARDNESS, NONCARBONATE	1	0.0	0.0	0						
TURBIDITY (JTU)	4	58.8	48.2	25	130	4	-0.144	278.256	-0.642*	45.2
FLOURIDE, DISSOLVED	9	0.42	0.08	0.3	0.5	9	0.0001	0.2422	0.677	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 345

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2400	2220	2150	2030	1840	1580	1380	1100	640	355

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
345	8.26	11.41	2.75	90	2.84

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06340500 -- KNIFE RIVER AT HAZEN, ND

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	5	4	1	2
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	3	<50	<50	3	0	1
COPPER (CU), UG/L	3	<10	20	3	3	9
IRON (FE), UG/L	4	820	3700	4	30	520
LEAD (PB), UG/L	4	<100	<100	4	0	8
MANGANESE (MN), UG/L	4	30	300	4	10	130
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	3	40	50	3	4	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	14.0	15.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06354000 NAME: CANNONBALL RIVER AT BREIEN, ND

LAT 46D22M33S LONG 100D56M03S
DRAINAGE AREA: 4100 SQ MI (10619 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	6.92	8.73	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	19	1740.6	1160.8	300	3800					
STREAMFLOW (CUBIC FT/SEC)	19	1179.3	1995.1	1	6940	19	-0.845	2650.463	-0.492	1787.6
PH (STANDARD UNITS)	12	8.28	0.40	7.5	9.0	12	-0.0000	8.3517	-0.085 *	0.42
PHOSPHORUS, TOTAL	12	0.141	0.304	0.01	1.10	12	-0.00013	0.41507	-0.451 *	0.285
NITRITE + NITRATE, TOTAL	12	0.248	0.711	0.00	2.50	12	-0.00026	0.81287	-0.397 *	0.684
NITROGEN, KJELDAHL, TOTAL	12	1.663	1.283	0.74	4.90	12	-0.00046	2.65147	-0.385 *	1.241
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	35884.0	79128.6	320	260000	10	0.870	34002.910	0.013 *	83921.3
SEDIMENT, SUSPENDED	5	1382.0	832.2	30	2060					
SEDIMENT, CLAY-SILT (PERCENT)	2	80.5	9.2	74	87					
COLIFORM, FECAL (COL/100 ML)	9	92.9	121.2	1	320					
STREPTOCOCCI, FECAL (COL/100 ML)	9	354.2	662.8	48	2100					
SILICA, DISSOLVED	12	7.02	2.26	4.1	10.0	12	0.0007	5.4161	0.356 *	2.22
CALCIUM, DISSOLVED	12	75.42	28.29	33.0	120.0	12	0.0165	39.7710	0.630	23.04
MAGNESIUM, DISSOLVED	12	65.33	26.39	22.0	100.0	12	0.0187	25.0096	0.764	17.84
SODIUM, DISSOLVED	12	345.17	181.61	72.0	630.0	12	0.1600	-0.6624	0.953	58.00
POTASSIUM, DISSOLVED	12	10.95	2.87	6.1	16.0	12	0.0015	7.7554	0.556 *	2.50
BICARBONATE, ION	12	502.5	275.3	122	951	12	0.221	24.317	0.869	143.0
CARBONATE, ION	10	14.7	21.7	0	55	10	0.013	-10.782	0.628	17.9
SULFATE, DISSOLVED	12	746.67	331.62	220.0	1200.0	12	0.2559	193.3748	0.835	191.60
CHLORIDE, DISSOLVED	12	20.09	17.16	4.1	62.0	12	0.0112	-4.0622	0.704	12.79
DISSOLVED SOLIDS, SUM OF CONST	12	1531.3	662.5	427	2520	12	0.579	278.679	0.946	225.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	1496.8	647.3	460	2610	11	0.561	341.670	0.928	253.8
HARDNESS, TOTAL	12	458.3	174.7	180	710	12	0.119	200.537	0.738	123.6
HARDNESS, NONCARBONATE	12	96.3	108.3	0	290	12	-0.034	170.072	-0.340 *	106.8
TURBIDITY (JTU)	12	180.6	413.4	4	1400	12	-0.066	322.416	-0.172 *	427.2
FLOURIDE, DISSOLVED	12	0.52	0.31	0.2	1.3	12	0.0002	0.1910	0.543 *	0.27

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 309

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	3770	3550	3350	3200	2420	2020	1740	930	735	343

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
296	7.70	11.46	2.82	85	3.25

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06354000 -- CANNONBALL RIVER AT BREIEN, ND

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	4	5	0	3
CADMIUM (CD), UG/L	5	<10	20	5	0	1
CHROMIUM (CR), UG/L	4	0	20	5	0	10
COBALT (CO), UG/L	5	<50	50	5	0	1
COPPER (CU), UG/L	5	<10	20	5	3	5
IRON (FE), UG/L	5	260	2100	5	10	1700
LEAD (PB), UG/L	5	<100	100	5	0	4
MANGANESE (MN), UG/L	5	20	140	5	0	120
MERCURY (HG), UG/L	5	0.0	0.4	5	0.0	0.1
SELENIUM (SE), UG/L	5	0	2	5	0	1
ZINC (ZN), UG/L	5	10	60	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.39	3.10			
BIOMASS, ASH WT., G/SQ M	2	.29	2.29			
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	5	10.0	17.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06357800 NAME: GRAND RIVER AT LITTLE EAGLE,S.D.

LAT 45D30M28S LONG 100D49M04S
DRAINAGE AREA: 5370 SQ MI (13908 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	14.07	10.36	0.0	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1805.0	798.4	430	3300					
STREAMFLOW (CUBIC FT/SEC)	23	1002.9	1828.6	1	5720	12	-1.198	2787.254	-0.628	1242.7
PH (STANDARD UNITS)	11	8.74	0.46	8.1	9.5	11	-0.0001	8.8706	-0.136 *	0.48
PHOSPHORUS, TOTAL	10	0.302	0.355	0.00	1.10	10	-0.00032	0.86016	-0.782	0.234
NITRITE + NITRATE, TOTAL	10	0.105	0.168	0.00	0.55	10	-0.00012	0.32011	-0.635	0.138
NITROGEN, KJELDAHL, TOTAL	10	2.062	1.976	0.68	7.20	10	-0.00165	4.90860	-0.717	1.462
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2923.0	3793.6	220	13000	10	-0.246	3328.715	-0.050 *	4018.7
SEDIMENT, SUSPENDED	7	5222.9	1860.3	3480	8270					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	1247.9	1446.6	3	4000					
STREPTOCOCCI, FECAL (COL/100 ML)	8	936.8	1377.8	4	4100					
SILICA, DISSOLVED	11	7.65	4.22	2.1	18.0	11	-0.0024	11.9721	-0.478 *	3.91
CALCIUM, DISSOLVED	11	42.62	41.25	2.0	150.0	11	0.0146	16.8770	0.292 *	41.59
MAGNESIUM, DISSOLVED	11	29.13	18.78	8.4	73.0	11	0.0187	-3.9726	0.824	11.21
SODIUM, DISSOLVED	11	376.36	168.30	200.0	700.0	11	0.1895	41.1582	0.931	64.64
POTASSIUM, DISSOLVED	11	9.62	2.62	5.8	15.0	11	0.0028	4.7010	0.877	1.33
BICARBONATE, ION	11	408.1	202.2	136	795	11	0.235	-7.741	0.961	58.6
CARBONATE, ION	11	8.7	14.3	0	48	11	-0.001	10.727	-0.065 *	15.1
SULFATE, DISSOLVED	11	565.91	292.65	85.0	1100.0	11	0.3462	-46.4910	0.978	63.70
CHLORIDE, DISSOLVED	11	134.24	209.24	6.6	680.0	11	-0.0798	275.3994	-0.315 *	209.30
DISSOLVED SOLIDS, SUM OF CONST	11	1376.2	575.6	839	2730	11	0.604	307.132	0.868	300.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	1298.9	620.9	545	2610	11	0.733	1.890	0.977	140.4
HARDNESS, TOTAL	11	225.7	164.6	71	680	11	0.116	21.359	0.581 *	141.3
HARDNESS, NONCARBONATE	11	14.2	34.6	0	110	11	-0.011	34.059	-0.268 *	35.2
TURBIDITY (JTU)	11	365.5	547.8	4	1700	11	-0.480	1214.738	-0.725	397.8
FLOURIDE, DISSOLVED	11	0.38	0.08	0.3	0.5	11	0.0001	0.2914	0.563 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 239

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	4900	3100	2950	2800	2050	1800	1390	480	395	270

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
208	10.78	13.33	2.73	89	3.52

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06357800 -- GRAND RIVER AT LITTLE EAGLE,S.D.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	15	4	1	6
CADMIUM (CD), UG/L	4	< 10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	34	4	0	4
COBALT (CO), UG/L	4	30	50	4	0	1
COPPER (CU), UG/L	4	10	60	4	4	11
IRON (FE), UG/L	4	480	43000	4	10	70
LEAD (PB), UG/L	4	<100	< 100	4	1	6
MANGANESE (MN), UG/L	4	110	1200	4	0	30
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	30	260	4	0	6
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.50	46.00			
BIOMASS, ASH WT., G/SQ M	4	.29	44.00			
CHLOROPHYLL A, MG/SQ M	4	.1	3.0			
CHLOROPHYLL B, MG/SQ M	4	.0	.8			
ORGANIC CARBON, MG/L	4	8.8	25.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06438000 NAME: BELLE FOURCHE R NR ELM SPRINGS, S. DAK.

LAT 44D22M11S LONG 102D33M56S
DRAINAGE AREA: 7210 SQ MI (18674 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.38	9.59	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	2384.2	924.4	1280	4000					
STREAMFLOW (CUBIC FT/SEC)	12	336.8	451.5	6	1600	12	-0.304	1062.459	-0.623	370.4
PH (STANDARD UNITS)	11	8.11	0.54	6.9	8.7	11	-0.0005	9.3242	-0.875	0.27
PHOSPHORUS, TOTAL	12	0.273	0.390	0.01	1.40	12	-0.00021	0.77881	-0.503*	0.354
NITRITE + NITRATE, TOTAL	12	2.134	1.778	0.41	5.90	12	0.00157	-1.62023	0.819	1.071
NITROGEN, KJELDAHL, TOTAL	12	1.567	1.410	0.12	4.20	12	-0.00048	2.70045	-0.311*	1.406
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	8133.6	10216.2	0	28000	11	-5.600	20663.141	-0.444*	9650.6
SEDIMENT, SUSPENDED	11	1110.1	1433.3	294	4480					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	410.8	721.5	3	2600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	337.2	672.5	6	2400					
SILICA, DISSOLVED	12	7.02	1.60	4.7	10.0	12	0.0005	5.7406	0.309*	1.60
CALCIUM, DISSOLVED	12	227.75	92.22	83.0	380.0	12	0.0926	6.9451	0.928	35.95
MAGNESIUM, DISSOLVED	12	110.50	63.06	36.0	230.0	12	0.0663	-47.6253	0.972	15.46
SODIUM, DISSOLVED	12	164.17	89.32	64.0	330.0	12	0.0929	-57.3988	0.962	25.66
POTASSIUM, DISSOLVED	12	15.27	5.47	7.5	25.0	12	0.0055	2.1897	0.926	2.16
BICARBONATE, ION	12	234.1	112.4	96	499	12	0.107	-21.388	0.881	55.8
CARBONATE, ION	7	0.1	0.4	0	1	7	-0.000	0.186	-0.016*	0.4
SULFATE, DISSOLVED	12	1105.00	528.57	440.0	2100.0	12	0.5572	-223.3389	0.974	124.69
CHLORIDE, DISSOLVED	12	22.82	13.97	8.9	48.0	12	0.0141	-10.8307	0.934	5.23
DISSOLVED SOLIDS, SUM OF CONST	12	1769.2	838.6	734	3360	12	0.882	-333.912	0.972	205.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	1973.9	962.2	780	3720	12	1.013	-440.940	0.973	232.4
HARDNESS, TOTAL	12	1025.0	486.8	360	1900	12	0.506	-182.348	0.962	140.0
HARDNESS, NONCARBONATE	12	837.5	410.0	280	1500	12	0.428	-183.004	0.965	112.8
TURBIDITY (JTU)	12	393.1	1010.5	2	3500	12	-0.320	1156.177	-0.293*	1013.4
FLOURIDE, DISSOLVED	12	0.50	0.12	0.2	0.7	12	0.0001	0.3065	0.622	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 334

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	4220	4000	3800	3220	2700	1820	1700	1280	1120	1020

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
335	9.40	11.69	2.76	88	3.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06438000 -- BELLE FOURCHE R NR ELM SPRINGS, S. DAK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	75	2300	3	13	65
CADMIUM (CD), UG/L	3	<10	<10	3	0	1
CHROMIUM (CR), UG/L	3	0	120	3	0	0
COBALT (CO), UG/L	3	<50	50	3	0	0
COPPER (CU), UG/L	3	10	180	3	3	9
IRON (FE), UG/L	3	300	200000	3	10	220
LEAD (PB), UG/L	3	<100	100	3	0	2
MANGANESE (MN), UG/L	3	170	2100	3	10	140
MERCURY (HG), UG/L	3	0.1	1.7	3	0.1	1.0
SELENIUM (SE), UG/L	3	2	5	3	4	5
ZINC (ZN), UG/L	3	50	490	3	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	.79				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	3	3.8	27.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06439300 NAME: CHEYENNE RIVER AT CHERRY CREEK,S.D.

LAT 44D36M10S LONG 101D29M24S
DRAINAGE AREA: 23900 SQ MI (61901 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	11.38	9.38	0.0	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	1963.6	765.1	610	3200					
STREAMFLOW (CUBIC FT/SEC)	26	1460.4	2226.8	42	7120	14	-1.517	3853.923	-0.640	1450.0
PH (STANDARD UNITS)	14	8.31	0.54	7.4	9.2	14	-0.0003	8.8744	-0.412 *	0.51
PHOSPHORUS, TOTAL	12	0.406	0.549	0.02	2.00	12	-0.00047	1.26731	-0.647	0.439
NITRITE + NITRATE, TOTAL	12	0.837	0.832	0.01	2.60	12	0.00087	-0.77209	0.798	0.525
NITROGEN, KJELDAHL, TOTAL	12	1.752	2.084	0.27	7.40	12	-0.00163	4.75562	-0.595	1.757
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	11430.8	19451.6	570	70000	12	-1.032	13344.078	-0.041 *	20383.6
SEDIMENT, SUSPENDED	9	16595.6	10022.0	3710	30700					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	1815.7	3659.7	1	11600					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1708.9	3831.0	3	12600					
SILICA, DISSOLVED	13	7.25	2.29	3.8	13.0	13	0.0011	5.2451	0.351 *	2.24
CALCIUM, DISSOLVED	13	145.92	97.86	18.0	300.0	13	0.0895	-24.7191	0.700	73.02
MAGNESIUM, DISSOLVED	13	61.79	31.45	0.3	110.0	13	0.0318	1.2253	0.773	20.85
SODIUM, DISSOLVED	13	225.38	95.62	120.0	360.0	13	0.0804	71.9896	0.644	76.43
POTASSIUM, DISSOLVED	13	12.36	4.06	4.6	19.0	13	0.0043	4.1760	0.810	2.49
BICARBONATE, ION	13	195.8	75.2	96	361	13	0.070	63.183	0.707	55.5
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	13	845.38	350.54	190.0	1200.0	13	0.4302	25.0239	0.939	125.81
CHLORIDE, DISSOLVED	13	57.62	63.67	3.1	240.0	13	0.0686	-73.2459	0.825	37.60
DISSOLVED SOLIDS, SUM OF CONST	13	1454.3	584.7	468	2300	13	0.741	40.368	0.970	147.4
DISSOLVED SOLIDS, ROE 180 DEG C	13	1571.0	641.8	396	2320	13	0.804	37.972	0.959	191.0
HARDNESS, TOTAL	13	617.4	340.0	46	1200	13	0.353	-55.692	0.794	215.8
HARDNESS, NONCARBONATE	13	462.5	309.3	0	910	13	0.292	-95.102	0.723	223.1
TURBIDITY (JTU)	13	162.8	379.7	2	1400	13	-0.156	460.402	-0.315 *	376.5
FLOURIDE, DISSOLVED	13	0.47	0.12	0.2	0.6	13	0.0001	0.2383	0.784	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 256

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	3400	2900	2850	2650	2250	2050	1650	955	690	635

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
278	10.33	11.43	2.62	84	3.86

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06439300 -- CHEYENNE RIVER AT CHERRY CREEK,S.D.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	19	85	4	3	20
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	<50	< 50	4	0	0
COPPER (CU), UG/L	4	<10	30	4	2	4
IRON (FE), UG/L	4	230	17000	4	10	60
LEAD (PB), UG/L	4	<100	<100	4	4	10
MANGANESE (MN), UG/L	3	60	540	4	0	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.3
SELENIUM (SE), UG/L	4	3	4	4	1	4
ZINC (ZN), UG/L	4	30	120	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.50	130.00			
BIOMASS, ASH WT., G/SQ M	4	.50	120.00			
CHLOROPHYLL A, MG/SQ M	4	.0	51.0			
CHLOROPHYLL B, MG/SQ M	4	.0	2.1			
ORGANIC CARBON, MG/L	4	4.0	9.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06440000 NAME: MISSOURI RIVER AT PIERRE S DAK

LAT 44D22M25S LONG 100D22M20S
DRAINAGE AREA: 243500 SQ MI (630665 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	11.32	6.77	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	18	755.6	62.1	650	870					
STREAMFLOW (CUBIC FT/SEC)	18	44605.6	13174.0	11100	54600	17	-119.864	135268.125	-0.565	11531.4
PH (STANDARD UNITS)	16	8.48	0.58	7.4	9.3	16	0.0060	4.0403	0.550	0.59
PHOSPHORUS, TOTAL	16	0.029	0.018	0.01	0.06	16	-0.00004	0.05696	-0.136*	0.018
NITRITE + NITRATE, TOTAL	12	0.100	0.038	0.05	0.18	12	0.00021	-0.05718	0.365*	0.037
NITROGEN, KJELDAHL, TOTAL	12	0.314	0.120	0.13	0.57	12	-0.00045	0.64807	-0.246*	0.122
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	159.9	132.0	59	480	11	-0.184	296.516	-0.091*	138.6
SEDIMENT, SUSPENDED	10	116.0	181.9	28	630					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	9.6	12.5	0	40					
STREPTOCOCCI, FECAL (COL/100 ML)	9	14.2	16.6	0	50					
SILICA, DISSOLVED	16	6.52	0.66	5.4	8.0	16	-0.0019	7.9790	-0.192*	0.67
CALCIUM, DISSOLVED	16	33.87	28.11	1.1	65.0	16	-0.3108	267.9087	-0.726	20.01
MAGNESIUM, DISSOLVED	16	16.65	6.95	0.5	23.0	16	-0.0666	66.8060	-0.629	5.59
SODIUM, DISSOLVED	16	114.69	57.86	65.0	240.0	16	0.6962	-409.6501	0.790	36.71
POTASSIUM, DISSOLVED	16	4.64	0.45	3.9	5.9	16	-0.0007	5.1811	-0.104*	0.46
BICARBONATE, ION	16	194.4	9.9	181	211	16	0.110	111.815	0.730	7.0
CARBONATE, ION	15	0.7	1.9	0	7	15	-0.005	4.141	-0.154*	2.0
SULFATE, DISSOLVED	16	205.63	9.64	190.0	230.0	16	0.0884	139.0482	0.602	7.96
CHLORIDE, DISSOLVED	16	10.84	1.32	9.2	14.0	16	0.0003	10.6269	0.014*	1.37
DISSOLVED SOLIDS, SUM OF CONST	16	490.3	36.7	448	576	16	0.455	147.494	0.815	22.0
DISSOLVED SOLIDS, ROE 180 DEG C	10	490.4	24.4	455	530	10	0.308	261.702	0.830	14.4
HARDNESS, TOTAL	16	153.4	95.0	5	260	16	-1.051	945.060	-0.727	67.6
HARDNESS, NONCARBONATE	16	43.1	39.6	0	91	16	-0.426	364.051	-0.707	29.0
TURBIDITY (JTU)	10	3.4	1.9	2	7	10	-0.006	7.824	-0.206*	2.0
FLOURIDE, DISSOLVED	16	0.49	0.06	0.4	0.6	16	-0.0001	0.5676	-0.113*	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	810	800	785	770	770	760	755	720	710	700

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	9.81	9.82	2.29	97	1.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06440000 -- MISSOURI RIVER AT PIERRE S DAK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	3	5	1	3
CADMIUM (CD), UG/L	5	< 10	10	5	0	1
CHROMIUM (CR), UG/L	5	0	20	5	0	20
COBALT (CO), UG/L	5	< 50	50	5	0	1
COPPER (CU), UG/L	5	< 10	470	5	2	6
IRON (FE), UG/L	5	0	310	5	0	20
LEAD (PB), UG/L	5	<100	< 100	5	1	7
MANGANESE (MN), UG/L	4	0	60	5	0	20
MERCURY (HG), UG/L	5	0.0	0.1	5	0.0	0.0
SELENIUM (SE), UG/L	5	1	2	5	1	2
ZINC (ZN), UG/L	5	0	70	5	0	7
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.19	2.39			
BIOMASS, ASH WT., G/SQ M	4	.09	2.29			
CHLOROPHYLL A, MG/SQ M	4	.0	1.8			
CHLOROPHYLL B, MG/SQ M	4	.0	.5			
ORGANIC CARBON, MG/L	5	2.1	3.8			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06452000 NAME: WHITE RIVER NEAR OACOMA S DAK

LAT 43D44M54S LONG 099D33M22S
DRAINAGE AREA: 10200 SQ MI (26418 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	43	14.43	9.33	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	572.1	84.4	480	730					
STREAMFLOW (CUBIC FT/SEC)	46	432.4	744.1	18	3200	12	-0.223	232.242	-0.222 *	86.7
PH (STANDARD UNITS)	12	8.43	0.71	7.2	10.0	12	-0.0001	8.4832	-0.010 *	0.74
PHOSPHORUS, TOTAL	12	6.044	7.124	0.12	18.00	12	-0.00778	10.49593	-0.092 *	7.440
NITRITE + NITRATE, TOTAL	12	0.787	0.551	0.02	1.90	12	-0.00017	0.88587	-0.027 *	0.577
NITROGEN, KJELDAHL, TOTAL	12	1.920	2.145	0.27	8.00	12	0.00739	-2.30532	0.290 *	2.153
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	30468.2	49630.9	120	160000	11	274.556	-125654.188	0.484 *	45764.7
SEDIMENT, SUSPENDED	31	18275.5	12513.0	5110	55100					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	1330.0	2133.2	0	6600					
STREPTOCOCCI, FECAL (COL/100 ML)	10	12778.0	37694.8	10	120000					
SILICA, DISSOLVED	12	40.50	18.14	22.0	70.0	12	0.0082	35.8040	0.038 *	19.01
CALCIUM, DISSOLVED	12	41.03	57.15	1.2	210.0	12	0.0091	35.7995	0.014 *	59.93
MAGNESIUM, DISSOLVED	12	4.27	3.75	0.5	9.7	12	0.0003	4.1132	0.006 *	3.94
SODIUM, DISSOLVED	12	118.00	71.48	41.0	290.0	12	0.1110	54.5221	0.131 *	74.32
POTASSIUM, DISSOLVED	12	6.15	1.70	4.3	8.9	12	0.0046	3.5426	0.227 *	1.73
BICARBONATE, ION	11	240.7	157.6	4	663	11	0.063	205.062	0.035 *	166.1
CARBONATE, ION	9	0.2	0.7	0	2	9	-0.000	0.426	-0.048 *	0.7
SULFATE, DISSOLVED	12	84.83	34.51	45.0	150.0	12	0.3034	-88.7107	0.741	24.29
CHLORIDE, DISSOLVED	12	99.22	281.59	5.8	990.0	12	-0.0858	148.3124	-0.026 *	295.24
DISSOLVED SOLIDS, SUM OF CONST	11	520.2	398.6	272	1670	11	0.427	277.378	0.094 *	418.3
DISSOLVED SOLIDS, ROE 180 DEG C	10	478.2	273.3	307	1240	10	0.521	180.237	0.175 *	285.4
HARDNESS, TOTAL	12	119.1	151.2	5	560	12	0.019	108.354	0.010 *	158.6
HARDNESS, NONCARBONATE	11	42.4	112.4	0	370	11	-0.098	98.146	-0.076 *	118.1
TURBIDITY (JTU)	12	3456.7	4348.2	10	13000	12	3.503	1452.427	0.068 *	4549.9
FLOURIDE, DISSOLVED	12	0.65	0.36	0.3	1.7	12	0.0006	0.3193	0.134 *	0.38

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 355

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	950	830	795	680	650	580	510	440	410	400

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE

FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
349	11.10	13.32	2.69	91	3.07

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06452000 -- WHITE RIVER NEAR OACOMA S DAK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	7	220	5	7	38
CADMIUM (CD), UG/L	4	0	20	5	0	< 1
CHROMIUM (CR), UG/L	4	20	170	5	0	0
COBALT (CO), UG/L	4	< 50	150	5	0	2
COPPER (CU), UG/L	4	10	370	5	3	35
IRON (FE), UG/L	4	1100	180000	5	10	360
LEAD (PB), UG/L	4	<100	600	5	0	5
MANGANESE (MN), UG/L	4	30	8000	5	0	10
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.0
SELENIUM (SE), UG/L	5	2	4	5	2	3
ZINC (ZN), UG/L	4	40	550	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.50	30.00			
BIOMASS, ASH WT., G/SQ M	3	1.39	13.00			
CHLOROPHYLL A, MG/SQ M	3	.1	13.0			
CHLOROPHYLL B, MG/SQ M	3	.0	3.8			
ORGANIC CARBON, MG/L	4	5.5	46.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06453000 NAME: MISSOURI RIVER AT FORT RANDALL DAM,S.DAK.

LAT 43D03M54S LONG 098D33M11S
DRAINAGE AREA: 263500 SQ MI (682465 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.92	8.56	0.5	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	662.5	68.8	530	770					
STREAMFLOW (CUBIC FT/SEC)	12	36908.3	14481.7	13000	60000	12	2.993	34925.465	0.014 *	15186.8
PH (STANDARD UNITS)	12	8.29	0.31	7.7	8.6	12	0.0006	7.9069	0.129 *	0.32
PHOSPHORUS, TOTAL	12	0.010	0.006	0.00	0.02	12	-0.00001	0.01764	-0.132 *	0.006
NITRITE + NITRATE, TOTAL	12	0.129	0.307	0.01	1.10	12	-0.00283	2.00584	-0.635	0.249
NITROGEN, KJELDAHL, TOTAL	12	0.269	0.122	0.04	0.52	12	-0.00080	0.80239	-0.454 *	0.114
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	946.1	1212.0	8	2900	11	-6.232	5087.293	-0.369 *	1187.4
SEDIMENT, SUSPENDED	9	60.3	18.4	35	98					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	0.3	0.5	0	1					
STREPTOCOCCI, FECAL (COL/100 ML)	8	1.4	2.3	0	5					
SILICA, DISSOLVED	12	6.42	1.95	4.7	12.0	12	-0.0141	15.7814	-0.499 *	1.77
CALCIUM, DISSOLVED	12	103.00	156.55	52.0	600.0	12	0.4746	-211.4067	0.208 *	160.58
MAGNESIUM, DISSOLVED	12	22.50	0.80	21.0	24.0	12	0.0007	22.0543	0.058 *	0.84
SODIUM, DISSOLVED	12	69.92	1.83	67.0	73.0	12	0.0087	64.1544	0.327 *	1.82
POTASSIUM, DISSOLVED	12	4.78	0.91	2.5	6.6	12	0.0001	4.7261	0.007 *	0.96
BICARBONATE, ION	12	187.3	25.4	110	205	12	0.013	178.811	0.034 *	26.7
CARBONATE, ION	8	0.1	0.4	0	1	8	0.002	-0.851	0.305 *	0.4
SULFATE, DISSOLVED	12	204.17	9.00	190.0	220.0	12	0.0053	200.6520	0.041 *	9.43
CHLORIDE, DISSOLVED	12	11.67	2.15	10.0	18.0	12	-0.0015	12.6854	-0.049 *	2.25
DISSOLVED SOLIDS, SUM OF CONST	12	471.2	16.9	435	491	12	0.005	468.042	0.019 *	17.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	500.6	10.7	485	520	12	-0.007	505.388	-0.047 *	11.2
HARDNESS, TOTAL	12	236.7	9.8	220	250	12	-0.056	273.596	-0.389 *	9.5
HARDNESS, NONCARBONATE	12	82.3	17.6	60	130	12	-0.078	133.792	-0.305 *	17.5
TURBIDITY (JTU)	12	4.2	2.3	1	8	12	-0.002	5.758	-0.071 *	2.4
FLOURIDE, DISSOLVED	12	0.47	0.14	0.1	0.6	12	0.0013	-0.3623	0.641	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	847	832	830	822	797	779	720	702	692	645

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	10.31	12.05	2.36	95	1.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06453000 -- MISSOURI RIVER AT FORT RANDALL DAM,S.DAK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	2	2
CADMIUM (CD), UG/L	4	< 10	10	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	1
COPPER (CU), UG/L	4	0	30	4	1	3
IRON (FE), UG/L	4	30	290	4	10	80
LEAD (PB), UG/L	4	< 100	< 100	4	0	16
MANGANESE (MN), UG/L	4	10	40	4	0	0
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	2	4	0	2
ZINC (ZN), UG/L	4	10	40	4	6	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.50				
BIOMASS, ASH WT., G/SQ M	2	.19	.79			
CHLOROPHYLL A, MG/SQ M	2	.0	.1			
CHLOROPHYLL B, MG/SQ M	2	.0	.0			
ORGANIC CARBON, MG/L	4	2.2	7.5			

STATION NUMBER: 06465500 NAME: NIOBRARA RIVER NR. VERDEL, NEBR.

LAT 42D44M25S LONG 098D12M45S
DRAINAGE AREA: 12600 SQ MI (32634 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	9.93	10.71	0.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	259.0	15.8	233	282					
STREAMFLOW (CUBIC FT/SEC)	30	1162.0	520.2	554	2450	11	9.058	-1108.446	0.268 *	540.4
PH (STANDARD UNITS)	11	7.52	0.23	7.1	7.9	11	-0.0053	8.8956	-0.362 *	0.23
PHOSPHORUS, TOTAL	11	0.194	0.074	0.10	0.33	11	-0.00074	0.38447	-0.156 *	0.077
NITRITE + NITRATE, TOTAL	11	0.425	0.387	0.01	0.98	11	0.00757	-1.53474	0.308 *	0.388
NITROGEN, KJELDAHL, TOTAL	11	0.806	0.745	0.23	2.90	11	-0.01479	4.63819	-0.313 *	0.746
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	31167.8	33234.4	470	95000	9	-1492.702	414792.250	-0.691	25679.4
SEDIMENT, SUSPENDED	11	686.6	353.5	244	1300					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	34.0	31.2	8	100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	136.0	97.3	44	340					
SILICA, DISSOLVED	7	49.29	5.68	41.0	57.0	7	-0.0160	53.3854	-0.047 *	6.21
CALCIUM, DISSOLVED	7	36.29	3.64	32.0	42.0	7	0.1815	-10.1105	0.822	2.27
MAGNESIUM, DISSOLVED	7	4.46	0.54	3.7	5.1	7	0.0196	-0.5557	0.594 *	0.48
SODIUM, DISSOLVED	7	9.90	0.60	9.0	11.0	7	0.0070	8.1120	0.191 *	0.65
POTASSIUM, DISSOLVED	7	6.80	1.04	5.0	7.9	7	-0.0118	9.8272	-0.188 *	1.12
BICARBONATE, ION	7	141.0	6.2	132	149	7	0.259	74.822	0.692 *	4.9
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	7	15.60	4.30	9.2	22.0	7	0.2259	-42.1405	0.865	2.36
CHLORIDE, DISSOLVED	11	1.74	0.34	1.3	2.6	11	0.0062	0.1205	0.291 *	0.34
DISSOLVED SOLIDS, SUM OF CONST	7	195.1	11.6	179	208	7	0.587	44.999	0.832	7.1
DISSOLVED SOLIDS, ROE 180 DEG C	10	191.8	7.8	178	206	10	0.314	111.036	0.639	6.4
HARDNESS, TOTAL	7	110.7	11.6	97	130	7	0.568	-34.366	0.805	7.5
HARDNESS, NONCARBONATE	7	0.7	1.9	0	5	7	0.078	-19.224	0.680 *	1.5
TURBIDITY (JTU)	10	38.0	20.6	15	75	10	-0.261	105.608	-0.209 *	21.3
FLOURIDE, DISSOLVED	7	0.40	0.06	0.3	0.5	7	0.0013	0.0706	0.368 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 269

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	362	322	292	280	271	257	248	240	233	223

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
270	13.21	14.35	2.69	93	3.03

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06465500 -- NIOBRARA RIVER NR. VERDEL, NEBR.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	9	10	3	3	9
CADMIUM (CD), UG/L	3	<10	<10	3	0	3
CHROMIUM (CR), UG/L	3	0	10	3	0	20
COBALT (CO), UG/L	3	<50	100	3	0	0
COPPER (CU), UG/L	3	10	20	3	1	23
IRON (FE), UG/L	3	1300	11000	7	10	110
LEAD (PB), UG/L	3	<100	< 100	3	2	7
MANGANESE (MN), UG/L	3	120	610	7	0	40
MERCURY (HG), UG/L	3	0.0	0.0	3	0.0	0.0
SELENIUM (SE), UG/L	3	1	4	3	1	1
ZINC (ZN), UG/L	3	20	60	3	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.09	4.79			
BIOMASS, ASH WT., G/SQ M	4	.89	2.39			
CHLOROPHYLL A, MG/SQ M	4	.0	14.0			
CHLOROPHYLL B, MG/SQ M	4	.0	3.6			
ORGANIC CARBON, MG/L	2	11.0	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06478500 NAME: JAMES RIVER NEAR SCOTLAND,S.DAK.

LAT 43D11M09S LONG 097D38M07S
DRAINAGE AREA: 21550 SQ MI (55815 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.29	10.83	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1394.2	577.3	580	2080					
STREAMFLOW (CUBIC FT/SEC)	12	267.6	316.7	14	833	12	-0.526	1001.545	-0.960	93.5
PH (STANDARD UNITS)	12	8.03	0.54	7.2	8.9	12	0.0003	7.5861	0.343*	0.53
PHOSPHORUS, TOTAL	12	0.368	0.329	0.13	1.20	12	0.00014	0.16914	0.251*	0.334
NITRITE + NITRATE, TOTAL	12	0.319	0.546	0.00	1.70	12	0.00043	-0.27934	0.454*	0.511
NITROGEN, KJELDAHL, TOTAL	12	1.787	0.662	0.25	2.90	12	-0.00028	2.18297	-0.247*	0.673
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	38954.4	41555.5	990	120000	9	-14.751	59244.797	-0.205*	43480.8
SEDIMENT, SUSPENDED	10	175.0	54.6	124	267					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	59.2	63.6	0	200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	156.4	144.1	5	470					
SILICA, DISSOLVED	12	11.44	7.13	0.5	23.0	12	-0.0003	11.8692	-0.025*	7.47
CALCIUM, DISSOLVED	12	138.08	71.30	55.0	240.0	12	0.1126	-18.9524	0.912	30.69
MAGNESIUM, DISSOLVED	12	64.00	29.66	24.0	110.0	12	0.0481	-3.0219	0.936	10.98
SODIUM, DISSOLVED	12	130.17	55.70	40.0	200.0	12	0.0939	-0.6946	0.973	13.53
POTASSIUM, DISSOLVED	12	18.00	4.33	11.0	23.0	12	0.0038	12.6338	0.513*	3.89
BICARBONATE, ION	12	332.8	62.2	253	455	12	0.079	222.027	0.738	44.0
CARBONATE, ION	7	0.1	0.4	0	1	7	0.000	-0.197	0.430*	0.4
SULFATE, DISSOLVED	12	508.92	319.17	70.0	950.0	12	0.5325	-233.4106	0.963	90.14
CHLORIDE, DISSOLVED	12	70.92	34.29	18.0	130.0	12	0.0545	-5.0707	0.918	14.29
DISSOLVED SOLIDS, SUM OF CONST	12	1106.2	524.9	380	1830	12	0.885	-127.717	0.973	126.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	1187.2	574.7	412	1970	12	0.967	-161.328	0.972	142.5
HARDNESS, TOTAL	12	613.3	303.8	240	1100	12	0.486	-63.781	0.923	122.7
HARDNESS, NONCARBONATE	12	334.1	260.3	0	680	12	0.412	-240.969	0.915	110.2
TURBIDITY (JTU)	12	13.8	11.4	1	35	12	-0.019	39.602	-0.937	4.2
FLOURIDE, DISSOLVED	12	0.48	0.22	0.2	0.8	12	0.0003	0.0373	0.852	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2150	2050	2020	1950	1680	1420	780	700	630	580

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	10.56	13.45	2.81	83	4.25

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06478500 -- JAMES RIVER NEAR SCOTLAND,S.DAK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	4	4	2	6
CADMIUM (CD), UG/L	4	<10	30	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	2
COPPER (CU), UG/L	4	<10	40	4	1	3
IRON (FE), UG/L	4	150	1200	4	0	50
LEAD (PB), UG/L	4	<100	100	4	3	6
MANGANESE (MN), UG/L	4	400	720	4	20	610
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	10	40	4	20	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.79	20.00			
BIOMASS, ASH WT., G/SQ M	3	.39	10.00			
CHLOROPHYLL A, MG/SQ M	3	.2	6.1			
CHLOROPHYLL B, MG/SQ M	3	.0	.5			
ORGANIC CARBON, MG/L	4	12.0	25.0			

STATION NUMBER: 06485500 NAME: BIG SIOUX RIVER AT AKRON, IOWA

LAT 42D49M42S LONG 096D33M45S
DRAINAGE AREA: 9030 SQ MI (23388 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.88	10.47	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	854.2	295.6	420	1350					
STREAMFLOW (CUBIC FT/SEC)	12	454.5	559.3	27	1580	12	-1.223	1498.967	-0.646	447.6
PH (STANDARD UNITS)	12	8.00	0.42	7.4	8.6	12	-0.0002	8.1476	-0.120*	0.44
PHOSPHORUS, TOTAL	12	0.985	0.770	0.13	2.50	12	0.00240	-1.06812	0.923	0.312
NITRITE + NITRATE, TOTAL	12	1.841	1.604	0.00	4.90	12	-0.00069	2.42895	-0.127*	1.669
NITROGEN, KJELDAHL, TOTAL	12	2.661	0.934	0.23	3.90	12	-0.00080	3.34297	-0.253*	0.948
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	105863.6	123170.4	1300	330000	11	-129.559	213044.188	-0.309*	123457.8
SEDIMENT, SUSPENDED	10	192.1	162.5	79	617					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	273.6	417.4	3	1380					
STREPTOCOCCI, FECAL (COL/100 ML)	12	919.5	2316.0	10	8200					
SILICA, DISSOLVED	12	9.05	7.58	0.1	22.0	12	0.0137	-2.6478	0.534*	6.73
CALCIUM, DISSOLVED	12	89.50	34.90	42.0	140.0	12	0.1059	-0.9876	0.897	16.16
MAGNESIUM, DISSOLVED	12	38.33	8.82	20.0	49.0	12	0.0261	16.0051	0.876	4.47
SODIUM, DISSOLVED	12	54.42	30.95	17.0	110.0	12	0.1011	-31.8975	0.965	8.50
POTASSIUM, DISSOLVED	12	7.17	1.49	5.2	10.0	12	0.0030	4.6074	0.595	1.26
BICARBONATE, ION	12	245.9	84.6	128	381	12	0.257	26.028	0.899	38.8
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	196.08	60.61	83.0	280.0	12	0.1925	31.6594	0.939	21.89
CHLORIDE, DISSOLVED	12	66.17	41.26	20.0	140.0	12	0.1314	-46.0745	0.941	14.59
DISSOLVED SOLIDS, SUM OF CONST	12	582.6	208.8	284	938	12	0.701	-16.575	0.993	25.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	618.2	218.3	315	960	12	0.734	-8.614	0.994	25.4
HARDNESS, TOTAL	12	381.7	117.3	200	550	12	0.378	59.125	0.952	37.8
HARDNESS, NONCARBONATE	12	180.3	53.9	83	280	12	0.157	46.139	0.860	28.8
TURBIDITY (JTU)	12	21.5	17.2	2	60	12	-0.045	60.360	-0.780	11.3
FLOURIDE, DISSOLVED	12	0.40	0.07	0.3	0.5	12	0.0002	0.2560	0.675	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1570	1480	1400	1360	1280	890	785	660	550	490

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
328	11.12	12.83	2.75	91	2.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06485500 -- BIG SIOUX RIVER AT AKRON, IOWA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	13	4	0	9
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	<10	30	4	1	3
IRON (FE), UG/L	4	650	9200	4	0	50
LEAD (PB), UG/L	4	<100	100	4	2	9
MANGANESE (MN), UG/L	4	310	1600	4	10	1500
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	2	4	4	2	6
ZINC (ZN), UG/L	4	50	90	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	73.00				
BIOMASS, ASH WT., G/SQ M	1	34.00				
CHLOROPHYLL A, MG/SQ M	1	22.0				
CHLOROPHYLL B, MG/SQ M	1	2.6				
ORGANIC CARBON, MG/L	3	6.6	26.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06486000 NAME: MISSOURI RIVER AT SIOUX CITY, IOWA

LAT 42D29M10S LONG 096D24M47S
DRAINAGE AREA: 314600 SQ MI (814814 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	46	9.90	9.40	0.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	735.7	57.3	580	850					
STREAMFLOW (CUBIC FT/SEC)	46	33126.1	14021.7	17200	64400	22	-36.991	58577.309	-0.162*	13247.7
PH (STANDARD UNITS)	22	8.06	0.29	7.6	8.8	22	0.0019	6.6350	0.386*	0.27
PHOSPHORUS, TOTAL	22	0.044	0.020	0.01	0.10	22	-0.00011	0.12418	-0.306*	0.020
NITRITE + NITRATE, TOTAL	22	0.054	0.049	0.00	0.18	22	-0.00010	0.12989	-0.120*	0.050
NITROGEN, KJELDAHL, TOTAL	22	0.348	0.208	0.17	1.20	22	-0.00016	0.46844	-0.045*	0.213
PHYTOPLANKTON, TOTAL (CELLS/ML)	15	2698.7	2015.7	350	6100	15	7.023	-2538.248	0.228*	2036.6
SEDIMENT, SUSPENDED	24	375.7	162.9	141	931					
SEDIMENT, CLAY-SILT (PERCENT)	12	38.3	20.8	5	76					
COLIFORM, FECAL (COL/100 ML)	22	305.1	1029.9	15	4900					
STREPTOCOCCI, FECAL (COL/100 ML)	12	86.4	108.1	19	400					
SILICA, DISSOLVED	22	8.32	1.18	6.1	10.0	22	0.0000	8.3148	0.000*	1.21
CALCIUM, DISSOLVED	12	59.75	2.42	54.0	64.0	12	0.0006	59.3095	0.013*	2.53
MAGNESIUM, DISSOLVED	12	21.92	1.08	20.0	24.0	12	0.0123	12.8033	0.607	0.90
SODIUM, DISSOLVED	12	67.92	4.62	60.0	76.0	12	0.0371	40.3611	0.430*	4.38
POTASSIUM, DISSOLVED	12	5.18	0.35	4.5	6.0	12	0.0021	3.6543	0.314*	0.35
BICARBONATE, ION	22	186.7	13.9	170	220	22	-0.017	198.838	-0.068*	14.2
CARBONATE, ION	22	2.3	6.0	0	17	22	0.030	-19.963	0.291*	5.9
SULFATE, DISSOLVED	12	201.67	11.15	180.0	220.0	12	0.0456	167.7739	0.219*	11.41
CHLORIDE, DISSOLVED	12	10.08	0.44	9.7	11.0	12	0.0015	8.9772	0.180*	0.46
DISSOLVED SOLIDS, SUM OF CONST	12	469.4	17.5	440	497	12	0.143	363.227	0.438*	16.5
DISSOLVED SOLIDS, ROE 180 DEG C	22	487.3	23.3	428	540	22	-0.009	493.878	-0.022*	23.9
HARDNESS, TOTAL	12	240.0	6.0	230	250	12	0.043	208.300	0.379*	5.9
HARDNESS, NONCARBONATE	12	82.9	14.2	57	110	12	-0.032	106.929	-0.122*	14.8
TURBIDITY (JTU)	22	21.8	31.9	4	160	22	0.064	-25.594	0.116*	32.5
FLOURIDE, DISSOLVED	12	0.58	0.21	0.3	1.2	12	-0.0000	0.6050	-0.007*	0.22

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
93	10.74	13.02	2.66	92	2.64

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06486000 -- MISSOURI RIVER AT SIOUX CITY, IOWA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	20	0	2
CADMIUM (CD), UG/L	4	0	2	20	0	1
CHROMIUM (CR), UG/L	4	<10	20	20	0	2
COBALT (CO), UG/L	4	0	6	4	0	10
COPPER (CU), UG/L	4	2	8	20	1	6
IRON (FE), UG/L	20	260	26000	4	0	20
LEAD (PB), UG/L	4	3	10	20	0	12
MANGANESE (MN), UG/L	4	27	80	20	0	60
MERCURY (HG), UG/L	4	0.2	0.9	4	0.0	1.1
SELENIUM (SE), UG/L	4	2	3	4	0	3
ZINC (ZN), UG/L	4	30	70	20	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.09	13.00			
BIOMASS, ASH WT., G/SQ M	3	1.50	6.19			
CHLOROPHYLL A, MG/SQ M	3	2.8	19.0			
CHLOROPHYLL B, MG/SQ M	3	.2	6.0			
ORGANIC CARBON, MG/L	20	1.0	31.0			

STATION NUMBER: 06686000 NAME: NORTH PLATTE RIVER AT LISCO, NEBR.

LAT 41D30M00S LONG 102D38M00S
DRAINAGE AREA: 30700 SQ MI (79513 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	35	12.77	8.66	0.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	33	862.0	62.4	640	960					
STREAMFLOW (CUBIC FT/SEC)	35	1296.9	416.4	431	2010	33	-3.572	4364.742	-0.523	369.5
PH (STANDARD UNITS)	33	7.56	0.15	7.2	7.8	33	0.0002	7.4030	0.073*	0.16
PHOSPHORUS, TOTAL	10	0.282	0.263	0.11	1.00	10	0.00018	0.12690	0.028*	0.278
NITRITE + NITRATE, TOTAL	11	2.055	0.579	1.20	2.80	11	-0.00051	2.49220	-0.034*	0.609
NITROGEN, KJELDAHL, TOTAL	11	0.965	0.433	0.50	1.90	11	0.00337	-1.95243	0.306*	0.435
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	15763.6	13475.0	1100	40000	11	-96.959	98689.813	-0.311*	13499.0
SEDIMENT, SUSPENDED	12	481.8	468.3	200	1920					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	76.6	132.0	0	460					
STREPTOCOCCI, FECAL (COL/100 ML)	12	227.8	288.2	31	1000					
SILICA, DISSOLVED	11	36.36	5.22	29.0	42.0	11	0.0303	10.1194	0.228*	5.36
CALCIUM, DISSOLVED	11	78.91	5.74	71.0	90.0	11	0.0492	36.3341	0.337*	5.69
MAGNESIUM, DISSOLVED	11	19.91	1.70	16.0	22.0	11	0.0022	18.0312	0.050*	1.79
SODIUM, DISSOLVED	11	84.18	4.21	76.0	90.0	11	0.0230	64.2582	0.215*	4.34
POTASSIUM, DISSOLVED	11	10.04	0.91	8.3	11.0	11	0.0071	3.9091	0.307*	0.91
BICARBONATE, ION	11	283.9	18.5	257	306	11	0.037	251.990	0.078*	19.4
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	189.09	11.36	170.0	210.0	11	0.2189	-0.3845	0.758	7.82
CHLORIDE, DISSOLVED	11	20.73	1.35	19.0	23.0	11	-0.0062	26.1216	-0.182*	1.40
DISSOLVED SOLIDS, SUM OF CONST	11	587.5	26.2	528	626	11	0.331	301.246	0.497*	23.9
DISSOLVED SOLIDS, ROE 180 DEG C	2	562.5	33.2	539	586					
HARDNESS, TOTAL	11	280.0	15.5	260	310	11	0.116	179.766	0.294*	15.6
HARDNESS, NONCARBONATE	11	46.1	13.7	23	67	11	0.098	-38.967	0.283*	13.8
TURBIDITY (JTU)	32	52.0	31.7	20	150	32	0.085	-20.772	0.169*	31.8
FLOURIDE, DISSOLVED	4	0.50	0.00	0.5	0.5	4	0.0000	0.5000	0.000*	0.00

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	997	912	893	885	881	869	858	832	815	794

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	10.01	9.81	2.76	87	2.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06686000 -- NORTH PLATTE RIVER AT LISCO, NEBR.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	6	11	4	6	10
CADMIUM (CD), UG/L	4	<10	40	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	<50	150	4	0	1
COPPER (CU), UG/L	3	<10	130	3	2	30
IRON (FE), UG/L	4	950	6000	4	0	40
LEAD (PB), UG/L	4	<100	<100	4	0	6
MANGANESE (MN), UG/L	4	40	290	4	0	58
MERCURY (HG), UG/L	3	0.0	0.4	3	0.0	0.2
SELENIUM (SE), UG/L	4	4	4	4	3	4
ZINC (ZN), UG/L	4	40	260	4	30	360
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	48.00	170.00			
BIOMASS, ASH WT., G/SQ M	7	43.00	150.00			
CHLOROPHYLL A, MG/SQ M	7	5.0	48.0			
CHLOROPHYLL B, MG/SQ M	7	.3	12.0			
ORGANIC CARBON, MG/L	3	5.5	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06764000 NAME: SOUTH PLATTE RIVER AT JULESBURG, CO.

LAT 40D58M46S LONG 102D15M15S
DRAINAGE AREA: 23138 SQ MI (59927 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.96	9.94	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1769.2	245.6	1400	2140					
STREAMFLOW (CUBIC FT/SEC)	12	231.8	163.3	42	527	12	-0.182	552.927	-0.273 *	164.8
PH (STANDARD UNITS)	10	7.82	0.48	7.1	8.8	10	-0.0011	9.7117	-0.602 *	0.40
PHOSPHORUS, TOTAL	12	0.239	0.313	0.02	1.20	12	-0.00027	0.71639	-0.212 *	0.321
NITRITE + NITRATE, TOTAL	12	1.466	0.886	0.38	2.70	12	0.00119	-0.63703	0.329 *	0.877
NITROGEN, KJELDAHL, TOTAL	12	1.327	1.599	0.38	6.10	12	-0.00094	2.98217	-0.144 *	1.659
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	28616.7	42786.5	1200	140000	12	-20.716	65266.641	-0.119 *	44556.1
SEDIMENT, SUSPENDED	5	121.4	64.3	47	190					
SEDIMENT, CLAY-SILT (PERCENT)	7	56.4	28.0	16	88					
COLIFORM, FECAL (COL/100 ML)	12	139.2	236.8	5	720					
STREPTOCOCCI, FECAL (COL/100 ML)	12	250.0	263.6	30	800					
SILICA, DISSOLVED	12	23.00	3.28	17.0	27.0	12	0.0064	11.6906	0.479 *	3.01
CALCIUM, DISSOLVED	12	196.67	18.75	150.0	220.0	12	0.0542	100.7320	0.710	13.84
MAGNESIUM, DISSOLVED	12	60.92	6.49	49.0	72.0	12	0.0090	44.9416	0.342 *	6.39
SODIUM, DISSOLVED	12	184.17	20.21	130.0	210.0	12	0.0626	73.3591	0.761	13.75
POTASSIUM, DISSOLVED	12	15.92	2.47	11.0	20.0	12	0.0033	10.1308	0.326 *	2.45
BICARBONATE, ION	12	289.9	27.7	233	328	12	0.062	179.546	0.553 *	24.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	745.83	75.97	550.0	840.0	12	0.2235	350.3799	0.722	55.09
CHLORIDE, DISSOLVED	12	83.08	9.59	58.0	92.0	12	0.0231	42.2698	0.591	8.11
DISSOLVED SOLIDS, SUM OF CONST	12	1453.3	137.7	1080	1580	12	0.417	714.962	0.744	96.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	1564.2	150.0	1150	1720	12	0.430	802.636	0.705	111.6
HARDNESS, TOTAL	12	742.5	59.7	580	790	12	0.172	437.824	0.708	44.2
HARDNESS, NONCARBONATE	12	504.2	43.6	390	550	12	0.119	293.334	0.671	33.9
TURBIDITY (JTU)	12	27.8	55.5	1	200	12	-0.066	144.159	-0.291 *	55.7
FLOURIDE, DISSOLVED	12	0.73	0.09	0.6	0.9	12	-0.0000	0.7539	-0.032 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2140	1940	1850	1820	1800	1710	1580	1440	1280	961

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	11.40	12.76	2.83	91	2.77

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06764000 -- SOUTH PLATTE RIVER AT JULESBURG, CO.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	8	4	1	4
CADMIUM (CD), UG/L	4	< 10	30	4	0	1
CHROMIUM (CR), UG/L	4	0	40	4	0	20
COBALT (CO), UG/L	4	< 50	50	4	0	0
COPPER (CU), UG/L	4	< 10	40	4	1	3
IRON (FE), UG/L	4	680	2500	4	10	60
LEAD (PB), UG/L	4	< 100	< 100	4	2	5
MANGANESE (MN), UG/L	4	70	210	4	10	70
MERCURY (HG), UG/L	3	< 0.1	0.6	4	0.0	0.6
SELENIUM (SE), UG/L	4	2	5	4	2	5
ZINC (ZN), UG/L	4	20	110	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	340.00				
BIOMASS, ASH WT., G/SQ M	1	290.00				
CHLOROPHYLL A, MG/SQ M	1	200.0				
CHLOROPHYLL B, MG/SQ M	1	37.0				
ORGANIC CARBON, MG/L	4	1.7	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06792499 NAME: LOUP R POWER CA AT DIV NR GENOA, NEBR.

LAT 41D23M31S LONG 097D49M20S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	12.53	11.58	0.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	278.4	25.4	258	346					
STREAMFLOW (CUBIC FT/SEC)	13	1527.0	733.7	365	2670	11	-17.962	6385.434	-0.662	545.5
PH (STANDARD UNITS)	10	7.65	0.60	6.8	8.6	10	0.0020	7.0892	0.090*	0.63
PHOSPHORUS, TOTAL	11	0.285	0.072	0.18	0.40	11	0.00074	0.07922	0.263*	0.073
NITRITE + NITRATE, TOTAL	11	0.324	0.301	0.00	0.65	11	-0.00557	1.87446	-0.471*	0.280
NITROGEN, KJELDAHL, TOTAL	11	0.600	0.387	0.21	1.30	11	0.00323	-0.30021	0.212*	0.399
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	59372.7	69757.1	2100	220000	11	1625.471	-393099.063	0.592*	59240.3
SEDIMENT, SUSPENDED	4	148.3	122.7	66	329					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	1006.7	2172.6	10	6900					
STREPTOCOCCI, FECAL (COL/100 ML)	10	246.1	296.9	33	920					
SILICA, DISSOLVED	11	47.09	5.36	38.0	54.0	11	0.0473	33.9261	0.224*	5.50
CALCIUM, DISSOLVED	11	37.45	4.72	32.0	49.0	11	0.1695	-9.7186	0.913	2.03
MAGNESIUM, DISSOLVED	11	6.06	1.01	5.0	8.7	11	0.0299	-2.2510	0.755	0.70
SODIUM, DISSOLVED	11	9.56	1.03	8.3	11.0	11	0.0251	2.5708	0.622	0.85
POTASSIUM, DISSOLVED	11	7.50	1.13	6.2	9.8	11	0.0334	-1.7865	0.749	0.79
BICARBONATE, ION	11	159.5	17.2	144	201	11	0.661	-24.477	0.976	4.0
CARBONATE, ION	11	0.7	2.4	0	8	11	-0.008	2.920	-0.083*	2.5
SULFATE, DISSOLVED	11	10.78	2.27	7.9	15.0	11	0.0402	-0.4114	0.451*	2.13
CHLORIDE, DISSOLVED	11	2.33	0.69	1.4	3.5	11	0.0170	-2.4145	0.632	0.56
DISSOLVED SOLIDS, SUM OF CONST	11	200.5	18.6	174	246	11	0.687	9.394	0.939	6.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	202.9	18.5	176	247	11	0.693	10.054	0.952	6.0
HARDNESS, TOTAL	11	119.1	15.8	100	160	11	0.572	-40.006	0.921	6.5
HARDNESS, NONCARBONATE	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	11	40.7	47.9	15	180	11	-0.453	166.799	-0.241*	49.0
FLOURIDE, DISSOLVED	11	0.32	0.04	0.3	0.4	11	0.0008	0.0887	0.518*	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	348	331	314	291	281	270	259	249	241	229

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	13.04	15.49	2.80	93	2.91

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06792499 -- LOUP R POWER CA AT DIV NR GENOA, NEBR.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	17	4	4	8
CADMIUM (CD), UG/L	4	<10	10	4	0	4
CHROMIUM (CR), UG/L	4	0	40	4	0	<10
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	20	70	4	1	10
IRON (FE), UG/L	4	1100	15000	6	30	160
LEAD (PB), UG/L	4	<100	<100	4	0	4
MANGANESE (MN), UG/L	4	20	580	6	0	120
MERCURY (HG), UG/L	4	0.1	0.7	4	0.0	0.2
SELENIUM (SE), UG/L	4	1	1	4	1	1
ZINC (ZN), UG/L	4	40	160	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	.79				
CHLOROPHYLL A, MG/SQ M	1	.2				
CHLOROPHYLL B, MG/SQ M	1	.2				
ORGANIC CARBON, MG/L	3	.7	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06796000 NAME: PLATTE RIVER AT NORTH BEND, NEBR.

LAT 41D27M10S LONG 096D45M50S
DRAINAGE AREA: 77800 SQ MI (201502 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	14.52	10.96	0.2	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	484.2	90.3	362	739					
STREAMFLOW (CUBIC FT/SEC)	23	3717.8	2602.7	304	10400	15	-6.502	6807.094	-0.233 *	2544.6
PH (STANDARD UNITS)	15	7.56	0.26	7.2	7.9	15	-0.0002	7.6710	-0.081 *	0.26
PHOSPHORUS, TOTAL	14	0.301	0.127	0.16	0.66	14	-0.00015	0.37597	-0.105 *	0.132
NITRITE + NITRATE, TOTAL	15	0.499	0.554	0.00	2.10	15	-0.00108	1.02332	-0.176 *	0.566
NITROGEN, KJELDAHL, TOTAL	15	1.345	1.006	0.40	4.70	15	-0.00363	3.10159	-0.325 *	0.988
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	38053.8	34103.5	3300	97000	13	-75.172	74408.063	-0.211 *	34814.7
SEDIMENT, SUSPENDED	12	518.5	493.9	164	1760					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	14	8310.4	30132.2	5	113000					
STREPTOCOCCI, FECAL (COL/100 ML)	14	666.6	1718.2	44	6600					
SILICA, DISSOLVED	15	34.67	6.70	21.0	44.0	15	0.0101	29.7814	0.136 *	6.89
CALCIUM, DISSOLVED	15	48.60	5.05	36.0	57.0	15	0.0283	34.9155	0.505 *	4.53
MAGNESIUM, DISSOLVED	15	11.41	1.93	8.1	14.0	15	0.0094	6.8838	0.438 *	1.80
SODIUM, DISSOLVED	15	30.47	5.88	19.0	38.0	15	0.0376	12.2815	0.577	4.98
POTASSIUM, DISSOLVED	15	9.15	2.35	7.1	17.0	15	0.0017	8.3137	0.067 *	2.43
BICARBONATE, ION	15	177.2	16.0	134	196	15	0.065	145.591	0.369 *	15.4
CARBONATE, ION	15	0.0	0.0	0	0	15	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	15	74.53	19.04	39.0	100.0	15	0.0975	27.3434	0.462 *	17.52
CHLORIDE, DISSOLVED	15	11.69	4.16	7.7	24.0	15	0.0151	4.3589	0.328 *	4.08
DISSOLVED SOLIDS, SUM OF CONST	15	309.4	38.1	230	359	15	0.231	197.595	0.547	33.1
DISSOLVED SOLIDS, ROE 180 DEG C	9	307.2	38.2	238	359	9	0.156	231.678	0.449 *	36.5
HARDNESS, TOTAL	15	168.0	19.7	120	200	15	0.127	106.302	0.584	16.6
HARDNESS, NONCARBONATE	15	23.0	12.5	0	41	15	0.061	-6.706	0.443 *	11.6
TURBIDITY (JTU)	14	111.4	202.0	10	780	14	-0.749	471.559	-0.344 *	197.4
FLOURIDE, DISSOLVED	15	0.37	0.07	0.3	0.5	15	0.0002	0.2983	0.199 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	707	650	602	564	526	516	477	417	380	377

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	13.80	15.33	3.00	96	2.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06796000 -- PLATTE RIVER AT NORTH BEND, NEBR.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	6	4	62	6	2	8
CADMIUM (CD), UG/L	6	< 10	10	6	0	1
CHROMIUM (CR), UG/L	6	< 10	70	6	0	10
COBALT (CO), UG/L	6	< 50	< 50	6	0	1
COPPER (CU), UG/L	6	< 10	70	6	2	14
IRON (FE), UG/L	6	980	82000	15	0	370
LEAD (PB), UG/L	6	<100	100	6	0	2
MANGANESE (MN), UG/L	6	40	1900	15	0	30
MERCURY (HG), UG/L	6	0.1	0.7	6	0.0	0.1
SELENIUM (SE), UG/L	6	1	2	6	1	2
ZINC (ZN), UG/L	6	20	380	6	0	340
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	8.19	8.19			
BIOMASS, ASH WT., G/SQ M	3	6.19	23.00			
CHLOROPHYLL A, MG/SQ M	3	.5	2.5			
CHLOROPHYLL B, MG/SQ M	3	.5	.6			
ORGANIC CARBON, MG/L	4	1.1	35.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06805500 NAME: PLATTE R AT LOUISVILLE NE

LAT 41D00M55S LONG 096D09M28S
DRAINAGE AREA: 88800 SQ MI (229992 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	11.52	9.30	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	723.4	177.9	478	994					
STREAMFLOW (CUBIC FT/SEC)	19	4678.4	4199.5	1230	18200	10	-7.966	9771.410	-0.526 *	2430.7
PH (STANDARD UNITS)	10	7.80	0.46	6.9	8.4	10	-0.0015	8.9126	-0.589 *	0.40
PHOSPHORUS, TOTAL	10	0.534	0.203	0.34	0.96	10	-0.00009	0.60059	-0.081 *	0.214
NITRITE + NITRATE, TOTAL	10	0.684	0.538	0.06	1.50	10	-0.00127	1.60279	-0.420 *	0.518
NITROGEN, KJELDAHL, TOTAL	10	1.722	0.963	0.71	3.30	10	0.00031	1.49530	0.058 *	1.020
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	75706.0	90652.5	130	240000	10	392.850	-208481.875	0.771	61250.6
SEDIMENT, SUSPENDED	11	723.0	883.3	222	3270					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	1375.2	1652.0	12	4800					
STREPTOCOCCI, FECAL (COL/100 ML)	10	1846.9	3318.0	11	11000					
SILICA, DISSOLVED	10	32.90	7.11	26.0	44.0	10	0.0010	32.1902	0.025 *	7.54
CALCIUM, DISSOLVED	10	58.30	6.78	49.0	70.0	10	0.0294	37.0401	0.771	4.58
MAGNESIUM, DISSOLVED	10	13.66	2.19	9.6	18.0	10	0.0108	5.8476	0.877	1.12
SODIUM, DISSOLVED	10	74.40	31.01	34.0	120.0	10	0.1728	-50.6355	0.991	4.32
POTASSIUM, DISSOLVED	10	9.62	1.63	7.5	13.0	10	0.0023	7.9544	0.251 *	1.68
BICARBONATE, ION	10	216.3	22.1	179	247	10	0.089	152.174	0.715	16.4
CARBONATE, ION	10	0.8	2.5	0	8	10	0.001	0.280	0.051 *	2.7
SULFATE, DISSOLVED	10	80.90	17.59	50.0	110.0	10	0.0900	15.8046	0.910	7.74
CHLORIDE, DISSOLVED	10	74.40	42.89	20.0	140.0	10	0.2390	-98.5037	0.991	6.00
DISSOLVED SOLIDS, SUM OF CONST	10	452.7	104.7	303	605	10	0.586	28.962	0.995	10.7
DISSOLVED SOLIDS, ROE 180 DEG C	10	470.0	120.9	318	710	10	0.661	-8.094	0.972	29.9
HARDNESS, TOTAL	10	202.0	25.7	160	240	10	0.122	113.819	0.843	14.7
HARDNESS, NONCARBONATE	10	23.8	12.0	2	46	10	0.045	-8.485	0.664	9.5
TURBIDITY (JTU)	10	83.4	87.6	6	260	10	-0.228	248.299	-0.463 *	82.4
FLOURIDE, DISSOLVED	10	0.38	0.08	0.2	0.5	10	0.0002	0.2518	0.400 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 335

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1410	1100	961	812	750	632	560	476	443	350

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
335	13.13	15.51	2.78	93	3.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06805500 -- PLATTE R AT LOUISVILLE NE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	7	15	3	5	11
CADMIUM (CD), UG/L	3	< 10	10	3	0	2
CHROMIUM (CR), UG/L	3	1	10	1	< 10	
COBALT (CO), UG/L	3	< 50	100	3	0	0
COPPER (CU), UG/L	3	20	50	3	4	8
IRON (FE), UG/L	3	880	15000	4	10	7800
LEAD (PB), UG/L	3	< 100	100	3	0	4
MANGANESE (MN), UG/L	3	70	540	4	10	50
MERCURY (HG), UG/L	2	0.1	0.1	3	0.0	0.1
SELENIUM (SE), UG/L	3	1	3	3	1	2
ZINC (ZN), UG/L	3	80	200	2	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	.79				
CHLOROPHYLL A, MG/SQ M	1	.1				
CHLOROPHYLL B, MG/SQ M	1	.1				
ORGANIC CARBON, MG/L	3	3.5	18.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06807000 NAME: MISSOURI RIVER AT NEBRASKA CITY, NEBR.

LAT 40D40M55S LONG 095D50M48S
DRAINAGE AREA: 414400 SQ MI (1073296 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	40	11.46	9.66	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	720.0	100.1	540	890					
STREAMFLOW (CUBIC FT/SEC)	40	41145.0	15891.7	15000	67700	12	-65.303	86976.188	-0.382*	16580.4
PH (STANDARD UNITS)	12	7.80	0.29	7.5	8.4	12	-0.0008	8.3946	-0.289*	0.29
PHOSPHORUS, TOTAL	12	0.179	0.115	0.10	0.52	12	-0.00018	0.30657	-0.154*	0.119
NITRITE + NITRATE, TOTAL	12	0.625	0.663	0.06	2.30	12	-0.00307	2.83861	-0.464*	0.616
NITROGEN, KJELDAHL, TOTAL	12	0.816	0.309	0.51	1.60	12	-0.00078	1.37714	-0.253*	0.313
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	12700.0	18526.8	2500	67000	11	-19.310	26550.586	-0.109*	19412.6
SEDIMENT, SUSPENDED	24	666.9	702.9	253	3890					
SEDIMENT, CLAY-SILT (PERCENT)	12	41.2	19.5	12	86					
COLIFORM, FECAL (COL/100 ML)	12	70258.3	151667.8	8200	549999					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2565.0	3316.4	430	11000					
SILICA, DISSOLVED	12	11.27	2.58	8.0	16.0	12	-0.0041	14.2157	-0.158*	2.67
CALCIUM, DISSOLVED	12	63.33	5.97	51.0	73.0	12	0.0222	47.3261	0.372*	5.82
MAGNESIUM, DISSOLVED	12	22.25	1.36	20.0	25.0	12	0.0087	15.9778	0.643	1.09
SODIUM, DISSOLVED	12	64.67	9.66	46.0	80.0	12	0.0396	36.1803	0.410*	9.24
POTASSIUM, DISSOLVED	12	5.79	0.49	5.1	6.5	12	-0.0020	7.2094	-0.405*	0.47
BICARBONATE, ION	12	213.5	14.2	196	239	12	0.072	161.623	0.506*	12.9
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	182.50	18.65	150.0	200.0	12	0.0971	112.5908	0.521*	16.69
CHLORIDE, DISSOLVED	12	17.50	2.81	14.0	22.0	12	0.0015	16.3893	0.055*	2.95
DISSOLVED SOLIDS, SUM OF CONST	12	473.2	31.6	426	517	12	0.199	329.820	0.630	25.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	491.8	33.3	437	550	12	0.123	402.963	0.370*	32.5
HARDNESS, TOTAL	12	249.2	18.8	220	280	12	0.109	170.764	0.579	16.1
HARDNESS, NONCARBONATE	12	74.6	11.5	50	95	12	0.033	50.605	0.290*	11.5
TURBIDITY (JTU)	12	31.3	25.9	5	95	12	-0.143	134.480	-0.555*	22.6
FLOURIDE, DISSOLVED	12	0.57	0.12	0.4	0.8	12	-0.0002	0.7235	-0.189*	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	900	800	770	750	744	730	700	630	600	560

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	11.76	14.07	2.73	96	2.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06807000 -- MISSOURI RIVER AT NEBRASKA CITY, NEBR.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	5	4	1	5
CADMIUM (CD), UG/L	4	0	4	4	0	2
CHROMIUM (CR), UG/L	4	<10	<10	4	0	1
COBALT (CO), UG/L	4	0	6	4	0	1
COPPER (CU), UG/L	4	4	16	4	0	4
IRON (FE), UG/L	4	600	4900	4	0	50
LEAD (PB), UG/L	4	1	30	4	0	3
MANGANESE (MN), UG/L	4	60	260	4	4	20
MERCURY (HG), UG/L	4	0.1	0.7	4	0.0	0.9
SELENIUM (SE), UG/L	4	2	5	4	2	4
ZINC (ZN), UG/L	4	20	60	4	5	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	6.89	20.00			
BIOMASS, ASH WT., G/SQ M	3	6.19	20.00			
CHLOROPHYLL A, MG/SQ M	3	2.7	52.0			
CHLOROPHYLL B, MG/SQ M	3	1.0	9.5			
ORGANIC CARBON, MG/L	4	5.8	15.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06818000 NAME: MISSOURI RIVER AT ST. JOSEPH, MO.

LAT 39D48M14S LONG 094D52M34S
DRAINAGE AREA: 424300 SQ MI (1098937 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.46	10.70	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	722.9	88.4	525	875					
STREAMFLOW (CUBIC FT/SEC)	12	49775.0	21346.1	16900	90500	12	-173.283	175044.438	-0.717	15600.1
PH (STANDARD UNITS)	12	8.02	0.23	7.5	8.4	12	0.0012	7.1739	0.452 *	0.22
PHOSPHORUS, TOTAL	12	0.296	0.213	0.14	0.91	12	-0.00180	1.59399	-0.744	0.150
NITRITE + NITRATE, TOTAL	12	0.826	0.847	0.00	2.40	12	-0.00670	5.67198	-0.700	0.634
NITROGEN, KJELDAHL, TOTAL	12	1.602	2.689	0.16	10.00	12	-0.02309	18.29601	-0.759	1.837
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	5909.1	3160.2	1300	13000	10	-9.008	13080.887	-0.209 *	3023.9
SEDIMENT, SUSPENDED	12	1131.8	1073.4	73	4060					
SEDIMENT, CLAY-SILT (PERCENT)	11	50.1	24.9	11	93					
COLIFORM, FECAL (COL/100 ML)	12	8608.3	9179.1	1200	36000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	10391.7	14945.0	250	38000					
SILICA, DISSOLVED	12	10.62	2.35	7.4	14.0	12	-0.0016	11.7679	-0.060 *	2.46
CALCIUM, DISSOLVED	12	61.17	6.60	49.0	77.0	12	0.0653	13.9885	0.873	3.38
MAGNESIUM, DISSOLVED	12	20.92	3.45	12.0	26.0	12	0.0339	-3.5634	0.867	1.80
SODIUM, DISSOLVED	12	58.75	11.70	35.0	69.0	12	0.1087	-19.8253	0.821	7.01
POTASSIUM, DISSOLVED	12	5.85	0.70	5.1	7.8	12	-0.0023	7.4894	-0.285 *	0.71
BICARBONATE, ION	12	213.2	23.0	172	268	12	0.222	52.544	0.853	12.6
CARBONATE, ION	12	0.3	1.2	0	4	12	0.001	-0.579	0.097 *	1.2
SULFATE, DISSOLVED	12	164.08	35.19	99.0	200.0	12	0.2865	-43.0206	0.719	25.64
CHLORIDE, DISSOLVED	12	16.25	2.83	12.0	21.0	12	0.0166	4.2853	0.516 *	2.54
DISSOLVED SOLIDS, SUM OF CONST	12	443.8	60.4	310	530	12	0.620	-4.143	0.906	26.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	455.3	56.6	330	532	12	0.596	24.782	0.929	21.9
HARDNESS, TOTAL	12	239.2	30.0	170	300	12	0.312	13.306	0.921	12.3
HARDNESS, NONCARBONATE	12	63.4	14.3	31	90	12	0.118	-21.907	0.727	10.3
TURBIDITY (JTU)	5	60.8	84.9	9	210	5	-0.436	390.849	-0.375 *	90.9
FLOURIDE, DISSOLVED	12	0.52	0.17	0.4	0.9	12	0.0005	0.1451	0.280 *	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 361

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	875	850	805	760	750	737	710	658	638	540

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	12.56	13.67	2.71	97	1.76

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06818000 -- MISSOURI RIVER AT ST. JOSEPH, MO.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	5	11	4	2	4
CADMIUM (CD), UG/L	4	< 10	10	4	0	6
CHROMIUM (CR), UG/L	4	0	30	4	0	0
COBALT (CO), UG/L	4	< 50	50	4	0	1
COPPER (CU), UG/L	4	< 10	60	4	1	8
IRON (FE), UG/L	4	1300	11000	11	0	990
LEAD (PB), UG/L	4	< 100	100	4	2	10
MANGANESE (MN), UG/L	4	130	210	11	0	130
MERCURY (HG), UG/L	3	0.0	0.3	4	0.0	0.9
SELENIUM (SE), UG/L	3	0	2	4	1	2
ZINC (ZN), UG/L	4	30	320	4	0	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	5.89	280.00			
BIOMASS, ASH WT., G/SQ M	4	4.59	270.00			
CHLOROPHYLL A, MG/SQ M	4	.0	91.0			
CHLOROPHYLL B, MG/SQ M	4	.0	5.0			
ORGANIC CARBON, MG/L	4	4.3	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06856600 NAME: REPUBLICAN R AT CLAY CENTER, KS

LAT 39D21M20S LONG 097D07M34S
DRAINAGE AREA: 24542 SQ MI (63564 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	12.81	9.80	1.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	942.7	277.0	292	1420					
STREAMFLOW (CUBIC FT/SEC)	12	472.2	488.0	140	1740	12	-1.252	1640.796	-0.737	346.1
PH (STANDARD UNITS)	13	8.11	0.30	7.7	8.6	13	-0.0000	8.1398	-0.032 *	0.31
PHOSPHORUS, TOTAL	12	0.353	0.096	0.25	0.53	12	-0.00022	0.55900	-0.661	0.075
NITRITE + NITRATE, TOTAL	12	0.684	0.665	0.00	1.90	12	0.00082	-0.08351	0.355 *	0.652
NITROGEN, KJELDAHL, TOTAL	12	1.646	1.205	0.43	4.70	12	-0.00329	4.71655	-0.784	0.784
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	41057.7	62402.9	550	220000	13	-52.376	90432.313	-0.232 *	63391.3
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	2542.5	6175.4	13	22000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3335.3	10296.0	10	36000					
SILICA, DISSOLVED	12	18.92	5.45	10.0	27.0	12	0.0141	5.7293	0.744	3.82
CALCIUM, DISSOLVED	12	88.42	27.46	32.0	120.0	12	0.0831	10.7942	0.870	14.21
MAGNESIUM, DISSOLVED	12	18.42	5.50	6.1	29.0	12	0.0174	2.1535	0.911	2.38
SODIUM, DISSOLVED	12	64.92	18.16	18.0	83.0	12	0.0549	13.6164	0.869	9.41
POTASSIUM, DISSOLVED	12	11.40	2.33	6.9	15.0	12	0.0009	10.5188	0.116 *	2.43
BICARBONATE, ION	12	274.0	76.5	114	390	12	0.238	51.439	0.895	35.7
CARBONATE, ION	12	0.4	1.0	0	3	12	0.000	0.084	0.103 *	1.0
SULFATE, DISSOLVED	12	130.17	32.81	42.0	170.0	12	0.1058	31.4155	0.926	12.99
CHLORIDE, DISSOLVED	12	60.42	19.09	16.0	93.0	12	0.0615	2.9647	0.926	7.54
DISSOLVED SOLIDS, SUM OF CONST	12	528.6	135.2	190	697	12	0.456	103.002	0.968	35.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	542.3	138.2	208	715	12	0.462	110.868	0.961	40.2
HARDNESS, TOTAL	12	296.7	85.2	110	420	12	0.275	39.969	0.927	33.5
HARDNESS, NONCARBONATE	12	70.7	32.7	12	140	12	0.082	-5.764	0.719	23.9
TURBIDITY (JTU)	12	43.7	48.4	4	170	12	-0.131	165.933	-0.777	32.0
FLOURIDE, DISSOLVED	12	0.40	0.07	0.3	0.5	12	0.0000	0.3636	0.152 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1170	1100	1060	1020	996	913	731	569	464	292

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	14.39	13.44	2.86	94	2.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06856600 -- REPUBLICAN R AT CLAY CENTER, KS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	15	4	6	8
CADMIUM (CD), UG/L	4	< 10	10	4	1	4
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	< 50	50	4	0	1
COPPER (CU), UG/L	4	< 10	200	4	3	5
IRON (FE), UG/L	4	360	5700	4	10	30
LEAD (PB), UG/L	4	<100	100	4	4	14
MANGANESE (MN), UG/L	4	70	180	4	0	50
MERCURY (HG), UG/L	3	0.0	0.4	4	0.0	2.0
SELENIUM (SE), UG/L	4	2	3	4	2	3
ZINC (ZN), UG/L	4	20	110	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.29	24.00			
BIOMASS, ASH WT., G/SQ M	2	1.79	21.00			
CHLOROPHYLL A, MG/SQ M	2	.0	5.1			
CHLOROPHYLL B, MG/SQ M	2	.0	1.0			
ORGANIC CARBON, MG/L	4	3.7	14.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06877600 NAME: SMOKY HILL R AT ENTERPRISE, KS

LAT 38D54M24S LONG 097D07M12S
DRAINAGE AREA: 19260 SQ MI (49883 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	26	14.42	9.28	0.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	26	1924.8	747.9	510	2960					
STREAMFLOW (CUBIC FT/SEC)	27	1780.4	2803.2	387	13100	26	-2.588	6610.793	-0.705	1988.4
PH (STANDARD UNITS)	25	7.79	0.24	7.4	8.3	25	0.0001	7.5304	0.389 *	0.22
PHOSPHORUS, TOTAL	25	0.243	0.158	0.10	0.78	25	-0.00012	0.46892	-0.568	0.133
NITRITE + NITRATE, TOTAL	11	0.735	0.456	0.02	1.60	11	-0.00014	1.01065	-0.246 *	0.465
NITROGEN, KJELDAHL, TOTAL	11	1.681	1.223	0.54	4.10	11	-0.00127	4.11808	-0.811	0.754
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	16740.8	14861.4	890	52000	12	3.074	10756.578	0.155 *	15397.6
SEDIMENT, SUSPENDED	3	1202.3	1032.1	523	2390					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	1936.5	2139.4	260	8000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2840.4	8249.7	70	29000					
SILICA, DISSOLVED	25	11.45	2.30	7.0	15.0	25	0.0011	9.3461	0.364 *	2.19
CALCIUM, DISSOLVED	25	130.12	41.37	50.0	190.0	25	0.0512	32.1586	0.942	14.20
MAGNESIUM, DISSOLVED	25	28.49	10.26	7.2	41.0	25	0.0119	5.7182	0.882	4.93
SODIUM, DISSOLVED	25	223.40	107.51	32.0	370.0	25	0.1393	-42.9901	0.986	18.63
POTASSIUM, DISSOLVED	25	8.57	1.59	4.5	12.0	25	-0.0002	8.9340	-0.090 *	1.62
BICARBONATE, ION	25	250.3	67.9	130	360	25	0.078	101.697	0.871	34.1
CARBONATE, ION	20	0.0	0.0	0	0	20	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	25	261.40	99.45	63.0	410.0	25	0.1188	34.1263	0.909	42.35
CHLORIDE, DISSOLVED	25	321.60	161.56	44.0	560.0	25	0.2080	-76.2966	0.980	33.19
DISSOLVED SOLIDS, SUM OF CONST	25	1110.0	434.5	298	1740	25	0.568	23.370	0.995	45.5
DISSOLVED SOLIDS, ROE 180 DEG C	25	1143.6	447.6	318	1780	25	0.584	25.983	0.993	54.0
HARDNESS, TOTAL	25	440.8	142.9	160	640	25	0.176	104.140	0.937	50.9
HARDNESS, NONCARBONATE	25	236.3	93.5	42	400	25	0.113	20.364	0.918	37.9
TURBIDITY (JTU)	26	204.3	410.6	2	1500	26	-0.372	919.560	-0.677	308.5
FLOURIDE, DISSOLVED	25	0.36	0.06	0.3	0.5	25	0.0000	0.3419	0.124 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2880	2740	2650	2520	2400	1990	1570	1080	868	550

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.54	14.01	2.86	93	2.63

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06877600 -- SMOKY HILL R AT ENTERPRISE, KS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	23	4	1	3
CADMIUM (CD), UG/L	4	10	10	4	2	8
CHROMIUM (CR), UG/L	4	0	30	4	0	10
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	10	40	4	2	7
IRON (FE), UG/L	4	470	19000	6	10	130
LEAD (PB), UG/L	4	<100	100	4	4	12
MANGANESE (MN), UG/L	4	190	700	6	0	190
MERCURY (HG), UG/L	3	0.0	0.4	4	0.0	0.6
SELENIUM (SE), UG/L	4	1	5	4	1	5
ZINC (ZN), UG/L	4	10	120	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	8.3	19.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06887000 NAME: BIG BLUE R NR MANHATTAN, KS

LAT 39D14M14S LONG 096D34M16S
DRAINAGE AREA: 9640 SQ MI (24968 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	14.41	8.15	0.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	519.5	105.7	358	713					
STREAMFLOW (CUBIC FT/SEC)	25	2515.0	3784.4	12	10600	23	-12.413	8791.254	-0.355 *	3532.8
PH (STANDARD UNITS)	23	7.92	0.27	7.3	8.5	23	0.0000	7.8971	0.015 *	0.27
PHOSPHORUS, TOTAL	23	0.148	0.047	0.08	0.22	23	-0.00036	0.33624	-0.818	0.028
NITRITE + NITRATE, TOTAL	12	0.897	0.583	0.01	1.70	12	-0.00450	3.32844	-0.929	0.226
NITROGEN, KJELDAHL, TOTAL	12	1.070	1.057	0.49	4.00	12	-0.00015	1.14988	-0.017 *	1.108
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3207.5	3154.9	13	9000	11	16.158	-5514.941	0.646	2539.9
SEDIMENT, SUSPENDED	7	52.0	37.1	31	135					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	998.1	1345.2	30	3200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	191.3	221.3	10	620					
SILICA, DISSOLVED	23	7.16	3.75	1.9	13.0	23	-0.0107	12.7227	-0.302 *	3.66
CALCIUM, DISSOLVED	23	60.70	14.23	39.0	91.0	23	0.1279	-5.7677	0.951	4.52
MAGNESIUM, DISSOLVED	23	14.78	4.45	7.6	24.0	23	0.0382	-5.0735	0.909	1.90
SODIUM, DISSOLVED	23	22.83	6.12	13.0	30.0	23	0.0444	-0.2482	0.768	4.01
POTASSIUM, DISSOLVED	23	6.60	1.10	4.3	8.2	23	-0.0065	9.9633	-0.625	0.88
BICARBONATE, ION	23	218.6	56.0	138	343	23	0.494	-38.266	0.933	20.7
CARBONATE, ION	21	0.1	0.4	0	2	21	0.001	-0.259	0.165 *	0.4
SULFATE, DISSOLVED	23	55.35	14.94	30.0	74.0	23	0.0974	4.7574	0.689	11.08
CHLORIDE, DISSOLVED	23	19.51	5.61	9.9	27.0	23	0.0447	-3.7233	0.842	3.10
DISSOLVED SOLIDS, SUM OF CONST	23	297.0	62.1	193	398	23	0.570	0.994	0.970	15.4
DISSOLVED SOLIDS, ROE 180 DEG C	23	309.0	64.7	193	409	23	0.596	-0.692	0.975	14.7
HARDNESS, TOTAL	23	212.6	54.1	130	330	23	0.488	-40.641	0.952	16.9
HARDNESS, NONCARBONATE	23	33.2	10.5	10	46	23	0.075	-5.823	0.757	7.0
TURBIDITY (JTU)	23	29.8	23.3	5	90	23	-0.153	109.339	-0.696	17.1
FLOURIDE, DISSOLVED	23	0.33	0.06	0.3	0.5	23	-0.0000	0.3493	-0.052 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	672	650	637	599	574	552	451	338	331	320

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	13.78	11.86	2.65	96	1.69

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06887000 -- BIG BLUE R NR MANHATTAN, KS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	5	4	1	3
CADMIUM (CD), UG/L	4	<10	10	4	1	2
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	<10	120	4	3	320
IRON (FE), UG/L	4	560	3100	6	10	60
LEAD (PB), UG/L	4	<100	100	4	0	4
MANGANESE (MN), UG/L	4	0	490	6	0	400
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	1	1	4	1	1
ZINC (ZN), UG/L	4	20	320	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	4.8	19.0			

STATION NUMBER: 06892350 NAME: KANSAS R AT DESOTO, KS

LAT 38D59M00S LONG 094D57M52S
DRAINAGE AREA: 59756 SQ MI (154768 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	15.00	8.99	0.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	818.3	238.7	450	1310					
STREAMFLOW (CUBIC FT/SEC)	23	7040.0	7052.5	1890	27900	22	-20.962	24343.863	-0.697	5277.6
PH (STANDARD UNITS)	22	7.93	0.36	7.4	8.6	22	0.0008	7.2923	0.521	0.31
PHOSPHORUS, TOTAL	23	0.277	0.193	0.13	1.10	22	-0.00010	0.36572	-0.125 *	0.200
NITRITE + NITRATE, TOTAL	11	0.892	0.601	0.02	2.20	11	-0.00129	2.02983	-0.539	0.534
NITROGEN, KJELDAHL, TOTAL	11	2.025	1.285	0.37	4.90	11	-0.00190	3.69266	-0.370 *	1.259
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	19010.0	24552.4	1200	82000	10	34.993	-11927.488	0.377 *	24125.4
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	15290.9	16710.8	2200	47000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	13344.5	38720.6	330	130000					
SILICA, DISSOLVED	23	8.75	1.85	4.7	12.0	22	0.0020	7.1217	0.249 *	1.88
CALCIUM, DISSOLVED	23	79.04	20.41	49.0	110.0	22	0.0765	15.7679	0.886	9.81
MAGNESIUM, DISSOLVED	23	17.29	5.08	6.7	26.0	22	0.0186	1.9736	0.859	2.71
SODIUM, DISSOLVED	23	65.30	26.05	20.0	120.0	22	0.1082	-23.4312	0.969	6.74
POTASSIUM, DISSOLVED	23	5.91	1.56	3.2	8.9	22	0.0003	5.6667	0.052 *	1.62
BICARBONATE, ION	23	224.9	57.8	150	320	22	0.203	56.956	0.827	33.8
CARBONATE, ION	23	0.2	1.0	0	5	22	0.000	0.187	0.011 *	1.1
SULFATE, DISSOLVED	23	107.48	32.07	58.0	160.0	22	0.1217	6.3851	0.908	13.75
CHLORIDE, DISSOLVED	23	80.96	34.57	20.0	150.0	22	0.1409	-34.5542	0.951	11.24
DISSOLVED SOLIDS, SUM OF CONST	23	479.0	137.2	264	738	22	0.565	12.974	0.969	35.2
DISSOLVED SOLIDS, ROE 180 DEG C	22	491.2	142.2	272	760	22	0.580	16.823	0.973	33.6
HARDNESS, TOTAL	23	267.4	69.7	170	380	22	0.264	48.774	0.896	31.9
HARDNESS, NONCARBONATE	23	83.8	26.5	44	120	22	0.099	2.192	0.877	13.2
TURBIDITY (JTU)	23	298.4	510.7	5	2000	22	-1.322	1392.460	-0.608	422.6
FLOURIDE, DISSOLVED	23	0.33	0.09	0.2	0.5	22	-0.0001	0.4056	-0.241 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 359

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1320	1210	1150	1030	928	861	829	630	587	488

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
341	15.68	9.40	2.60	81	3.20

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06892350 -- KANSAS R AT DESOTO, KS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	2	9	3	2	4
CADMIUM (CD), UG/L	3	< 10	10	3	1	6
CHROMIUM (CR), UG/L	3	0	10	3	0	0
COBALT (CO), UG/L	3	< 50	50	3	0	0
COPPER (CU), UG/L	3	10	50	3	2	7
IRON (FE), UG/L	3	810	14000	5	20	120
LEAD (PB), UG/L	3	<100	100	3	1	11
MANGANESE (MN), UG/L	3	70	400	5	0	40
MERCURY (HG), UG/L	3	0.0	0.3	3	0.0	0.3
SELENIUM (SE), UG/L	3	1	2	3	1	1
ZINC (ZN), UG/L	3	30	100	3	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	53.00				
BIOMASS, ASH WT., G/SQ M	1	46.00				
CHLOROPHYLL A, MG/SQ M	1	.2				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	2	3.3	20.0			

STATION NUMBER: 06902000 NAME: GRAND RIVER NEAR SUMNER MO

LAT 39D38M25S LONG 093D16M25S
DRAINAGE AREA: 6880 SQ MI (17819 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.67	10.84	0.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	361.7	89.2	243	550					
STREAMFLOW (CUBIC FT/SEC)	12	2295.4	1844.1	240	6000	12	-7.164	4886.449	-0.347 *	1814.1
PH (STANDARD UNITS)	12	7.87	0.23	7.6	8.3	12	0.0019	7.1884	0.737	0.16
PHOSPHORUS, TOTAL	12	0.437	0.346	0.00	1.30	12	-0.00116	0.85739	-0.300 *	0.346
NITRITE + NITRATE, TOTAL	12	0.986	0.795	0.00	2.50	12	-0.00383	2.37248	-0.430 *	0.753
NITROGEN, KJELDAHL, TOTAL	12	2.252	1.956	0.51	7.30	12	-0.01126	6.32241	-0.514 *	1.760
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10422.5	18301.1	470	66000	12	127.826	-35807.738	0.623	15010.0
SEDIMENT, SUSPENDED	12	1316.1	1484.3	12	5130					
SEDIMENT, CLAY-SILT (PERCENT)	12	64.4	33.1	0	97					
COLIFORM, FECAL (COL/100 ML)	12	5105.8	5973.6	120	18500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6676.7	7676.5	140	22000					
SILICA, DISSOLVED	12	9.02	2.54	6.2	14.0	12	0.0235	0.5143	0.826	1.50
CALCIUM, DISSOLVED	12	46.92	11.46	32.0	70.0	12	0.1259	1.3663	0.981	2.36
MAGNESIUM, DISSOLVED	12	8.89	3.19	5.8	18.0	12	0.0320	-2.6985	0.896	1.49
SODIUM, DISSOLVED	12	9.73	2.47	6.6	15.0	12	0.0250	0.6930	0.904	1.11
POTASSIUM, DISSOLVED	12	4.32	0.56	3.5	5.3	12	0.0002	4.2379	0.038 *	0.59
BICARBONATE, ION	12	165.7	48.4	124	296	12	0.487	-10.638	0.898	22.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	35.42	8.83	22.0	47.0	12	0.0554	15.3632	0.561 *	7.67
CHLORIDE, DISSOLVED	12	6.70	1.58	3.6	8.8	12	0.0151	1.2468	0.852	0.87
DISSOLVED SOLIDS, SUM OF CONST	12	203.0	46.8	145	310	12	0.518	15.818	0.988	7.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	214.4	48.5	145	309	12	0.542	18.470	0.996	4.6
HARDNESS, TOTAL	12	153.3	40.5	100	250	12	0.442	-6.516	0.973	9.8
HARDNESS, NONCARBONATE	12	19.4	14.3	2	43	12	0.040	4.814	0.252 *	14.5
TURBIDITY (JTU)	5	222.8	148.3	4	400	5	-1.146	600.403	-0.717 *	119.4
FLOURIDE, DISSOLVED	12	0.25	0.09	0.1	0.4	12	-0.0001	0.2682	-0.050 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 295

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	530	500	480	458	425	365	308	234	200	136

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
293	12.92	13.88	2.82	94	2.47

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06902000 -- GRAND RIVER NEAR SUMNER MO

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	32	4	0	2
CADMIUM (CD), UG/L	4	< 10	10	4	0	2
CHROMIUM (CR), UG/L	4	0	50	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	2
COPPER (CU), UG/L	4	< 10	40	4	1	20
IRON (FE), UG/L	4	3000	22000	11	10	150
LEAD (PB), UG/L	4	<100	< 100	4	0	5
MANGANESE (MN), UG/L	4	290	690	11	0	240
MERCURY (HG), UG/L	4	0.0	0.7	4	0.0	1.4
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	4	40	280	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.59	71.00			
BIOMASS, ASH WT., G/SQ M	4	.39	58.00			
CHLOROPHYLL A, MG/SQ M	4	.0	2.2			
CHLOROPHYLL B, MG/SQ M	4	.0	.5			
ORGANIC CARBON, MG/L	4	9.5	44.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06926510 NAME: OSAGE RIVER BELOW ST. THOMAS, MISSOURI

LAT 38D25M18S LONG 092D12M31S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.29	8.71	2.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	294.4	31.1	230	327					
STREAMFLOW (CUBIC FT/SEC)	12	14534.2	10424.0	4080	35000	12	-6.330	16397.695	-0.019*	10930.8
PH (STANDARD UNITS)	12	7.85	0.21	7.5	8.2	12	0.0020	7.2556	0.297*	0.21
PHOSPHORUS, TOTAL	12	0.062	0.022	0.02	0.09	12	-0.00032	0.15621	-0.445*	0.021
NITRITE + NITRATE, TOTAL	12	0.407	0.148	0.16	0.60	12	0.00028	0.32459	0.059*	0.155
NITROGEN, KJELDAHL, TOTAL	12	0.450	0.116	0.22	0.64	12	0.00017	0.39958	0.046*	0.122
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	592.7	474.9	110	1600	11	2.604	-166.821	0.170*	493.3
SEDIMENT, SUSPENDED	12	53.2	23.2	20	110					
SEDIMENT, CLAY-SILT (PERCENT)	12	80.6	9.5	66	96					
COLIFORM, FECAL (COL/100 ML)	12	589.1	1555.1	4	5500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	468.8	1120.1	0	4000					
SILICA, DISSOLVED	12	5.60	1.40	4.0	8.4	12	-0.0220	12.0721	-0.489*	1.28
CALCIUM, DISSOLVED	12	36.75	4.37	28.0	42.0	12	0.1320	-2.0990	0.938	1.59
MAGNESIUM, DISSOLVED	12	10.02	2.13	6.4	14.0	12	0.0581	-7.0887	0.849	1.18
SODIUM, DISSOLVED	12	5.35	0.76	4.1	6.3	12	0.0162	0.5777	0.664	0.59
POTASSIUM, DISSOLVED	12	2.70	0.60	1.9	3.7	12	-0.0125	6.3736	-0.643	0.48
BICARBONATE, ION	12	134.3	20.8	92	155	12	0.637	-53.415	0.950	6.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	29.92	3.96	25.0	37.0	12	0.0369	19.0448	0.289*	3.98
CHLORIDE, DISSOLVED	12	4.95	0.76	3.8	6.0	12	0.0196	-0.8110	0.799	0.48
DISSOLVED SOLIDS, SUM OF CONST	12	161.8	17.6	127	185	12	0.540	2.868	0.952	5.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	174.7	15.0	147	196	12	0.433	47.289	0.896	7.0
HARDNESS, TOTAL	12	133.0	18.5	96	150	12	0.582	-38.243	0.979	3.9
HARDNESS, NONCARBONATE	12	23.0	5.0	13	29	12	0.046	9.342	0.287*	5.1
TURBIDITY (JTU)	12	16.0	7.7	1	30	12	-0.094	43.705	-0.378*	7.5
FLOURIDE, DISSOLVED	12	0.14	0.05	0.1	0.2	12	0.0007	-0.0714	0.437*	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	357	344	337	325	318	300	280	238	223	213

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
359	14.67	11.02	2.53	97	1.26

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06926510 -- OSAGE RIVER BELOW ST. THOMAS, MISSOURI

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	4	5	0	4
CADMIUM (CD), UG/L	5	0	10	5	0	1
CHROMIUM (CR), UG/L	5	0	20	5	0	10
COBALT (CO), UG/L	5	<50	<50	5	0	1
COPPER (CU), UG/L	5	<10	540	5	3	26
IRON (FE), UG/L	5	920	1200	5	40	330
LEAD (PB), UG/L	5	<100	100	5	2	9
MANGANESE (MN), UG/L	5	70	340	5	0	200
MERCURY (HG), UG/L	5	0.0	0.3	5	0.0	1.7
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	20	140	5	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.09	72.00			
BIOMASS, ASH WT., G/SQ M	3	2.50	69.00			
CHLOROPHYLL A, MG/SQ M	3	.0	1.5			
CHLOROPHYLL B, MG/SQ M	3	.0	.6			
ORGANIC CARBON, MG/L	5	4.7	7.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 06934500 NAME: MISSOURI RIVER AT HERMANN, MO

LAT 38D42M36S LONG 091D26M21S
DRAINAGE AREA: 528200 SQ MI (1368038 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	11.68	8.75	0.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	540.0	145.7	243	770					
STREAMFLOW (CUBIC FT/SEC)	22	92459.1	47118.3	47000	256000	22	-214.720	208417.750	-0.664	36107.8
PH (STANDARD UNITS)	22	8.02	0.19	7.7	8.3	22	0.0009	7.5412	0.680	0.14
PHOSPHORUS, TOTAL	12	0.309	0.267	0.10	1.10	12	-0.00040	0.53950	-0.213*	0.274
NITRITE + NITRATE, TOTAL	12	0.780	0.608	0.00	1.90	12	-0.00228	2.08931	-0.532*	0.540
NITROGEN, KJELDAHL, TOTAL	12	1.276	1.611	0.44	6.00	12	-0.00313	3.07656	-0.276*	1.623
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	10510.9	11062.1	720	32000	11	50.491	-18879.348	0.671	8646.1
SEDIMENT, SUSPENDED	12	786.9	781.6	66	2400					
SEDIMENT, CLAY-SILT (PERCENT)	12	53.2	28.1	8	91					
COLIFORM, FECAL (COL/100 ML)	22	3530.5	5832.3	50	26000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2418.3	3015.6	50	8400					
SILICA, DISSOLVED	4	8.02	0.96	7.0	9.3	4	0.0006	7.7153	0.104*	1.17
CALCIUM, DISSOLVED	4	49.25	9.43	38.0	61.0	4	0.0540	21.1004	0.968*	2.92
MAGNESIUM, DISSOLVED	4	15.50	4.93	10.0	22.0	4	0.0286	0.5691	0.981*	1.17
SODIUM, DISSOLVED	4	32.50	23.87	18.0	68.0	4	0.1359	-38.3190	0.962*	8.02
POTASSIUM, DISSOLVED	4	4.47	1.38	3.0	6.3	4	0.0070	0.8367	0.852*	0.89
BICARBONATE, ION	22	168.3	26.3	116	214	22	0.139	93.074	0.772	17.1
CARBONATE, ION	22	0.0	0.0	0	0	22	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	6	120.83	66.40	49.0	200.0	6	0.3771	-101.9980	0.974	16.93
CHLORIDE, DISSOLVED	6	15.83	5.27	11.0	25.0	6	0.0256	0.7295	0.832	3.27
DISSOLVED SOLIDS, SUM OF CONST	4	306.5	126.3	205	490	4	0.744	-81.384	0.995*	15.3
DISSOLVED SOLIDS, ROE 180 DEG C	6	366.8	117.7	218	483	6	0.684	-37.345	0.996	11.9
HARDNESS, TOTAL	4	187.5	41.1	140	240	4	0.238	63.532	0.977*	10.8
HARDNESS, NONCARBONATE	4	43.3	17.7	25	67	4	0.104	-10.865	0.993*	2.6
TURBIDITY (JTU)	6	123.7	214.9	20	560	6	-0.400	359.879	-0.319*	227.8
FLOURIDE, DISSOLVED	4	0.32	0.13	0.2	0.5	4	0.0006	-0.0030	0.845*	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 228

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	780	760	750	669	645	570	475	420	365	327

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
240	14.38	13.05	2.72	96	1.71

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

06934500 -- MISSOURI RIVER AT HERMANN, MO

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	51	4	0	2
CADMIUM (CD), UG/L	4	10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	50	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	2
COPPER (CU), UG/L	4	10	110	4	3	6
IRON (FE), UG/L	4	1100	58000	4	20	120
LEAD (PB), UG/L	4	<100	<100	4	1	5
MANGANESE (MN), UG/L	4	70	2300	4	0	5
MERCURY (HG), UG/L	4	0.0	0.8	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	4	30	610	4	4	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.39	23.00			
BIOMASS, ASH WT., G/SQ M	3	.39	19.00			
CHLOROPHYLL A, MG/SQ M	3	.0	75.0			
CHLOROPHYLL B, MG/SQ M	3	.0	17.0			
ORGANIC CARBON, MG/L	4	4.0	50.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07022000 NAME: MISSISSIPPI RIVER AT THEBES ILL

LAT 37D13M00S LONG 089D27M50S
DRAINAGE AREA: 717200 SQ MI (1857548 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.08	10.50	2.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	541.0	68.7	410	650					
STREAMFLOW (CUBIC FT/SEC)	12	196333.3	81377.1	104000	359000	12	-1038.699	758269.688	-0.876	41111.2
PH (STANDARD UNITS)	12	7.97	0.15	7.8	8.3	12	0.0013	7.2697	0.603	0.12
PHOSPHORUS, TOTAL	12	0.272	0.102	0.13	0.51	12	-0.00032	0.44256	-0.213 *	0.104
NITRITE + NITRATE, TOTAL	12	1.420	1.025	0.00	2.60	12	-0.00307	3.07844	-0.205 *	1.052
NITROGEN, KJELDAHL, TOTAL	12	1.344	1.518	0.47	6.10	12	-0.00539	4.26240	-0.244 *	1.544
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	9110.0	6488.4	2500	21000	10	69.173	-28914.184	0.682	5035.1
SEDIMENT, SUSPENDED	12	302.3	294.3	73	1170					
SEDIMENT, CLAY-SILT (PERCENT)	12	60.0	19.2	26	83					
COLIFORM, FECAL (COL/100 ML)	12	6236.7	9517.3	700	35000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	456.7	248.9	80	980					
SILICA, DISSOLVED	12	7.24	1.76	4.1	10.0	12	-0.0115	13.4423	-0.448 *	1.65
CALCIUM, DISSOLVED	12	52.42	5.21	42.0	59.0	12	0.0649	17.2974	0.855	2.84
MAGNESIUM, DISSOLVED	12	18.75	2.05	16.0	22.0	12	0.0236	6.0002	0.789	1.32
SODIUM, DISSOLVED	12	26.58	9.96	14.0	49.0	12	0.1191	-37.8751	0.821	5.96
POTASSIUM, DISSOLVED	12	3.82	0.61	2.9	5.0	12	0.0056	0.8087	0.627	0.50
BICARBONATE, ION	12	193.5	19.7	152	216	12	0.261	52.334	0.908	8.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	77.67	21.79	48.0	130.0	12	0.2497	-57.4268	0.787	14.10
CHLORIDE, DISSOLVED	12	19.58	3.15	13.0	25.0	12	0.0329	1.7733	0.718	2.30
DISSOLVED SOLIDS, SUM OF CONST	12	301.9	44.2	225	392	12	0.613	-29.801	0.953	14.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	317.8	44.7	238	397	12	0.638	-27.308	0.981	9.2
HARDNESS, TOTAL	12	208.3	19.0	170	230	12	0.254	70.924	0.918	7.9
HARDNESS, NONCARBONATE	12	49.5	6.1	38	61	12	0.048	23.489	0.539 *	5.4
TURBIDITY (JTU)	5	34.8	9.0	28	50	5	-0.104	93.118	-0.951 *	3.2
FLOURIDE, DISSOLVED	12	0.27	0.08	0.2	0.4	12	0.0006	-0.0255	0.506 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 341

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	660	625	605	575	545	500	450	390	370	340

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
340	15.45	13.29	2.66	97	1.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07022000 -- MISSISSIPPI RIVER AT THEBES ILL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	0	2
CADMIUM (CD), UG/L	4	<10	10	3	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	< 50	3	0	1
COPPER (CU), UG/L	4	10	70	3	8	11
IRON (FE), UG/L	4	2300	4600	11	20	1300
LEAD (PB), UG/L	4	<100	< 100	4	1	3
MANGANESE (MN), UG/L	4	70	260	11	0	250
MERCURY (HG), UG/L	4	0.1	0.4	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	30	180	4	10	190
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.69	100.00			
BIOMASS, ASH WT., G/SQ M	4	1.50	170.00			
CHLOROPHYLL A, MG/SQ M	4	.0	78.0			
CHLOROPHYLL B, MG/SQ M	4	.0	16.0			
ORGANIC CARBON, MG/L	4	6.5	9.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07026000 NAME: OBION RIVER AT OBION, TENN.

LAT 36D15M04S LONG 089D11M33S
DRAINAGE AREA: 1852 SQ MI (4797 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	6	21.33	5.91	12.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	73.2	9.3	59	85					
STREAMFLOW (CUBIC FT/SEC)	6	2354.0	2682.5	674	7750	6	-242.245	20078.223	-0.842	1617.2
PH (STANDARD UNITS)	6	7.03	0.53	6.2	7.6	6	0.0432	3.8754	0.762*	0.38
PHOSPHORUS, TOTAL	6	0.167	0.073	0.10	0.27	6	-0.00602	0.60696	-0.767*	0.052
NITRITE + NITRATE, TOTAL	6	0.417	0.093	0.26	0.50	6	0.00836	-0.19471	0.841	0.056
NITROGEN, KJELDAHL, TOTAL	6	0.753	0.292	0.41	1.10	6	0.01646	-0.45084	0.526*	0.278
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	3101.7	4403.8	510	12000	6	220.218	-13010.977	0.466*	4355.5
SEDIMENT, SUSPENDED	7	115.7	82.6	20	221					
SEDIMENT, CLAY-SILT (PERCENT)	7	90.1	10.3	68	98					
COLIFORM, FECAL (COL/100 ML)	5	508.0	351.2	160	1060					
STREPTOCOCCI, FECAL (COL/100 ML)	5	357.0	197.0	93	600					
SILICA, DISSOLVED	6	10.48	2.73	6.1	13.0	6	0.2721	-9.4246	0.930	1.12
CALCIUM, DISSOLVED	6	6.37	0.50	5.8	6.9	6	-0.0050	6.7310	-0.093*	0.56
MAGNESIUM, DISSOLVED	6	2.43	0.39	1.8	3.0	6	0.0202	0.9583	0.484*	0.38
SODIUM, DISSOLVED	6	5.22	1.28	3.0	6.6	6	0.1315	-4.4054	0.957	0.41
POTASSIUM, DISSOLVED	6	1.57	0.19	1.3	1.8	6	-0.0181	2.8904	-0.906	0.09
BICARBONATE, ION	6	33.3	6.9	21	40	6	0.634	-13.051	0.862	3.9
CARBONATE, ION	0									
SULFATE, DISSOLVED	6	4.90	1.45	3.2	7.0	6	-0.1352	14.7936	-0.868	0.81
CHLORIDE, DISSOLVED	6	3.72	0.18	3.5	4.0	6	0.0131	2.7603	0.664*	0.15
DISSOLVED SOLIDS, SUM OF CONST	6	51.2	6.3	39	56	6	0.598	7.446	0.884	3.3
DISSOLVED SOLIDS, ROE 180 DEG C	6	60.5	9.6	48	72	6	0.482	25.249	0.468*	9.5
HARDNESS, TOTAL	6	26.0	2.6	22	30	6	0.078	20.279	0.280*	2.8
HARDNESS, NONCARBONATE	6	1.0	2.0	0	5	6	-0.177	13.956	-0.826	1.3
TURBIDITY (JTU)	6	45.0	31.8	10	95	6	-3.174	277.204	-0.931	12.9
FLOURIDE, DISSOLVED	6	0.13	0.14	0.0	0.4	6	0.0052	-0.2481	0.356*	0.14

*Not significant at the 95 percent confidence level

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
71	18.73	6.52	2.70	28	2.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07026000 -- OBION RIVER AT OBION, TENN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	2	3	3	0	1
CADMIUM (CD), UG/L	3	0	3	3	0	0
CHROMIUM (CR), UG/L	3	<10	<10	3	0	0
COBALT (CO), UG/L	3	1	8	3	0	0
COPPER (CU), UG/L	3	5	21	3	0	3
IRON (FE), UG/L	3	2000	8700	3	50	100
LEAD (PB), UG/L	3	7	56	3	0	0
MANGANESE (MN), UG/L	3	280	320	3	80	120
MERCURY (HG), UG/L	3	0.0	0.4	3	0.0	0.3
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	20	70	3	5	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	3.1	8.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07032000 NAME: MISSISSIPPI RIVER AT MEMPHIS, TENN.

LAT 35D07M37S LONG 090D04M25S
DRAINAGE AREA: 932800 SQ MI (2415952 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	15.86	9.38	5.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	387.1	83.9	228	490					
STREAMFLOW (CUBIC FT/SEC)	12	570583.3	351077.5	204000	1490000	12	-3811.417	2045918.000	-0.911	151806.3
PH (STANDARD UNITS)	12	7.75	0.36	7.3	8.4	12	0.0012	7.2805	0.284*	0.36
PHOSPHORUS, TOTAL	12	0.201	0.061	0.03	0.27	12	0.00053	-0.00403	0.723	0.044
NITRITE + NITRATE, TOTAL	12	1.309	0.739	0.56	3.20	12	-0.00183	2.01790	-0.208*	0.759
NITROGEN, KJELDAHL, TOTAL	12	0.776	0.176	0.47	1.10	12	-0.00076	1.07097	-0.363*	0.172
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	7420.9	6930.3	930	26000	11	46.454	-10721.473	0.584*	5930.3
SEDIMENT, SUSPENDED	9	126.1	36.2	74	174					
SEDIMENT, CLAY-SILT (PERCENT)	9	90.6	8.1	73	99					
COLIFORM, FECAL (COL/100 ML)	11	670.2	908.3	67	3000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	191.5	175.4	8	540					
SILICA, DISSOLVED	12	5.91	0.82	4.4	6.8	12	-0.0032	7.1375	-0.324*	0.82
CALCIUM, DISSOLVED	12	41.08	5.33	29.0	49.0	12	0.0525	20.7619	0.826	3.15
MAGNESIUM, DISSOLVED	12	12.75	2.53	8.0	16.0	12	0.0242	3.3648	0.803	1.58
SODIUM, DISSOLVED	12	17.68	6.48	9.2	28.0	12	0.0718	-10.1258	0.931	2.48
POTASSIUM, DISSOLVED	12	2.92	0.67	1.5	3.9	12	0.0073	0.1101	0.914	0.28
BICARBONATE, ION	12	131.8	22.2	84	166	12	0.223	45.255	0.844	12.5
CARBONATE, ION	12	0.2	0.6	0	2	12	0.002	-0.712	0.330*	0.6
SULFATE, DISSOLVED	12	58.67	17.40	37.0	90.0	12	0.1852	-13.0337	0.893	8.20
CHLORIDE, DISSOLVED	12	15.67	2.93	11.0	20.0	12	0.0279	4.8770	0.797	1.86
DISSOLVED SOLIDS, SUM OF CONST	12	220.3	41.3	143	276	12	0.478	35.166	0.971	10.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	236.6	40.9	153	288	12	0.471	54.299	0.965	11.2
HARDNESS, TOTAL	12	156.7	21.5	110	180	12	0.220	71.505	0.860	11.5
HARDNESS, NONCARBONATE	12	47.3	6.5	36	58	12	0.039	32.060	0.508*	5.9
TURBIDITY (JTU)	12	45.8	18.1	20	76	12	-0.147	102.826	-0.684	13.8
FLOURIDE, DISSOLVED	12	0.23	0.07	0.1	0.3	12	0.0005	0.0226	0.701	0.05

*Not significant at the 95 percent confidence level

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 277

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	496	481	470	457	445	424	343	287	272	244

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
270	16.33	12.54	2.57	95	2.32

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07032000 -- MISSISSIPPI RIVER AT MEMPHIS, TENN.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	6	4	0	3
CADMIUM (CD), UG/L	4	<10	840	4	0	190
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	40	110	4	7	25
IRON (FE), UG/L	4	1100	5100	4	0	40
LEAD (PB), UG/L	4	<100	200	4	0	3
MANGANESE (MN), UG/L	4	100	250	4	0	100
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	60	100	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	59.00				
BIOMASS, ASH WT., G/SQ M	1	55.00				
CHLOROPHYLL A, MG/SQ M	1	2.1				
CHLOROPHYLL B, MG/SQ M	1	.1				
ORGANIC CARBON, MG/L	2	5.2	7.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07047800 NAME: ST. FRANCIS RIVER AT PARKIN, ARK.

LAT 35D16M23S LONG 090D33M33S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	18.08	8.71	6.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	289.5	119.3	72	489					
STREAMFLOW (CUBIC FT/SEC)	11	2692.3	2438.5	685	9440	11	-14.474	6758.156	-0.735 *	1742.6
PH (STANDARD UNITS)	13	7.64	0.30	7.1	8.1	13	0.0015	7.1923	0.616	0.25
PHOSPHORUS, TOTAL	13	0.403	0.186	0.10	0.79	13	-0.00094	0.67649	-0.605	0.155
NITRITE + NITRATE, TOTAL	13	0.428	0.279	0.06	0.95	13	-0.00147	0.85434	-0.630	0.226
NITROGEN, KJELDAHL, TOTAL	13	1.163	0.651	0.47	3.00	13	-0.00070	1.36523	-0.128 *	0.675
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	2821.5	1689.6	240	5600	13	8.210	444.383	0.580	1437.7
SEDIMENT, SUSPENDED	8	191.6	134.5	47	366					
SEDIMENT, CLAY-SILT (PERCENT)	8	97.8	2.5	93	100					
COLIFORM, FECAL (COL/100 ML)	9	374.4	396.5	25	1200					
STREPTOCOCCI, FECAL (COL/100 ML)	13	497.0	609.1	17	2000					
SILICA, DISSOLVED	13	13.42	4.75	4.7	21.0	13	0.0390	2.1371	0.978	1.04
CALCIUM, DISSOLVED	13	37.25	16.17	7.3	66.0	13	0.1345	-1.6809	0.992	2.10
MAGNESIUM, DISSOLVED	13	10.08	4.38	2.1	17.0	13	0.0364	-0.4571	0.991	0.63
SODIUM, DISSOLVED	13	7.85	2.00	4.5	11.0	13	0.0156	3.3275	0.933	0.75
POTASSIUM, DISSOLVED	13	2.66	0.54	1.6	3.7	13	0.0022	2.0352	0.477 *	0.50
BICARBONATE, ION	13	155.7	69.8	30	278	13	0.583	-12.971	0.996	6.1
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	13	16.45	5.00	9.8	26.0	13	0.0278	8.4074	0.663	3.91
CHLORIDE, DISSOLVED	13	5.30	1.89	2.4	8.6	13	0.0109	2.1517	0.686	1.44
DISSOLVED SOLIDS, SUM OF CONST	13	169.9	66.4	47	286	13	0.554	9.564	0.995	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	13	180.1	63.7	62	286	13	0.529	27.043	0.990	9.2
HARDNESS, TOTAL	13	135.2	58.2	27	230	13	0.484	-4.915	0.992	7.8
HARDNESS, NONCARBONATE	13	6.8	4.4	0	13	13	0.004	5.646	0.105 *	4.6
TURBIDITY (JTU)	13	130.8	119.3	6	400	13	-0.833	371.911	-0.833	69.0
FLUORIDE, DISSOLVED	13	0.18	0.07	0.1	0.3	13	0.0002	0.1101	0.380 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	535	519	476	416	389	323	249	130	97	55

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	17.70	11.49	2.84	93	2.20

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07047800 -- ST. FRANCIS RIVER AT PARKIN, ARK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	7	10	4	0	2
CADMIUM (CD), UG/L	4	<10	10	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	10	120	4	3	15
IRON (FE), UG/L	4	7200	16000	4	0	80
LEAD (PB), UG/L	4	<100	<100	4	1	2
MANGANESE (MN), UG/L	4	260	400	4	0	30
MERCURY (HG), UG/L	3	0.1	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	2	4	0	0
ZINC (ZN), UG/L	4	60	100	4	30	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.50				
BIOMASS, ASH WT., G/SQ M	1	.79				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.1				
ORGANIC CARBON, MG/L	4	6.8	12.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07047900 NAME: ST. FRANCIS BAY AT RIVERFRONT, ARK.

LAT 35D15M34S LONG 090D40M48S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.79	9.69	4.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	231.4	81.7	68	318					
STREAMFLOW (CUBIC FT/SEC)	11	8402.7	10937.2	2170	39000	11	-112.493	33672.840	-0.845	6172.2
PH (STANDARD UNITS)	12	7.64	0.36	7.2	8.3	12	0.0021	7.1477	0.491 *	0.32
PHOSPHORUS, TOTAL	12	0.279	0.156	0.10	0.61	12	-0.00117	0.55096	-0.616	0.129
NITRITE + NITRATE, TOTAL	12	0.161	0.096	0.02	0.34	12	-0.00096	0.38332	-0.817	0.058
NITROGEN, KJELDAHL, TOTAL	12	0.927	0.501	0.47	2.20	12	-0.00205	1.40251	-0.335 *	0.495
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	8369.1	9565.0	350	34000	11	64.824	-6546.316	0.580 *	8212.4
SEDIMENT, SUSPENDED	8	143.4	86.6	47	331					
SEDIMENT, CLAY-SILT (PERCENT)	8	96.0	4.1	87	100					
COLIFORM, FECAL (COL/100 ML)	11	193.9	252.1	8	770					
STREPTOCOCCI, FECAL (COL/100 ML)	11	484.0	715.0	25	2000					
SILICA, DISSOLVED	12	10.83	3.78	3.9	16.0	12	0.0452	0.3784	0.977	0.84
CALCIUM, DISSOLVED	12	26.67	10.25	7.0	39.0	12	0.1241	-2.0528	0.989	1.57
MAGNESIUM, DISSOLVED	12	8.52	3.25	2.3	13.0	12	0.0381	-0.2957	0.960	0.96
SODIUM, DISSOLVED	12	6.97	1.47	4.6	9.2	12	0.0155	3.3807	0.859	0.79
POTASSIUM, DISSOLVED	12	1.97	0.37	1.3	2.5	12	0.0033	1.1926	0.744	0.26
BICARBONATE, ION	12	119.4	46.9	30	179	12	0.568	-11.919	0.989	7.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	12.08	3.41	6.6	18.0	12	0.0195	7.5735	0.467 *	3.16
CHLORIDE, DISSOLVED	12	5.52	1.88	2.8	8.3	12	0.0138	2.3259	0.599	1.58
DISSOLVED SOLIDS, SUM OF CONST	12	131.7	44.3	44	186	12	0.539	6.981	0.995	4.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	143.2	43.1	55	190	12	0.523	22.088	0.992	5.6
HARDNESS, TOTAL	12	102.8	39.5	27	150	12	0.477	-7.464	0.986	7.0
HARDNESS, NONCARBONATE	12	4.4	3.9	0	12	12	0.007	2.748	0.151 *	4.0
TURBIDITY (JTU)	12	86.8	81.8	3	300	12	-0.829	278.671	-0.828	48.1
FLOURIDE, DISSOLVED	12	0.17	0.10	0.1	0.4	12	-0.0002	0.2319	-0.208 *	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	396	378	365	313	287	231	195	123	105	68

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.93	12.09	2.85	93	2.32

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07047900 -- ST. FRANCIS BAY AT RIVERFRONT, ARK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	7	4	0	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	3
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	< 50	<50	4	0	1
COPPER (CU), UG/L	4	< 10	110	4	3	13
IRON (FE), UG/L	4	2900	10000	4	10	30
LEAD (PB), UG/L	4	<100	< 100	4	1	2
MANGANESE (MN), UG/L	4	150	390	4	0	10
MERCURY (HG), UG/L	2	0.0	0.3	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	40	50	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	4.0	14.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07077800 NAME: WHITE RIVER AT CLARENDON, ARK.

LAT 34D41M08S LONG 091D18M55S
DRAINAGE AREA: 25497 SQ MI (66037 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	17.09	8.73	6.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	228.5	42.6	172	300					
STREAMFLOW (CUBIC FT/SEC)	10	39240.0	20891.4	13300	74100	10	-437.045	137793.625	-0.913	9058.0
PH (STANDARD UNITS)	11	7.75	0.28	7.2	8.1	11	0.0052	6.5664	0.793	0.18
PHOSPHORUS, TOTAL	11	0.092	0.040	0.01	0.16	11	-0.00025	0.14875	-0.267 *	0.040
NITRITE + NITRATE, TOTAL	11	0.191	0.071	0.11	0.32	11	0.00071	0.02904	0.425 *	0.068
NITROGEN, KJELDAHL, TOTAL	11	0.501	0.106	0.31	0.65	11	-0.00031	0.57088	-0.123 *	0.111
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2247.3	1914.2	630	6100	11	36.956	-6198.863	0.822	1147.7
SEDIMENT, SUSPENDED	9	76.0	34.7	32	129					
SEDIMENT, CLAY-SILT (PERCENT)	9	91.0	9.0	76	100					
COLIFORM, FECAL (COL/100 ML)	11	1207.5	3583.0	3	12000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	263.4	268.4	24	870					
SILICA, DISSOLVED	11	5.86	1.55	2.7	8.5	11	0.0239	0.4070	0.655	1.24
CALCIUM, DISSOLVED	11	27.00	5.29	20.0	36.0	11	0.1206	-0.5533	0.971	1.34
MAGNESIUM, DISSOLVED	11	10.41	2.36	7.1	15.0	11	0.0533	-1.7638	0.961	0.68
SODIUM, DISSOLVED	11	3.98	1.25	2.4	6.8	11	0.0119	1.2629	0.406 *	1.20
POTASSIUM, DISSOLVED	11	1.61	0.28	1.3	2.1	11	-0.0022	2.1198	-0.339 *	0.28
BICARBONATE, ION	11	130.5	25.4	93	173	11	0.580	-2.152	0.974	6.1
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	5.90	0.76	4.7	7.3	11	-0.0000	5.9076	-0.002 *	0.80
CHLORIDE, DISSOLVED	11	4.78	1.50	3.2	8.6	11	0.0188	0.4838	0.533 *	1.34
DISSOLVED SOLIDS, SUM OF CONST	11	124.0	22.0	95	160	11	0.510	7.415	0.987	3.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	125.9	19.8	105	159	11	0.447	23.673	0.963	5.6
HARDNESS, TOTAL	11	110.7	23.1	79	150	11	0.536	-11.709	0.988	3.7
HARDNESS, NONCARBONATE	11	3.9	3.7	0	10	11	0.052	-8.023	0.597 *	3.2
TURBIDITY (JTU)	11	36.1	18.8	10	80	11	-0.237	90.222	-0.538 *	16.7
FLOURIDE, DISSOLVED	11	0.10	0.04	0.0	0.2	11	0.0005	-0.0221	0.509 *	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 327

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	303	291	279	263	248	220	163	112	91	68

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
332	17.13	9.36	2.77	95	1.52

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07077800 -- WHITE RIVER AT CLARENDON, ARK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	<50	50	4	0	0
COPPER (CU), UG/L	4	4	30	4	2	18
IRON (FE), UG/L	4	880	5300	4	0	40
LEAD (PB), UG/L	4	<100	<100	4	0	2
MANGANESE (MN), UG/L	4	80	230	4	0	40
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	120	4	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	3.09	1000.00			
BIOMASS, ASH WT., G/SQ M	5	1.50	970.00			
CHLOROPHYLL A, MG/SQ M	4	.2	48.0			
CHLOROPHYLL B, MG/SQ M	4	.2	11.0			
ORGANIC CARBON, MG/L	4	3.6	6.3			

Table 14,--Summary of measurements at each station--Continued

STATION NUMBER: 07137500 NAME: ARKANSAS RIVER NEAR COOLIDGE, KANS.

LAT 38D01M34S LONG 102D00M41S
DRAINAGE AREA: 25410 SQ MI (65812 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	5	20.20	10.95	1.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	5	4240.0	801.9	3000	5200					
STREAMFLOW (CUBIC FT/SEC)	5	59.0	86.8	7	212	5	-0.096	464.869	-0.885*	46.7
PH (STANDARD UNITS)	4	8.30	0.38	7.8	8.6	4	0.0003	6.8735	0.812*	0.27
PHOSPHORUS, TOTAL	5	0.110	0.179	0.02	0.43	5	-0.00020	0.94416	-0.881*	0.098
NITRITE + NITRATE, TOTAL	5	1.800	0.574	1.10	2.60	5	0.00035	0.33282	0.483*	0.581
NITROGEN, KJELDAHL, TOTAL	5	0.740	0.291	0.43	1.10	5	-0.00024	1.74068	-0.650*	0.255
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	21400.0	35245.7	2800	84000	5	5.568	-2207.055	0.127*	40370.1
SEDIMENT, SUSPENDED	5	387.8	339.1	46	792					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	3	256.7	384.8	10	700					
STREPTOCOCCI, FECAL (COL/100 ML)	3	583.3	631.2	110	1300					
SILICA, DISSOLVED	5	13.56	2.96	8.8	16.0	5	-0.0016	20.1739	-0.422*	3.10
CALCIUM, DISSOLVED	5	356.00	66.56	240.0	400.0	5	0.0722	49.7051	0.870*	37.85
MAGNESIUM, DISSOLVED	5	160.00	37.42	110.0	190.0	5	0.0156	94.0586	0.333*	40.73
SODIUM, DISSOLVED	5	526.00	123.21	310.0	620.0	5	0.1185	23.5269	0.771*	90.55
POTASSIUM, DISSOLVED	5	12.80	1.79	11.0	15.0	5	0.0004	10.9207	0.199*	2.02
BICARBONATE, ION	5	266.0	31.3	231	300	5	0.013	211.269	0.330*	34.1
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	5	2120.00	460.43	1300.0	2400.0	5	0.4767	98.8965	0.830*	296.42
CHLORIDE, DISSOLVED	5	161.80	41.31	89.0	190.0	5	0.0423	-17.6239	0.821*	27.20
DISSOLVED SOLIDS, SUM OF CONST	5	3482.0	728.7.	2190	3970	5	0.732	380.117	0.805*	499.2
DISSOLVED SOLIDS, ROE 180 DEG C	5	3840.0	866.8	2310	4440	5	0.896	41.776	0.829*	560.2
HARDNESS, TOTAL	5	1560.0	279.3	1100	1800	5	0.209	673.089	0.601*	257.8
HARDNESS, NONCARBONATE	5	1332.0	277.7	860	1500	5	0.234	340.242	0.675*	236.5
TURBIDITY (JTU)	5	42.8	60.8	1	150	5	-0.066	324.468	-0.877*	33.7
FLOURIDE, DISSOLVED	5	0.72	0.04	0.7	0.8	5	-0.0000	0.7431	-0.098*	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07137500 -- ARKANSAS RIVER NEAR COOLIDGE, KANS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	0	2	0	1
CADMIUM (CD), UG/L	2	20	20	2	0	0
CHROMIUM (CR), UG/L	2	10	10	2	10	10
COBALT (CO), UG/L	2	<50	100	2	0	0
COPPER (CU), UG/L	2	20	30	2	1	3
IRON (FE), UG/L	2	650	1500	2	0	10
LEAD (PB), UG/L	2	<100	100	2	0	0
MANGANESE (MN), UG/L	2	50	160	2	30	110
MERCURY (HG), UG/L	2	0.0	0.2	2	0.0	0.0
SELENIUM (SE), UG/L	2	21	25	2	21	25
ZINC (ZN), UG/L	2	20	70	2	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	2.19				
BIOMASS, ASH WT., G/SQ M	1	.39				
CHLOROPHYLL A, MG/SQ M	1	1.0				
CHLOROPHYLL B, MG/SQ M	1	.3				
ORGANIC CARBON, MG/L	2	5.3	8.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07139500 NAME: ARKANSAS R AT DODGE CITY, KS

LAT 37D44M51S LONG 100D01M08S
DRAINAGE AREA: 30600 SQ MI (79254 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	14.83	10.80	0.5	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	1362.4	125.0	940	1660					
STREAMFLOW (CUBIC FT/SEC)	29	15.1	8.2	0	24	21	0.022	-15.442	0.329 *	8.0
PH (STANDARD UNITS)	21	7.89	0.41	7.0	8.7	21	-0.0006	8.7327	-0.190 *	0.41
PHOSPHORUS, TOTAL	21	0.151	0.260	0.00	1.20	21	-0.00024	0.47392	-0.114 *	0.265
NITRITE + NITRATE, TOTAL	10	2.194	1.391	0.14	4.20	10	0.00364	-2.76374	0.468 *	1.304
NITROGEN, KJELDAHL, TOTAL	10	0.818	0.657	0.43	2.60	10	-0.00305	4.96975	-0.829	0.390
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	2364.1	2648.6	47	8200	9	-10.388	16999.348	-0.415 *	2575.8
SEDIMENT, SUSPENDED	11	60.0	44.7	17	170					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	3978.4	9439.1	10	30000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	2926.0	8810.9	6	28000					
SILICA, DISSOLVED	21	15.04	6.03	5.8	27.0	21	0.0026	11.4715	0.054 *	6.18
CALCIUM, DISSOLVED	21	129.57	14.52	91.0	150.0	21	0.0948	0.4609	0.816	8.62
MAGNESIUM, DISSOLVED	22	42.00	3.90	29.0	47.0	21	0.0245	8.4596	0.777	2.54
SODIUM, DISSOLVED	21	116.00	10.95	76.0	130.0	21	0.0745	14.4615	0.850	5.92
POTASSIUM, DISSOLVED	21	6.62	0.65	5.6	8.0	21	-0.0017	8.9080	-0.324 *	0.63
BICARBONATE, ION	21	266.0	34.6	205	325	21	0.198	-4.014	0.716	24.7
CARBONATE, ION	17	0.0	0.0	0	0	17	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	21	440.95	43.23	280.0	490.0	21	0.2816	57.3357	0.814	25.77
CHLORIDE, DISSOLVED	21	42.33	5.56	27.0	50.0	21	0.0324	-1.8644	0.729	3.91
DISSOLVED SOLIDS, SUM OF CONST	21	928.8	85.3	636	1040	21	0.609	98.610	0.893	39.3
DISSOLVED SOLIDS, ROE 180 DEG C	21	973.1	86.4	673	1120	21	0.658	76.539	0.952	27.1
HARDNESS, TOTAL	21	494.8	47.7	350	560	21	0.336	36.966	0.880	23.2
HARDNESS, NONCARBONATE	21	275.2	27.1	170	300	21	0.174	37.800	0.803	16.6
TURBIDITY (JTU)	21	14.0	21.2	1	95	21	-0.112	166.075	-0.657	16.4
FLOURIDE, DISSOLVED	21	0.88	0.09	0.7	1.1	21	0.0001	0.6850	0.206 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 300

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1620	1440	1430	1410	1400	1390	1360	1310	1280	1020

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
305	14.74	13.28	2.84	91	3.00

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07139500 -- ARKANSAS R AT DODGE CITY, KS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	2	5	0	2
CADMIUM (CD), UG/L	5	<10	10	5	0	3
CHROMIUM (CR), UG/L	5	0	10	5	0	0
COBALT (CO), UG/L	5	0	< 50	5	0	1
COPPER (CU), UG/L	5	<10	50	5	1	4
IRON (FE), UG/L	5	110	660	7	10	90
LEAD (PB), UG/L	5	< 100	100	5	1	6
MANGANESE (MN), UG/L	5	0	70	7	0	20
MERCURY (HG), UG/L	4	0.0	0.3	5	0.0	1.2
SELENIUM (SE), UG/L	4	10	34	4	10	15
ZINC (ZN), UG/L	5	20	450	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	16.00				
BIOMASS, ASH WT., G/SQ M	1	11.00				
CHLOROPHYLL A, MG/SQ M	1	4.1				
CHLOROPHYLL B, MG/SQ M	1	.2				
ORGANIC CARBON, MG/L	4	4.2	9.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07146500 NAME: ARKANSAS R AT ARKANSAS CITY, KS

LAT 37D03M23S LONG 097D03M32S
DRAINAGE AREA: 43713 SQ MI (113217 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	16.50	7.33	4.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	1493.9	744.2	280	2310					
STREAMFLOW (CUBIC FT/SEC)	21	6380.3	9616.3	586	30500	14	-8.823	18645.109	-0.729	6420.7
PH (STANDARD UNITS)	14	8.13	0.47	7.3	9.0	14	0.0003	7.7383	0.410*	0.45
PHOSPHORUS, TOTAL	14	0.586	0.340	0.05	1.30	14	-0.00008	0.69908	-0.166*	0.349
NITRITE + NITRATE, TOTAL	12	0.913	0.901	0.01	2.40	12	-0.00001	0.92893	-0.010*	0.945
NITROGEN, KJELDAHL, TOTAL	12	2.242	0.776	1.50	4.10	12	-0.00041	2.83237	-0.420*	0.739
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	88840.0	104385.8	440	280000	11	79.864	-20392.563	0.604	87675.8
SEDIMENT, SUSPENDED	5	1315.0	478.8	655	1900					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	6482.5	12629.8	100	46000					
STREPTOCOCCI, FECAL (COL/100 ML)	13	1411.8	2775.7	19	9900					
SILICA, DISSOLVED	14	8.13	3.91	0.6	14.0	14	0.0001	8.0355	0.012*	4.07
CALCIUM, DISSOLVED	14	73.14	32.75	17.0	120.0	14	0.0414	11.3168	0.940	11.59
MAGNESIUM, DISSOLVED	14	16.71	7.84	4.2	26.0	14	0.0099	1.8860	0.942	2.75
SODIUM, DISSOLVED	14	188.93	103.72	21.0	320.0	14	0.1337	-10.8501	0.960	30.40
POTASSIUM, DISSOLVED	14	7.88	5.86	5.2	28.0	14	0.0001	7.7847	0.008*	6.10
BICARBONATE, ION	14	186.6	66.9	74	264	14	0.085	59.558	0.946	22.7
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	14	108.79	59.43	16.0	220.0	14	0.0723	0.7123	0.906	26.21
CHLORIDE, DISSOLVED	14	283.71	160.31	30.0	500.0	14	0.2054	-23.1738	0.954	50.25
DISSOLVED SOLIDS, SUM OF CONST	14	781.9	388.8	136	1210	14	0.506	25.460	0.969	99.7
DISSOLVED SOLIDS, ROE 180 DEG C	14	798.4	393.5	142	1240	14	0.514	29.794	0.973	94.8
HARDNESS, TOTAL	14	250.1	109.1	60	350	14	0.143	36.632	0.974	25.6
HARDNESS, NONCARBONATE	14	97.3	57.3	0	170	14	0.074	-12.558	0.955	17.6
TURBIDITY (JTU)	15	91.7	76.7	20	250	14	-0.075	207.968	-0.718	56.4
FLOURIDE, DISSOLVED	14	0.39	0.11	0.2	0.5	14	0.0001	0.2087	0.804	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2280	2190	2120	2020	1940	1690	1380	754	584	399

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	14.66	12.36	2.83	91	2.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07146500 -- ARKANSAS R AT ARKANSAS CITY, KS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	11	4	1	4
CADMIUM (CD), UG/L	4	<10	20	4	0	2
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	<50	< 50	4	0	0
COPPER (CU), UG/L	4	<10	40	4	2	5
IRON (FE), UG/L	4	770	19000	5	10	70
LEAD (PB), UG/L	4	< 100	< 100	4	1	8
MANGANESE (MN), UG/L	3	60	280	5	0	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	4	30	90	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	30.00	47.00			
BIOMASS, ASH WT., G/SQ M	2	27.00	35.00			
CHLOROPHYLL A, MG/SQ M	2	2.3	54.0			
CHLOROPHYLL B, MG/SQ M	2	.2	4.1			
ORGANIC CARBON, MG/L	4	7.1	20.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07157950 NAME: CIMARRON RIVER NR BUFFALO, OK

LAT 36D55M28S LONG 099D23M56S
DRAINAGE AREA: 11930 SQ MI (30899 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	15.85	10.90	0.5	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	41	8315.6	4716.2	1040	27000					
STREAMFLOW (CUBIC FT/SEC)	43	135.8	83.8	2	392	41	0.006	87.623	0.330	81.6
PH (STANDARD UNITS)	43	8.11	0.33	7.1	8.9	41	-0.0000	8.3426	-0.395	0.31
PHOSPHORUS, TOTAL	11	0.165	0.230	0.03	0.83	10	-0.00001	0.26985	-0.300 *	0.245
NITRITE + NITRATE, TOTAL	12	0.200	0.168	0.01	0.56	11	-0.00000	0.24219	-0.162 *	0.182
NITROGEN, KJELDAHL, TOTAL	11	2.149	4.044	0.27	14.00	10	-0.00014	3.68225	-0.233 *	4.362
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	23316.7	26697.7	2700	69000	5	-0.248	16668.660	-0.151 *	18575.6
SEDIMENT, SUSPENDED	8	887.5	2024.2	55	5890					
SEDIMENT, CLAY-SILT (PERCENT)	8	73.0	38.9	1	99					
COLIFORM, FECAL (COL/100 ML)	10	1399.0	2418.6	0	6200					
STREPTOCOCCI, FECAL (COL/100 ML)	10	2092.0	2686.9	0	7000					
SILICA, DISSOLVED	10	16.80	2.94	13.0	21.0	9	-0.0001	17.3684	-0.274 *	2.77
CALCIUM, DISSOLVED	43	147.23	63.59	63.0	450.0	41	0.0079	81.7970	0.581	52.56
MAGNESIUM, DISSOLVED	43	52.91	17.68	13.0	96.0	41	0.0028	29.4672	0.822	9.24
SODIUM, DISSOLVED	33	1768.18	1504.73	120.0	6700.0	31	0.2242	-184.1897	0.991	164.96
POTASSIUM, DISSOLVED	38	8.25	1.98	0.4	12.0	36	0.0000	7.8014	0.109 *	2.00
BICARBONATE, ION	43	215.6	32.2	158	273	41	0.001	209.685	0.094 *	33.2
CARBONATE, ION	43	0.6	2.4	0	11	41	-0.000	1.811	-0.281 *	2.4
SULFATE, DISSOLVED	43	356.53	151.60	81.0	1000.0	41	0.0209	183.1039	0.668	111.28
CHLORIDE, DISSOLVED	40	2562.75	1779.90	180.0	8900.0	39	0.3617	-371.6035	0.990	247.15
DISSOLVED SOLIDS, SUM OF CONST	13	6615.2	5287.7	795	18900	11	0.580	147.754	0.994	438.4
DISSOLVED SOLIDS, ROE 180 DEG C	41	5195.3	3584.5	601	18900	39	0.617	-48.129	0.997	213.4
HARDNESS, TOTAL	43	587.4	219.7	210	1500	41	0.031	325.370	0.691	157.1
HARDNESS, NONCARBONATE	43	408.3	216.8	53	1300	41	0.031	151.776	0.688	155.2
TURBIDITY (JTU)	8	145.1	318.0	4	930	7	-0.019	353.499	-0.457 *	331.7
FLOURIDE, DISSOLVED	10	0.62	0.20	0.3	0.9	9	-0.0000	0.8244	-0.661 *	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 324

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	26700	16320	13277	10300	9000	7540	6050	2500	1940	1040

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
337	14.77	10.66	2.85	86	3.08

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07157950 -- CIMARRON RIVER NR BUFFALO, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	4	28	3	2	4
CADMIUM (CD), UG/L	3	< 10	40	3	1	3
CHROMIUM (CR), UG/L	3	20	60	3	0	10
COBALT (CO), UG/L	3	50	350	3	0	0
COPPER (CU), UG/L	3	40	550	3	3	8
IRON (FE), UG/L	3	3300	45000	3	30	110
LEAD (PB), UG/L	3	< 100	100	3	2	4
MANGANESE (MN), UG/L	3	120	1300	3	10	70
MERCURY (HG), UG/L	2	0.1	0.2	3	0.0	0.0
SELENIUM (SE), UG/L	3	0	3	3	0	3
ZINC (ZN), UG/L	3	40	450	3	0	200
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	17.0	24.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07161000 NAME: CIMARRON RIVER AT PERKINS, OK

LAT 35D57M32S LONG 097D01M49S
DRAINAGE AREA: 17852 SQ MI (46237 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	13.35	9.21	3.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	45	4413.8	2017.1	730	8970					
STREAMFLOW (CUBIC FT/SEC)	50	4874.0	11478.3	225	75000	45	-2.871	17876.461	-0.480	10707.9
PH (STANDARD UNITS)	49	8.06	0.35	7.2	9.4	45	0.0001	7.8372	0.303*	0.32
PHOSPHORUS, TOTAL	45	0.391	0.288	0.11	1.40	41	-0.00005	0.63927	-0.358	0.279
NITRITE + NITRATE, TOTAL	11	0.667	0.425	0.01	1.20	7	-0.00025	1.66135	-0.618*	0.416
NITROGEN, KJELDAHL, TOTAL	14	1.948	2.159	0.27	8.60	10	-0.00101	6.28987	-0.720	1.792
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	21373.6	27015.3	310	73000	6	12.092	-15125.707	0.463*	30633.6
SEDIMENT, SUSPENDED	9	579.9	705.6	62	2260					
SEDIMENT, CLAY-SILT (PERCENT)	8	67.9	25.9	32	99					
COLIFORM, FECAL (COL/100 ML)	12	3523.3	10259.5	0	36000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	2416.4	7170.5	0	24000					
SILICA, DISSOLVED	10	12.00	2.95	7.3	18.0	5	-0.0006	13.2453	-0.254*	3.15
CALCIUM, DISSOLVED	47	130.85	46.89	39.0	200.0	42	0.0202	37.2982	0.887	21.82
MAGNESIUM, DISSOLVED	49	44.40	17.46	7.7	74.0	44	0.0071	11.5533	0.813	10.43
SODIUM, DISSOLVED	43	809.12	413.65	82.0	1900.0	38	0.2092	-117.5129	0.992	56.06
POTASSIUM, DISSOLVED	43	6.45	1.19	4.7	9.4	38	0.0001	6.2270	0.101*	1.22
BICARBONATE, ION	49	261.4	81.9	103	400	44	0.030	118.104	0.772	50.3
CARBONATE, ION	49	0.2	1.1	0	8	44	-0.000	0.227	-0.017*	1.2
SULFATE, DISSOLVED	45	314.91	128.31	46.0	510.0	41	0.0541	64.7874	0.858	67.77
CHLORIDE, DISSOLVED	44	1252.27	623.94	120.0	2900.0	40	0.3147	-171.5667	0.991	89.16
DISSOLVED SOLIDS, SUM OF CONST	13	2417.0	831.3	991	3610	9	0.552	136.276	0.980	182.2
DISSOLVED SOLIDS, ROE 180 DEG C	47	2790.9	1232.6	414	5570	42	0.629	-94.788	0.995	122.3
HARDNESS, TOTAL	47	507.9	183.5	130	790	42	0.079	142.979	0.881	88.1
HARDNESS, NONCARBONATE	47	291.5	124.2	41	490	42	0.054	46.032	0.870	63.3
TURBIDITY (JTU)	11	174.6	289.6	7	1000	6	-0.269	1382.531	-0.871	200.2
FLOURIDE, DISSOLVED	11	0.37	0.16	0.1	0.6	6	0.0001	0.1993	0.529*	0.13

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	11000	9120	7440	6550	6020	4650	3570	1990	1420	946

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	15.85	12.77	2.81	91	2.83

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07161000 -- CIMARRON RIVER AT PERKINS, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	4	11	3	2	9
CADMIUM (CD), UG/L	2	10	10	3	1	8
CHROMIUM (CR), UG/L	2	10	20	3	0	10
COBALT (CO), UG/L	2	50	60	3	0	2
COPPER (CU), UG/L	2	10	20	3	5	10
IRON (FE), UG/L	2	3800	6000	3	0	40
LEAD (PB), UG/L	2	<100	<100	3	2	4
MANGANESE (MN), UG/L	2	160	400	3	0	70
MERCURY (HG), UG/L	2	0.1	0.1	2	0.1	0.1
SELENIUM (SE), UG/L	3	1	2	3	1	2
ZINC (ZN), UG/L	2	30	90	3	30	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	6	4.8	20.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07164400 NAME: ARKANSAS RIVER AT SAND SPRINGS NR TULSA, OK

LAT 36D06M48S LONG 096D06M49S
DRAINAGE AREA: 74615 SQ MI (193253 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	16.73	8.81	4.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	56	1490.5	447.5	482	2440					
STREAMFLOW (CUBIC FT/SEC)	59	17763.4	18282.7	307	100000	56	-20.989	49279.168	-0.502	16319.0
PH (STANDARD UNITS)	57	8.03	0.41	6.8	9.4	54	0.0000	7.9900	0.021*	0.42
PHOSPHORUS, TOTAL	58	0.136	0.067	0.00	0.42	55	-0.00010	0.27690	-0.616	0.055
NITRITE + NITRATE, TOTAL	26	0.522	0.284	0.01	1.10	24	0.00016	0.28592	0.257	0.289
NITROGEN, KJELDAHL, TOTAL	32	0.847	0.618	0.10	3.00	29	-0.00003	0.91617	-0.023*	0.651
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	24564.4	58731.3	370	180000	6	-28.616	79402.375	-0.137*	78738.1
SEDIMENT, SUSPENDED	8	103.0	114.7	12	351					
SEDIMENT, CLAY-SILT (PERCENT)	8	69.9	32.4	4	99					
COLIFORM, FECAL (COL/100 ML)	24	715.2	3257.3	0	16000					
STREPTOCOCCI, FECAL (COL/100 ML)	24	314.6	1342.6	0	6600					
SILICA, DISSOLVED	7	6.77	2.12	3.7	9.7	5	-0.0028	9.9012	-0.453*	1.75
CALCIUM, DISSOLVED	43	68.33	14.87	27.0	94.0	40	0.0338	18.3134	0.884	7.27
MAGNESIUM, DISSOLVED	44	18.98	5.86	6.0	33.0	41	0.0121	1.1307	0.813	3.54
SODIUM, DISSOLVED	44	208.07	65.46	60.0	360.0	41	0.1634	-32.5847	0.986	11.35
POTASSIUM, DISSOLVED	38	5.32	1.24	3.5	7.3	35	-0.0012	7.0643	-0.367	1.12
BICARBONATE, ION	44	175.0	43.3	82	236	41	0.080	61.455	0.793	27.5
CARBONATE, ION	51	0.1	0.6	0	4	48	-0.000	0.227	-0.051*	0.6
SULFATE, DISSOLVED	43	100.84	32.35	28.0	180.0	40	0.0726	-1.7847	0.911	13.79
CHLORIDE, DISSOLVED	42	312.31	108.91	88.0	540.0	39	0.2478	-48.9065	0.987	18.45
DISSOLVED SOLIDS, SUM OF CONST	6	786.8	161.9	502	963	4	0.566	-32.472	0.975*	47.1
DISSOLVED SOLIDS, ROE 180 DEG C	55	869.0	247.8	269	1370	52	0.581	-17.138	0.997	19.0
HARDNESS, TOTAL	44	246.0	61.1	92	370	41	0.139	41.176	0.892	28.9
HARDNESS, NONCARBONATE	42	97.2	34.7	24	180	39	0.076	-15.174	0.883	17.0
TURBIDITY (JTU)	23	43.4	69.3	5	240	21	-0.100	196.970	-0.676	54.3
FLOURIDE, DISSOLVED	10	0.26	0.08	0.1	0.4	8	0.0000	0.2170	0.121*	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2550	2270	2070	1840	1680	1480	1330	931	722	482

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.82	12.16	2.63	97	1.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07164400 -- ARKANSAS RIVER AT SAND SPRINGS NR TULSA, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	23	1	9	4	1	4
CADMIUM (CD), UG/L	23	0	10	4	1	2
CHROMIUM (CR), UG/L	22	0	30	4	0	20
COBALT (CO), UG/L	4	< 50	50	4	0	1
COPPER (CU), UG/L	4	< 10	50	4	2	13
IRON (FE), UG/L	23	300	26000	4	10	190
LEAD (PB), UG/L	23	< 100	< 100	4	1	6
MANGANESE (MN), UG/L	4	70	220	3	50	140
MERCURY (HG), UG/L	21	0.0	1.0	4	0.0	8.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	21	10	280	4	20	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	19	4.0	21.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07178620 NAME: NEWT GRAHAM LOCK AND DAM NR INOLA, OK

LAT 36D03M29S LONG 095D32M06S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	17.69	7.92	4.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	48	398.6	112.1	132	665					
STREAMFLOW (CUBIC FT/SEC)	13	9665.0	8528.2	176	28200	11	-46.788	29805.297	-0.546*	8038.5
PH (STANDARD UNITS)	47	7.77	0.50	5.4	8.5	41	0.0004	7.6292	0.078*	0.53
PHOSPHORUS, TOTAL	44	0.155	0.100	0.01	0.60	43	0.00001	0.15418	0.007*	0.102
NITRITE + NITRATE, TOTAL	9	0.446	0.258	0.06	1.00	8	0.00025	0.32062	0.107*	0.292
NITROGEN, KJELDAHL, TOTAL	17	0.635	0.241	0.21	1.20	16	0.00040	0.46358	0.142*	0.255
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	5218.8	6000.7	890	19000	6	27.746	-6960.984	0.558*	6388.7
SEDIMENT, SUSPENDED	6	153.0	222.6	20	604					
SEDIMENT, CLAY-SILT (PERCENT)	6	88.2	8.0	77	99					
COLIFORM, FECAL (COL/100 ML)	10	877.0	1495.1	0	4100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	226.3	261.7	0	680					
SILICA, DISSOLVED	10	6.45	1.20	4.5	8.3	9	-0.0055	8.9349	-0.481*	1.18
CALCIUM, DISSOLVED	44	45.23	9.84	15.0	73.0	43	0.0631	19.5174	0.739	6.74
MAGNESIUM, DISSOLVED	46	8.51	2.88	2.3	22.0	45	0.0170	1.6736	0.670	2.18
SODIUM, DISSOLVED	39	27.62	32.27	6.1	210.0	39	0.1150	-17.4045	0.410	29.82
POTASSIUM, DISSOLVED	40	3.00	0.71	1.8	5.3	39	0.0014	2.4532	0.196*	0.72
BICARBONATE, ION	44	135.9	26.8	50	191	43	0.145	76.715	0.629	21.1
CARBONATE, ION	43	0.0	0.0	0	0	37	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	45	36.11	16.26	12.0	120.0	44	0.0639	10.5960	0.441	14.91
CHLORIDE, DISSOLVED	43	45.90	49.94	7.6	320.0	42	0.2172	-41.6247	0.505	44.14
DISSOLVED SOLIDS, SUM OF CONST	20	264.3	146.3	164	851	18	0.605	22.652	0.406*	145.5
DISSOLVED SOLIDS, ROE 180 DEG C	42	248.9	117.2	88	887	41	0.646	-2.037	0.569	98.8
HARDNESS, TOTAL	44	148.5	35.2	47	270	43	0.223	57.727	0.727	24.6
HARDNESS, NONCARBONATE	42	37.5	18.6	6	120	41	0.108	-6.701	0.671	14.1
TURBIDITY (JTU)	10	29.3	15.9	14	66	9	-0.005	31.975	-0.036*	17.9
FLOURIDE, DISSOLVED	10	0.26	0.07	0.2	0.4	9	0.0001	0.2021	0.199*	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	701	641	584	441	410	371	343	275	248	164

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	16.24	12.77	2.67	96	1.86

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07178620 -- NEWT GRAHAM LOCK AND DAM NR INOLA, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	1	4	2	1	3
CADMIUM (CD), UG/L	2	<10	<10	2	0	1
CHROMIUM (CR), UG/L	2	0	10	2	0	10
COBALT (CO), UG/L	2	<50	<50	2	0	0
COPPER (CU), UG/L	2	<10	10	2	3	4
IRON (FE), UG/L	2	590	3000	2	30	130
LEAD (PB), UG/L	2	<100	<100	2	0	11
MANGANESE (MN), UG/L	2	140	590	2	20	370
MERCURY (HG), UG/L	2	0.1	0.3	2	0.0	0.3
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	10	60	2	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	6.6	9.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07193500 NAME: NEOSHO RIVER BLW FT GIBSON LAKE NR FT GIBSON, OK

LAT 35D51M15S LONG 095D13M45S
DRAINAGE AREA: 12495 SQ MI (32362 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, -B-	CONSTANT, -B-	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	17.62	8.38	4.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	29	192.2	98.0	26	289					
STREAMFLOW (CUBIC FT/SEC)	11	16668.2	14088.6	2150	47200	9	62.768	-544.430	0.241*	10654.3
PH (STANDARD UNITS)	12	7.63	0.51	6.4	8.1	10	0.0002	7.6458	0.014*	0.54
PHOSPHORUS, TOTAL	12	0.082	0.038	0.02	0.15	10	0.00024	0.02286	0.236*	0.040
NITRITE + NITRATE, TOTAL	11	0.785	0.703	0.10	2.70	9	-0.00726	2.73847	-0.238*	0.770
NITROGEN, KJELDAHL, TOTAL	11	0.628	0.702	0.01	2.60	9	-0.00261	1.27894	-0.084*	0.811
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	2227.1	3482.2	340	10000	6	40.428	-8178.387	0.293*	3960.0
SEDIMENT, SUSPENDED	8	129.6	180.9	11	496					
SEDIMENT, CLAY-SILT (PERCENT)	8	81.4	25.8	29	97					
COLIFORM, FECAL (COL/100 ML)	7	46.0	33.3	0	100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	91.9	161.8	4	547					
SILICA, DISSOLVED	11	5.76	2.27	2.6	9.2	9	-0.0096	8.2057	-0.093 *	2.70
CALCIUM, DISSOLVED	11	33.73	5.42	26.0	42.0	9	0.1260	2.3428	0.879	2.99
MAGNESIUM, DISSOLVED	10	4.85	1.33	1.9	6.5	9	0.0322	-3.1369	0.941	0.51
SODIUM, DISSOLVED	11	7.89	2.32	3.8	12.0	9	0.0415	-2.2166	0.647 *	2.05
POTASSIUM, DISSOLVED	12	2.76	0.52	1.7	3.7	10	0.0074	0.7757	0.672	0.34
BICARBONATE, ION	11	99.2	10.8	78	115	9	0.232	42.195	0.768	8.1
CARBONATE, ION	11	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	28.72	8.59	7.7	39.0	10	0.2277	-27.6637	0.954	2.95
CHLORIDE, DISSOLVED	11	8.40	2.22	4.9	13.0	10	0.0317	0.4887	0.528 *	2.10
DISSOLVED SOLIDS, SUM OF CONST	6	146.8	20.5	115	167	5	0.739	-42.803	0.934	9.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	155.5	21.9	102	175	10	0.559	16.209	0.926	9.3
HARDNESS, TOTAL	9	105.1	19.8	73	130	8	0.448	-7.172	0.931	8.3
HARDNESS, NONCARBONATE	8	22.4	11.5	2	40	7	0.254	-40.359	0.934	4.8
TURBIDITY (JTU)	11	29.7	37.3	9	140	9	-0.448	147.997	-0.266 *	42.2
FLOURIDE, DISSOLVED	11	0.14	0.09	0.1	0.4	9	0.0025	-0.4871	0.589 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 360

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	316	294	292	283	276	260	238	206	197	195

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
350	16.02	11.78	2.58	96	1.69

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07193500 -- NEOSHO RIVER BLW FT GIBSON LAKE NR FT GIBSON, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	1	2	2	1	2
CADMIUM (CD), UG/L	1	<10		2	1	2
CHROMIUM (CR), UG/L	1	20		2	10	10
COBALT (CO), UG/L	1	<50		2	0	0
COPPER (CU), UG/L	1	10		2	7	9
IRON (FE), UG/L	1	580		2	10	30
LEAD (PB), UG/L	1	<100		2	1	2
MANGANESE (MN), UG/L	2	150	170	2	60	60
MERCURY (HG), UG/L	1	0.1		2	0.1	12.0
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	40	870	2	10	170
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	3.5	7.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07227140 NAME: CANADIAN R AB NM-TX STATE LINE, NM

LAT 35D23M24S LONG 103D02M36S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	17.22	7.75	5.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	5690.4	2792.7	670	8000					
STREAMFLOW (CUBIC FT/SEC)	9	50.8	102.3	5	321	9	-0.025	195.295	-0.694	78.8
PH (STANDARD UNITS)	9	8.34	0.21	8.0	8.8	9	0.0000	8.0795	0.611*	0.18
PHOSPHORUS, TOTAL	9	0.384	0.947	0.02	2.90	9	-0.00023	1.70025	-0.682	0.740
NITRITE + NITRATE, TOTAL	9	0.339	0.153	0.04	0.53	9	-0.00002	0.47527	-0.439*	0.147
NITROGEN, KJELDAHL, TOTAL	9	1.429	2.288	0.14	6.40	9	-0.00078	5.88489	-0.956	0.718
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	6197.5	11222.2	240	31000	8	-0.278	7701.117	-0.070*	12091.2
SEDIMENT, SUSPENDED	9	3617.4	8496.5	29	25700					
SEDIMENT, CLAY-SILT (PERCENT)	9	89.0	8.0	75	99					
COLIFORM, FECAL (COL/100 ML)	9	4793.9	9735.1	0	26000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	2503.9	5266.5	0	15000					
SILICA, DISSOLVED	9	9.48	1.97	5.8	12.0	9	0.0006	5.8294	0.911	0.87
CALCIUM, DISSOLVED	9	96.11	42.92	17.0	130.0	9	0.0152	9.7666	0.987	7.28
MAGNESIUM, DISSOLVED	9	55.98	30.56	5.8	84.0	9	0.0107	-4.8919	0.978	6.87
SODIUM, DISSOLVED	9	1108.89	564.79	110.0	1600.0	9	0.2018	-39.1895	0.998	41.52
POTASSIUM, DISSOLVED	9	7.44	2.88	3.7	12.0	9	0.0008	2.7128	0.807	1.82
BICARBONATE, ION	9	264.3	69.1	130	327	9	0.023	134.834	0.920	29.0
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	388.44	177.28	46.0	610.0	9	0.0584	56.3977	0.919	74.61
CHLORIDE, DISSOLVED	9	1594.44	859.14	130.0	2300.0	9	0.3059	-146.4272	0.994	96.57
DISSOLVED SOLIDS, SUM OF CONST	9	3394.1	1690.6	385	4740	9	0.605	-46.842	0.999	84.5
DISSOLVED SOLIDS, ROE 180 DEG C	9	3361.4	1683.4	369	4800	9	0.602	-63.342	0.998	100.3
HARDNESS, TOTAL	9	470.1	229.2	67	650	9	0.082	4.747	0.997	20.3
HARDNESS, NONCARBONATE	9	264.4	162.9	0	410	9	0.057	-59.877	0.977	36.9
TURBIDITY (JTU)	9	2648.4	7272.9	4	22000	9	-1.685	12235.012	-0.647*	5929.1
FLOURIDE, DISSOLVED	9	0.57	0.14	0.3	0.8	9	0.0000	0.3628	0.707	0.11

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07227140 -- CANADIAN R AB NM-TX STATE LINE, NM

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	80	3	1	4
CADMIUM (CD), UG/L	2	< 10	20	3	0	1
CHROMIUM (CR), UG/L	2	1	120	3	0	< 10
COBALT (CO), UG/L	2	< 50	50	3	0	0
COPPER (CU), UG/L	2	< 10	150	3	0	9
IRON (FE), UG/L	2	290	91000	9	10	40
LEAD (PB), UG/L	2	<100	100	3	0	1
MANGANESE (MN), UG/L	2	230	3000	2	0	200
MERCURY (HG), UG/L	2	0.1	0.3	2	0.0	0.3
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	2	20	370	3	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	16.00	23.00			
BIOMASS, ASH WT., G/SQ M	3	14.00	21.00			
CHLOROPHYLL A, MG/SQ M	3	.2	1.0			
CHLOROPHYLL B, MG/SQ M	3	.0	.0			
ORGANIC CARBON, MG/L	8	1.3	102.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07228000 NAME: CANADIAN R NR CANADIAN, TX

LAT 35D56M06S LONG 100D22M13S
DRAINAGE AREA: 22866 SQ MI (59223 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	15.25	10.99	2.0	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	2312.3	769.0	773	3100					
STREAMFLOW (CUBIC FT/SEC)	12	369.9	811.4	0	2900	12	-0.176	777.692	-0.167*	839.1
PH (STANDARD UNITS)	12	8.09	0.30	7.5	8.5	12	0.0001	7.8428	0.279*	0.30
PHOSPHORUS, TOTAL	12	0.156	0.123	0.02	0.50	12	-0.00001	0.18246	-0.072*	0.129
NITRITE + NITRATE, TOTAL	12	0.182	0.232	0.00	0.58	12	0.00006	0.04397	0.199*	0.238
NITROGEN, KJELDAHL, TOTAL	12	0.938	0.548	0.00	1.90	12	0.00013	0.63047	0.187*	0.565
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	34458.3	38087.7	2300	120000	12	5.532	21666.027	0.112*	39696.3
SEDIMENT, SUSPENDED	13	749.0	1717.0	5	5350					
SEDIMENT, CLAY-SILT (PERCENT)	13	61.9	22.5	16	88					
COLIFORM, FECAL (COL/100 ML)	12	2068.1	5279.2	12	18000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3443.1	9402.4	27	33000					
SILICA, DISSOLVED	12	21.83	6.69	14.0	36.0	12	-0.0067	37.2760	-0.768	4.49
CALCIUM, DISSOLVED	12	103.92	25.50	58.0	140.0	12	0.0302	34.1491	0.910	11.10
MAGNESIUM, DISSOLVED	12	42.67	13.61	18.0	59.0	12	0.0173	2.7683	0.975	3.16
SODIUM, DISSOLVED	12	312.17	117.17	81.0	410.0	12	0.1519	-39.1104	0.997	9.43
POTASSIUM, DISSOLVED	12	12.59	5.38	2.8	20.0	12	0.0065	-2.3442	0.924	2.15
BICARBONATE, ION	12	276.5	34.1	196	345	12	-0.027	337.904	-0.598	28.7
CARBONATE, ION	12	1.4	3.6	0	12	12	-0.003	7.525	-0.560*	3.2
SULFATE, DISSOLVED	12	179.86	88.40	9.3	280.0	12	0.1124	-80.0243	0.978	19.47
CHLORIDE, DISSOLVED	12	498.08	212.42	97.0	740.0	12	0.2751	-138.0457	0.996	20.16
DISSOLVED SOLIDS, SUM OF CONST	12	1311.3	441.2	451	1770	12	0.572	-11.567	0.997	35.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	1373.3	492.2	439	1910	12	0.635	-96.126	0.993	61.5
HARDNESS, TOTAL	12	436.7	118.6	220	600	12	0.148	94.812	0.959	35.3
HARDNESS, NONCARBONATE	12	209.8	131.8	0	430	12	0.163	-166.996	0.950	43.1
TURBIDITY (JTU)	12	26.0	43.1	2	160	12	-0.007	43.102	-0.132*	44.8
FLOURIDE, DISSOLVED	10	1.38	0.25	1.1	1.8	10	0.0002	0.8531	0.760	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	3830	3220	3080	2940	2830	2720	2530	1020	832	771

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
329	18.25	12.55	2.94	86	3.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07228000 -- CANADIAN R NR CANADIAN, TX

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	7	4	3	7
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	0	1
COPPER (CU), UG/L	4	< 10	10	4	0	4
IRON (FE), UG/L	4	290	840	4	0	80
LEAD (PB), UG/L	4	< 100	< 100	4	0	1
MANGANESE (MN), UG/L	3	30	70	4	0	50
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	4	0	190	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	3.1	91.00			
BIOMASS, ASH WT., G/SQ M	5	2.3	36.00			
CHLOROPHYLL A, MG/SQ M	5	.2	22.0			
CHLOROPHYLL B, MG/SQ M	5	.2	6.2			
ORGANIC CARBON, MG/L	4	1.0	6.4			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07231500 NAME: CANADIAN RIVER AT CALVIN, OK

LAT 34D58M32S LONG 096D14M24S
DRAINAGE AREA: 27952 SQ MI (72396 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	15.23	7.62	4.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	53	1027.7	356.2	190	1650					
STREAMFLOW (CUBIC FT/SEC)	52	3029.9	4227.3	156	17500	50	-8.944	12581.336	-0.701 *	3088.7
PH (STANDARD UNITS)	48	7.94	0.46	6.5	9.0	47	0.0005	7.4115	0.389 *	0.43
PHOSPHORUS, TOTAL	21	0.308	0.290	0.06	1.20	20	-0.00058	1.00578	-0.513	0.260
NITRITE + NITRATE, TOTAL	6	0.238	0.288	0.00	0.70	5	0.00054	-0.40300	0.635 *	0.287
NITROGEN, KJELDAHL, TOTAL	6	1.622	1.516	0.88	4.70	5	-0.00408	6.57938	-0.942 *	0.640
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	2028.6	2360.7	230	7100	5	1.154	304.535	0.677 *	785.8
SEDIMENT, SUSPENDED	2	1986.0	2494.7	222	3750					
SEDIMENT, CLAY-SILT (PERCENT)	2	68.5	4.9	65	72					
COLIFORM, FECAL (COL/100 ML)	8	227.6	263.8	0	810					
STREPTOCOCCI, FECAL (COL/100 ML)	9	334.2	391.6	0	1280					
SILICA, DISSOLVED	4	7.97	1.88	5.8	10.0	3	0.0024	5.0346	0.552 *	2.54
CALCIUM, DISSOLVED	31	85.23	25.80	41.0	140.0	30	0.0693	11.8081	0.913	10.88
MAGNESIUM, DISSOLVED	35	29.95	10.81	8.4	50.0	34	0.0296	-0.7853	0.972	2.60
SODIUM, DISSOLVED	32	92.25	38.41	23.0	150.0	31	0.1053	-14.9025	0.981	7.67
POTASSIUM, DISSOLVED	8	5.31	1.40	4.2	8.6	7	0.0002	4.6487	0.156 *	0.52
BICARBONATE, ION	34	236.4	63.3	128	334	33	0.167	65.858	0.927	24.5
CARBONATE, ION	34	0.0	0.0	0	0	33	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	33	134.27	58.37	26.0	280.0	32	0.1491	-18.6767	0.911	24.58
CHLORIDE, DISSOLVED	33	141.64	59.73	30.0	240.0	32	0.1622	-25.1511	0.961	17.00
DISSOLVED SOLIDS, SUM OF CONST	5	676.0	230.6	330	893	4	0.607	-9.210	0.987 *	52.4
DISSOLVED SOLIDS, ROE 180 DEG C	42	631.2	220.9	85	1060	41	0.606	-12.588	0.915	91.1
HARDNESS, TOTAL	31	339.4	105.2	160	560	30	0.296	26.123	0.957	31.8
HARDNESS, NONCARBONATE	36	218.1	281.1	36	1300	30	0.156	-25.515	0.905	25.8
TURBIDITY (JTU)	5	236.0	371.7	50	900	4	-0.920	1333.643	-0.954 *	151.9
FLOURIDE, DISSOLVED	5	0.38	0.04	0.3	0.4	4	-0.0000	0.3755	-0.004 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 343

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1640	1570	1450	1340	1250	1070	888	567	476	360

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
337	15.32	11.65	2.85	91	2.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07231500 -- CANADIAN RIVER AT CALVIN, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	30	4	1	4
CADMIUM (CD), UG/L	2	< 10	20	4	0	1
CHROMIUM (CR), UG/L	2	10	40	6	0	10
COBALT (CO), UG/L	2	< 50	< 50	3	0	1
COPPER (CU), UG/L	2	10	60	4	3	30
IRON (FE), UG/L	2	5400	45000	5	10	150
LEAD (PB), UG/L	2	< 100	100	4	0	3
MANGANESE (MN), UG/L	3	100	1900	5	0	100
MERCURY (HG), UG/L	1	0.1		5	0.0	0.2
SELENIUM (SE), UG/L	4	0	2	4	0	0
ZINC (ZN), UG/L	2	110	320	5	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	5.5	36.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07232500 NAME: BEAVER RIVER NR GUYMON, OK

LAT 36D43M24S LONG 101D29M30S
DRAINAGE AREA: 2139 SQ MI (5540 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	8	11.50	9.12	1.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	7	533.4	42.3	500	620					
STREAMFLOW (CUBIC FT/SEC)	8	5.4	2.3	3	10	7	0.022	-6.359	0.373 *	2.5
PH (STANDARD UNITS)	8	8.12	0.24	7.6	8.3	7	-0.0011	8.6946	-0.193 *	0.26
PHOSPHORUS, TOTAL	6	0.050	0.039	0.01	0.12	5	-0.00062	0.37367	-0.322 *	0.047
NITRITE + NITRATE, TOTAL	6	0.500	0.375	0.02	1.00	5	0.00811	-3.60956	0.558 *	0.312
NITROGEN, KJELDAHL, TOTAL	6	0.263	0.041	0.22	0.32	5	0.00085	-0.17520	0.416 *	0.048
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	4040.0	945.0	2800	5200	3	35.000	-14399.992	0.938 *	424.3
SEDIMENT, SUSPENDED	2	35.0	1.4	34	36					
SEDIMENT, CLAY-SILT (PERCENT)	2	88.0	9.9	81	95					
COLIFORM, FECAL (COL/100 ML)	7	117.1	50.1	58	220					
STREPTOCOCCI, FECAL (COL/100 ML)	7	169.3	77.1	85	300					
SILICA, DISSOLVED	6	21.50	3.94	15.0	25.0	5	-0.0155	30.8418	-0.134 *	2.96
CALCIUM, DISSOLVED	6	44.17	6.85	34.0	50.0	5	0.1457	-29.3724	0.621 *	4.76
MAGNESIUM, DISSOLVED	6	25.50	1.05	24.0	27.0	5	-0.0376	44.8859	-0.739 *	0.89
SODIUM, DISSOLVED	5	26.60	3.05	23.0	31.0	4	-0.0331	43.1912	-0.185 *	4.10
POTASSIUM, DISSOLVED	6	4.85	0.66	4.0	5.7	5	-0.0151	12.4947	-0.586 *	0.54
BICARBONATE, ION	6	256.5	22.5	220	280	5	0.588	-41.067	0.863 *	8.9
CARBONATE, ION	5	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	6	46.50	3.51	41.0	50.0	5	0.0083	41.4698	0.055 *	3.94
CHLORIDE, DISSOLVED	6	14.33	2.07	11.0	17.0	5	-0.0342	31.9332	-0.336 *	2.48
DISSOLVED SOLIDS, SUM OF CONST	5	309.0	15.5	284	325	4	0.364	128.897	0.888 *	4.4
DISSOLVED SOLIDS, ROE 180 DEG C	6	306.8	14.4	284	326	5	0.443	81.384	0.981 *	2.3
HARDNESS, TOTAL	6	213.3	15.1	190	230	5	0.292	66.443	0.598 *	10.1
HARDNESS, NONCARBONATE	5	6.6	7.0	0	16	4	-0.125	69.500	-0.315 *	8.8
TURBIDITY (JTU)	6	19.5	1.8	16	21	5	-0.009	25.046	-0.469 *	0.5
FLOURIDE, DISSOLVED	6	1.80	0.33	1.5	2.4	5	0.0084	-2.5818	0.506 *	0.37

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 187

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	619	579	546	538	530	515	502	482	472	436

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
147	17.44	12.58	2.92	68	3.77

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07232500 -- BEAVER RIVER NR GUYMON, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	3	5	2	2	6
CADMIUM (CD), UG/L	2	<10	<10	2	0	2
CHROMIUM (CR), UG/L	2	10	20	2	0	0
COBALT (CO), UG/L	2	<50	<50	2	0	0
COPPER (CU), UG/L	2	20	90	2	1	20
IRON (FE), UG/L	2	800	1000	2	20	90
LEAD (PB), UG/L	2	<100	<100	2	2	6
MANGANESE (MN), UG/L	2	50	70	2	5	20
MERCURY (HG), UG/L	1	0.0		2	0.0	0.0
SELENIUM (SE), UG/L	2	0	1	2	0	1
ZINC (ZN), UG/L	2	10	30	2	2	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	1.7	7.6			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07234000 NAME: BEAVER RIVER AT BEAVER, OK

LAT 36D49M20S LONG 100D31M05S
DRAINAGE AREA: 7955 SQ MI (20603 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	1	15.00	0.00	15.0						
SPECIFIC CONDUCTANCE (MICROMHOS)	14	2927.5	1776.9	404	4970					
STREAMFLOW (CUBIC FT/SEC)	15	77.4	231.5	0	902	14	-0.066	276.272	-0.491*	216.9
PH (STANDARD UNITS)	14	7.82	0.36	7.3	8.4	13	0.0001	7.4803	0.570	0.28
PHOSPHORUS, TOTAL	1	0.060	0.000	0.06						
NITRITE + NITRATE, TOTAL	1	0.010	0.000	0.01						
NITROGEN, KJELDAHL, TOTAL	0									
PHYTOPLANKTON, TOTAL (CELLS/ML)	1	640.0	0.0	640						
SEDIMENT, SUSPENDED	1	36.0	0.0	36						
SEDIMENT, CLAY-SILT (PERCENT)	1	100.0	0.0	100						
COLIFORM, FECAL (COL/100 ML)	1	580.0	0.0	580						
STREPTOCOCCI, FECAL (COL/100 ML)	1	970.0	0.0	970						
SILICA, DISSOLVED	0									
CALCIUM, DISSOLVED	15	142.53	75.75	40.0	230.0	14	0.0421	14.4044	0.982	14.80
MAGNESIUM, DISSOLVED	15	69.89	45.34	7.3	130.0	14	0.0254	-7.4145	0.990	6.55
SODIUM, DISSOLVED	14	401.86	265.90	28.0	730.0	13	0.1517	-38.6443	0.999	12.86
POTASSIUM, DISSOLVED	15	11.66	2.81	7.7	18.0	14	-0.0004	12.9528	-0.245*	2.89
BICARBONATE, ION	15	231.9	55.6	159	315	14	0.025	153.985	0.819	32.3
CARBONATE, ION	15	0.0	0.0	0	0	14	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	15	410.20	275.69	21.0	770.0	14	0.1558	-61.5017	0.992	36.91
CHLORIDE, DISSOLVED	15	684.67	445.48	41.0	1200.0	14	0.2509	-79.6506	0.998	26.60
DISSOLVED SOLIDS, SUM OF CONST	0									
DISSOLVED SOLIDS, ROE 180 DEG C	15	1981.9	1215.1	219	3300	14	0.686	-106.301	0.999	44.0
HARDNESS, TOTAL	15	644.0	373.1	140	1100	14	0.210	5.920	0.994	42.7
HARDNESS, NONCARBONATE	15	454.9	335.4	8	880	14	0.190	-120.394	0.995	35.7
TURBIDITY (JTU)	0									
FLOURIDE, DISSOLVED	0									

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 129

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	5080	4890	4820	4650	4480	3810	1640	730	570	458

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
121	17.81	13.79	2.84	90	3.30

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07234000 -- BEAVER RIVER AT BEAVER, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	0			0		
CADMIUM (CD), UG/L	0			0		
CHROMIUM (CR), UG/L	0			0		
COBALT (CO), UG/L	0			0		
COPPER (CU), UG/L	0			0		
IRON (FE), UG/L	0			0		
LEAD (PB), UG/L	0			0		
MANGANESE (MN), UG/L	0			0		
MERCURY (HG), UG/L	0			0		
SELENIUM (SE), UG/L	0			0		
ZINC (ZN), UG/L	0			0		
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	0					

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07237500 NAME: NORTH CANADIAN RIVER AT WOODWARD, OK

LAT 36D26M18S LONG 099D16M40S
DRAINAGE AREA: 11589 SQ MI (30016 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	15.50	11.19	0.0	33.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	1794.5	661.6	1050	3010					
STREAMFLOW (CUBIC FT/SEC)	11	75.9	101.5	2	359	10	-0.097	258.810	-0.645	84.7
PH (STANDARD UNITS)	11	8.01	0.25	7.5	8.3	10	0.0001	7.9007	0.172*	0.28
PHOSPHORUS, TOTAL	11	0.456	0.635	0.02	2.10	10	0.00065	-0.68806	0.693	0.500
NITRITE + NITRATE, TOTAL	11	0.213	0.200	0.06	0.76	10	0.00012	0.01158	0.407*	0.197
NITROGEN, KJELDAHL, TOTAL	11	1.094	0.782	0.33	2.50	10	0.00049	0.26279	0.423*	0.771
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	22216.7	21903.5	2000	51000	6	23.117	-20049.004	0.724*	16895.7
SEDIMENT, SUSPENDED	6	44.0	34.8	12	106					
SEDIMENT, CLAY-SILT (PERCENT)	6	85.7	19.1	48	99					
COLIFORM, FECAL (COL/100 ML)	10	1235.0	2043.8	0	5900					
STREPTOCOCCI, FECAL (COL/100 ML)	10	12317.6	23543.5	67	67000					
SILICA, DISSOLVED	11	19.82	4.92	8.0	26.0	10	0.0045	11.0101	0.665	3.73
CALCIUM, DISSOLVED	10	136.80	57.03	75.0	220.0	9	0.0796	-16.1280	0.983	11.41
MAGNESIUM, DISSOLVED	11	41.18	13.83	21.0	63.0	10	0.0182	6.6833	0.927	5.41
SODIUM, DISSOLVED	11	207.27	84.15	100.0	360.0	10	0.1246	-24.0978	0.997	7.19
POTASSIUM, DISSOLVED	11	6.74	1.27	5.2	9.7	10	0.0011	4.7881	0.603*	1.10
BICARBONATE, ION	11	243.9	58.6	111	353	10	0.023	192.122	0.322*	48.8
CARBONATE, ION	10	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	340.00	170.16	170.0	580.0	9	0.2427	-126.2744	0.981	36.19
CHLORIDE, DISSOLVED	11	307.27	138.64	140.0	570.0	10	0.2055	-72.7981	0.991	20.34
DISSOLVED SOLIDS, SUM OF CONST	9	1237.4	491.5	596	1930	8	0.694	-138.238	0.997	43.1
DISSOLVED SOLIDS, ROE 180 DEG C	11	1197.1	477.0	626	1950	10	0.697	-104.787	0.996	44.7
HARDNESS, TOTAL	10	512.0	198.5	270	790	9	0.275	-17.331	0.983	39.6
HARDNESS, NONCARBONATE	11	304.5	171.9	120	590	10	0.251	-159.802	0.976	41.4
TURBIDITY (JTU)	11	23.0	44.7	1	150	10	-0.035	89.331	-0.528*	41.9
FLOURIDE, DISSOLVED	11	0.70	0.15	0.3	0.8	10	0.0001	0.5966	0.253*	0.16

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 327

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	3720	3540	2970	2700	2510	1910	1630	1350	1280	1060

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
320	12.73	6.32	3.19	47	4.83

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07237500 -- NORTH CANADIAN RIVER AT WOODWARD, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	5	10	2	3	4
CADMIUM (CD), UG/L	2	<10	<10	2	0	1
CHROMIUM (CR), UG/L	2	10	30	2	0	0
COBALT (CO), UG/L	2	<50	50	2	0	0
COPPER (CU), UG/L	2	20	30	2	1	3
IRON (FE), UG/L	2	110	8200	2	40	140
LEAD (PB), UG/L	2	<100	< 100	2	3	4
MANGANESE (MN), UG/L	2	280	530	2	90	470
MERCURY (HG), UG/L	2	0.0	0.1	2	0.0	0.1
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	50	440	2	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	8.6	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07245000 NAME: CANADIAN RIVER NR WHITEFIELD, OK

LAT 35D15M45S LONG 095D14M19S
DRAINAGE AREA: 47576 SQ MI (123222 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	16.15	9.20	5.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	41	385.7	76.4	129	492					
STREAMFLOW (CUBIC FT/SEC)	36	8958.3	10912.3	212	35400	34	21.764	933.988	0.153*	11188.1
PH (STANDARD UNITS)	47	7.79	0.45	5.6	8.4	41	0.0001	7.7674	0.013*	0.47
PHOSPHORUS, TOTAL	38	0.083	0.062	0.02	0.35	32	-0.00037	0.21222	-0.655	0.034
NITRITE + NITRATE, TOTAL	11	0.261	0.109	0.08	0.43	8	-0.00386	1.97522	-0.823	0.075
NITROGEN, KJELDAHL, TOTAL	16	0.856	1.033	0.13	3.60	13	0.00176	0.21983	0.091*	1.171
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	1128.0	1511.2	180	3800					
SEDIMENT, SUSPENDED	10	78.9	93.2	21	306					
SEDIMENT, CLAY-SILT (PERCENT)	10	122.7	147.5	6	520					
COLIFORM, FECAL (COL/100 ML)	6	171.0	132.6	20	400					
STREPTOCOCCI, FECAL (COL/100 ML)	6	158.8	115.3	10	310					
SILICA, DISSOLVED	8	6.00	1.70	2.3	8.2	5	0.0241	-4.0288	0.828*	0.62
CALCIUM, DISSOLVED	43	30.65	7.40	14.0	52.0	38	0.0768	0.6893	0.884	3.23
MAGNESIUM, DISSOLVED	45	10.12	2.22	2.7	14.0	39	0.0288	-1.1380	0.962	0.62
SODIUM, DISSOLVED	43	32.10	6.72	9.3	46.0	37	0.0795	1.0472	0.955	1.98
POTASSIUM, DISSOLVED	41	3.21	0.51	1.9	4.8	35	0.0003	3.0912	0.037*	0.50
BICARBONATE, ION	45	102.3	23.8	46	184	39	0.254	3.985	0.803	14.7
CARBONATE, ION	45	0.0	0.0	0	0	39	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	44	31.17	9.62	8.3	57.0	38	0.0848	-1.5162	0.695	6.94
CHLORIDE, DISSOLVED	47	50.83	12.24	12.0	86.0	41	0.1312	-1.0174	0.904	4.82
DISSOLVED SOLIDS, SUM OF CONST	7	240.1	34.9	167	273	4	0.649	-45.108	0.960*	5.3
DISSOLVED SOLIDS, ROE 180 DEG C	43	229.9	40.3	137	350	37	0.515	26.714	0.966	9.4
HARDNESS, TOTAL	41	118.6	27.0	46	180	36	0.313	-4.159	0.930	9.7
HARDNESS, NONCARBONATE	39	34.9	13.1	8	66	34	0.099	-5.147	0.658	8.9
TURBIDITY (JTU)	8	22.0	11.4	2	40	5	-0.324	162.536	-0.959*	3.6
FLOURIDE, DISSOLVED	8	0.24	0.07	0.2	0.4	5	0.0001	0.1826	0.061*	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	489	474	455	446	438	417	367	301	287	240

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07245000 -- CANADIAN RIVER NR WHITEFIELD, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	2	2	0	1
CADMIUM (CD), UG/L	2	<10	<10	2	1	1
CHROMIUM (CR), UG/L	2	0	0	2	0	0
COBALT (CO), UG/L	2	<50	<50	2	0	0
COPPER (CU), UG/L	2	10	20	2	5	11
IRON (FE), UG/L	2	640	800	2	40	60
LEAD (PB), UG/L	2	<100	100	2	1	3
MANGANESE (MN), UG/L	2	10	120	2	10	20
MERCURY (HG), UG/L	2	0.1	0.1	2	0.0	0.1
SELENIUM (SE), UG/L	2	0	1	2	0	0
ZINC (ZN), UG/L	2	40	50	2	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	1	9.2				

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07250550 NAME: ARKANSAS R. AT DAM NO. 13, NR VAN BUREN, ARK.

LAT 35D20M56S LONG 094D17M54S
DRAINAGE AREA: 150547 SQ MI (389917 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	14.15	9.90	4.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	555.8	145.4	325	768					
STREAMFLOW (CUBIC FT/SEC)	11	68973.6	49636.2	2910	154000	11	-150.864	152826.625	-0.442 *	46936.7
PH (STANDARD UNITS)	11	7.66	0.28	7.2	8.0	11	0.0000	7.6364	0.025 *	0.30
PHOSPHORUS, TOTAL	11	0.118	0.023	0.09	0.17	11	-0.00009	0.16903	-0.585 *	0.019
NITRITE + NITRATE, TOTAL	11	0.462	0.156	0.10	0.65	11	-0.00018	0.55984	-0.164 *	0.162
NITROGEN, KJELDAHL, TOTAL	11	0.610	0.212	0.34	1.00	11	0.00092	0.09784	0.632	0.173
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	3263.0	3129.6	360	11000	10	8.126	-1440.863	0.338 *	3123.8
SEDIMENT, SUSPENDED	8	43.6	26.4	26	101					
SEDIMENT, CLAY-SILT (PERCENT)	8	92.3	8.7	75	99					
COLIFORM, FECAL (COL/100 ML)	10	5162.3	12699.3	33	41000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	242.0	145.1	32	500					
SILICA, DISSOLVED	10	6.24	1.32	4.1	8.4	10	-0.0014	7.0415	-0.137 *	1.39
CALCIUM, DISSOLVED	10	38.60	4.86	28.0	43.0	10	0.0275	22.7069	0.736	3.49
MAGNESIUM, DISSOLVED	10	8.94	1.89	5.2	11.0	10	0.0108	2.6760	0.747	1.33
SODIUM, DISSOLVED	10	61.20	20.38	33.0	89.0	10	0.1539	-27.9100	0.984	3.89
POTASSIUM, DISSOLVED	10	3.25	0.43	2.6	4.0	10	0.0009	2.7535	0.261 *	0.44
BICARBONATE, ION	11	110.7	11.5	92	126	11	0.056	79.868	0.705	8.6
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	42.90	8.12	28.0	56.0	10	0.0550	11.0467	0.883	4.04
CHLORIDE, DISSOLVED	10	93.70	35.13	51.0	140.0	10	0.2590	-56.2460	0.960	10.37
DISSOLVED SOLIDS, SUM OF CONST	10	310.0	70.0	201	403	10	0.535	0.402	0.995	7.4
DISSOLVED SOLIDS, ROE 180 DEG C	10	325.6	73.7	218	421	10	0.563	-0.144	0.995	8.0
HARDNESS, TOTAL	10	133.1	19.2	91	150	10	0.108	70.450	0.733	13.9
HARDNESS, NONCARBONATE	10	41.0	10.1	16	49	10	0.062	5.136	0.796	6.5
TURBIDITY (JTU)	10	34.0	14.0	15	64	10	-0.050	63.200	-0.468 *	13.2
FLOURIDE, DISSOLVED	10	0.19	0.03	0.1	0.2	10	0.0000	0.1699	0.143 *	0.03

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
248	17.23	12.27	2.70	96	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07250550 -- ARKANSAS R. AT DAM NO. 13, NR VAN BUREN, ARK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	3	4	0	2
CADMIUM (CD), UG/L	4	< 10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	2
COPPER (CU), UG/L	4	10	30	4	4	12
IRON (FE), UG/L	4	1000	4100	4	20	40
LEAD (PB), UG/L	4	< 100	< 100	4	0	1
MANGANESE (MN), UG/L	4	50	120	4	0	20
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	60	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.79	7.69			
BIOMASS, ASH WT., G/SQ M	3	.79	10.00			
CHLOROPHYLL A, MG/SQ M	3	.0	21.0			
CHLOROPHYLL B, MG/SQ M	3	.0	1.8			
ORGANIC CARBON, MG/L	3	5.0	7.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07263620 NAME: ARKANSAS R @ DAVID D TERRY L&D BL LITTLE ROCK AR

LAT 34D40M07S LONG 092D09M18S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	16.91	7.83	5.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	507.8	122.6	277	700					
STREAMFLOW (CUBIC FT/SEC)	12	86333.3	51582.9	10800	162000	12	-212.397	194177.750	-0.505*	46694.2
PH (STANDARD UNITS)	12	7.83	0.19	7.4	8.1	12	0.0005	7.5850	0.320*	0.19
PHOSPHORUS, TOTAL	12	0.103	0.026	0.06	0.15	12	-0.00003	0.11696	-0.128*	0.027
NITRITE + NITRATE, TOTAL	12	0.363	0.168	0.02	0.58	12	-0.00076	0.75018	-0.555*	0.147
NITROGEN, KJELDAHL, TOTAL	12	0.568	0.156	0.38	0.85	12	0.00054	0.29402	0.426*	0.148
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5084.2	5764.5	270	18000	12	21.529	-5847.070	0.458*	5374.2
SEDIMENT, SUSPENDED	9	112.6	200.3	19	644					
SEDIMENT, CLAY-SILT (PERCENT)	9	89.3	11.0	64	99					
COLIFORM, FECAL (COL/100 ML)	12	1544.4	2227.7	90	8300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	219.6	326.2	8	1200					
SILICA, DISSOLVED	12	4.92	2.28	0.5	7.4	12	-0.0127	11.3628	-0.682	1.75
CALCIUM, DISSOLVED	12	33.50	6.93	24.0	46.0	12	0.0524	6.8793	0.927	2.72
MAGNESIUM, DISSOLVED	12	7.97	2.20	5.1	11.0	12	0.0148	0.4335	0.828	1.29
SODIUM, DISSOLVED	12	52.92	16.13	22.0	78.0	12	0.1290	-12.6011	0.981	3.28
POTASSIUM, DISSOLVED	12	3.17	0.93	1.5	5.0	12	0.0044	0.9543	0.577	0.79
BICARBONATE, ION	12	100.3	19.8	72	137	12	0.140	29.307	0.866	10.4
CARBONATE, ION	15	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	38.75	9.11	22.0	49.0	12	0.0688	3.8083	0.927	3.59
CHLORIDE, DISSOLVED	12	79.25	25.32	31.0	120.0	12	0.2017	-23.1572	0.977	5.65
DISSOLVED SOLIDS, SUM OF CONST	12	270.1	64.9	153	370	12	0.528	2.011	0.998	4.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	281.9	63.0	163	371	12	0.512	21.995	0.996	6.0
HARDNESS, TOTAL	12	115.9	25.2	82	160	12	0.189	20.067	0.919	10.4
HARDNESS, NONCARBONATE	12	34.1	11.3	16	50	12	0.078	-5.550	0.847	6.3
TURBIDITY (JTU)	12	29.0	17.7	4	60	12	-0.002	30.181	-0.016*	18.6
FLOURIDE, DISSOLVED	12	0.16	0.05	0.1	0.2	12	0.0003	-0.0119	0.799	0.03

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 169

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	945	867	769	662	632	552	488	354	310	290

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
236	17.49	12.42	2.72	97	1.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07263620 -- ARKANSAS R @ DAVID D TERRY L&D BL LITTLE ROCK AR

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	1	2
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	20
COBALT (CO), UG/L	4	0	<50	4	0	0
COPPER (CU), UG/L	4	<10	110	4	4	6
IRON (FE), UG/L	4	520	2000	4	0	40
LEAD (PB), UG/L	4	<100	< 100	4	0	2
MANGANESE (MN), UG/L	4	50	100	4	0	20
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	40	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	14.00	63.00			
BIOMASS, ASH WT., G/SQ M	3	11.00	52.00			
CHLOROPHYLL A, MG/SQ M	3	9.2	87.0			
CHLOROPHYLL B, MG/SQ M	3	.5	16.0			
ORGANIC CARBON, MG/L	5	2.6	7.3			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07265450 NAME: MISSISSIPPI RIV NR ARKANSAS CITY, ARK.

LAT 33D33M55S LONG 091D14M35S
DRAINAGE AREA: 1130600 SQ MI (2928254 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.54	9.06	6.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	384.0	74.2	267	487					
STREAMFLOW (CUBIC FT/SEC)	12	705333.3	348073.0	308000	1469000	12	-4407.012	2397625.000	-0.939	125634.5
PH (STANDARD UNITS)	12	7.74	0.31	7.2	8.1	12	-0.0019	8.4786	-0.461*	0.29
PHOSPHORUS, TOTAL	12	0.231	0.118	0.03	0.51	12	0.00084	-0.09108	0.528*	0.105
NITRITE + NITRATE, TOTAL	12	1.004	0.332	0.48	1.40	12	-0.00187	1.72242	-0.418*	0.316
NITROGEN, KJELDAHL, TOTAL	12	4.032	11.329	0.54	40.00	12	-0.03490	17.43504	-0.228*	11.568
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	4650.0	3058.1	860	9700	10	31.367	-7131.563	0.755	2125.4
SEDIMENT, SUSPENDED	8	140.4	47.7	81	214					
SEDIMENT, CLAY-SILT (PERCENT)	8	88.0	8.1	73	97					
COLIFORM, FECAL (COL/100 ML)	12	895.8	665.0	150	2400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	259.3	241.3	20	840					
SILICA, DISSOLVED	12	5.96	0.97	4.5	7.3	12	-0.0044	7.6316	-0.333*	0.96
CALCIUM, DISSOLVED	12	38.75	5.55	28.0	48.0	12	0.0565	17.0718	0.755	3.81
MAGNESIUM, DISSOLVED	12	11.50	2.71	7.3	17.0	12	0.0246	2.0358	0.674	2.10
SODIUM, DISSOLVED	12	20.33	8.00	11.0	39.0	12	0.0970	-16.9037	0.898	3.69
POTASSIUM, DISSOLVED	12	2.80	0.55	1.6	3.5	12	0.0067	0.2437	0.904	0.24
BICARBONATE, ION	12	126.0	21.0	82	162	12	0.250	30.178	0.881	10.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	51.08	13.91	36.0	82.0	12	0.1467	-5.2356	0.782	9.09
CHLORIDE, DISSOLVED	12	22.00	9.37	13.0	49.0	12	0.0679	-4.0773	0.537*	8.29
DISSOLVED SOLIDS, SUM OF CONST	12	214.8	39.4	143	264	12	0.519	15.317	0.977	8.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	227.5	39.7	153	281	12	0.521	27.571	0.973	9.6
HARDNESS, TOTAL	12	145.0	23.9	100	190	12	0.242	52.003	0.750	16.6
HARDNESS, NONCARBONATE	12	40.8	10.6	24	62	12	0.037	26.473	0.260*	10.7
TURBIDITY (JTU)	12	62.8	45.8	25	200	12	0.115	18.785	0.186*	47.2
FLOURIDE, DISSOLVED	12	0.19	0.08	0.0	0.3	12	0.0008	-0.1067	0.727	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 327

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	490	476	466	448	433	355	324	279	257	243

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
327	17.35	11.38	2.68	97	1.51

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07265450 -- MISSISSIPPI RIV NR ARKANSAS CITY, ARK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	8	4	1	2
CADMIUM (CD), UG/L	4	<10	30	4	< 1	14
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	30	80	4	8	10
IRON (FE), UG/L	4	3500	12000	4	0	40
LEAD (PB), UG/L	4	<100	100	4	0	1
MANGANESE (MN), UG/L	4	150	550	4	0	20
MERCURY (HG), UG/L	2	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	4	4	0	1
ZINC (ZN), UG/L	4	40	230	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.59				
BIOMASS, ASH WT., G/SQ M	1	.59				
CHLOROPHYLL A, MG/SQ M	1	.1				
CHLOROPHYLL B, MG/SQ M	1	.1				
ORGANIC CARBON, MG/L	2	7.1	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07287120 NAME: YAZOO RIVER AT SHELL BLUFF NR MORGAN CITY, MS.

LAT 33D23M48S LONG 090D16M19S
DRAINAGE AREA: 7650 SQ MI (19814 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.42	7.33	9.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	72.4	10.5	48	85					
STREAMFLOW (CUBIC FT/SEC)	12	18125.0	6697.0	10000	28000	12	-394.496	46693.086	-0.617	5527.3
PH (STANDARD UNITS)	12	6.42	0.32	6.1	7.3	12	0.0088	5.7850	0.287*	0.32
PHOSPHORUS, TOTAL	12	0.228	0.119	0.05	0.42	12	-0.00269	0.42343	-0.237*	0.121
NITRITE + NITRATE, TOTAL	12	0.222	0.141	0.05	0.46	12	0.00156	0.10924	0.116*	0.147
NITROGEN, KJELDAHL, TOTAL	12	0.734	0.345	0.29	1.30	12	0.00316	0.50506	0.096*	0.360
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1776.9	1292.9	43	4200	12	19.499	364.885	0.158*	1339.0
SEDIMENT, SUSPENDED	7	290.3	237.5	104	791					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	2047.9	3252.4	20	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	8	1274.6	1491.6	60	4800					
SILICA, DISSOLVED	12	5.97	0.64	4.8	7.1	12	0.0400	3.0709	0.650	0.51
CALCIUM, DISSOLVED	12	6.22	1.85	3.1	10.0	12	0.1420	-4.0681	0.806	1.15
MAGNESIUM, DISSOLVED	12	2.06	0.49	1.2	2.8	12	0.0372	-0.6363	0.797	0.31
SODIUM, DISSOLVED	12	3.89	0.61	2.9	5.0	12	0.0154	2.7730	0.267*	0.61
POTASSIUM, DISSOLVED	12	1.95	0.52	1.4	3.0	12	0.0313	-0.3151	0.635	0.42
BICARBONATE, ION	12	25.3	5.0	16	32	12	0.417	-4.976	0.866	2.6
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.51	0.94	5.2	8.2	12	0.0177	5.2267	0.198*	0.96
CHLORIDE, DISSOLVED	12	3.29	0.70	2.5	4.9	12	0.0251	1.4770	0.376*	0.68
DISSOLVED SOLIDS, SUM OF CONST	12	42.6	5.7	30	50	12	0.510	5.617	0.936	2.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	51.8	14.3	30	80	12	0.238	34.623	0.174*	14.7
HARDNESS, TOTAL	12	24.0	6.2	13	37	12	0.502	-12.361	0.843	3.5
HARDNESS, NONCARBONATE	12	3.3	3.7	0	14	12	0.154	-7.787	0.435*	3.5
TURBIDITY (JTU)	12	117.9	76.4	30	230	12	-3.459	368.397	-0.474*	70.6
FLOURIDE, DISSOLVED	12	0.18	0.12	0.1	0.4	12	-0.0003	0.2083	-0.030*	0.13

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	18.45	9.59	2.69	94	2.00

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07287120 -- YAZOO RIVER AT SHELL BLUFF NR MORGAN CITY, MS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	8	4	0	2
CADMIUM (CD), UG/L	4	0	3	4	0	1
CHROMIUM (CR), UG/L	4	<10	<10	4	0	4
COBALT (CO), UG/L	4	0	8	4	0	2
COPPER (CU), UG/L	4	14	18	4	4	15
IRON (FE), UG/L	4	3100	9200	4	0	560
LEAD (PB), UG/L	4	9	30	4	0	7
MANGANESE (MN), UG/L	4	210	330	4	14	91
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	40	90	4	10	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	2.69				
BIOMASS, ASH WT., G/SQ M	2	1.09	2.29			
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	4	4.1	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07289000 NAME: MISSISSIPPI RIVER AT VICKSBURG, MS.

LAT 32D18M45S LONG 090D54M25S
DRAINAGE AREA: 1144500 SQ MI (2964255 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	17.64	9.13	6.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	358.8	76.3	260	500					
STREAMFLOW (CUBIC FT/SEC)	13	772383.9	427166.4	350999	1679996	13	-3235.860	1933309.000	-0.578	364193.3
PH (STANDARD UNITS)	13	7.18	0.56	6.0	7.8	13	0.0039	5.7705	0.537 *	0.49
PHOSPHORUS, TOTAL	13	0.221	0.058	0.15	0.35	13	0.00011	0.18179	0.144 *	0.060
NITRITE + NITRATE, TOTAL	13	1.070	0.401	0.57	2.00	13	-0.00014	1.11879	-0.026 *	0.419
NITROGEN, KJELDAHL, TOTAL	13	0.693	0.180	0.28	0.95	13	0.00073	0.43168	0.309 *	0.178
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3545.0	4078.6	580	14000	12	12.483	-865.789	0.236 *	4157.2
SEDIMENT, SUSPENDED	6	400.8	223.8	120	606					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	1777.4	2007.3	100	4500					
STREPTOCOCCI, FECAL (COL/100 ML)	6	896.2	875.5	1	2500					
SILICA, DISSOLVED	12	5.94	1.08	4.1	8.0	12	-0.0059	8.0301	-0.422 *	1.03
CALCIUM, DISSOLVED	12	37.58	5.76	27.0	44.0	12	0.0504	19.7902	0.673	4.47
MAGNESIUM, DISSOLVED	12	10.82	2.15	7.9	15.0	12	0.0204	3.6253	0.728	1.55
SODIUM, DISSOLVED	12	17.50	8.85	1.0	37.0	12	0.0860	-12.8903	0.748	6.16
POTASSIUM, DISSOLVED	12	2.76	0.48	2.0	3.3	12	0.0038	1.4182	0.606	0.40
BICARBONATE, ION	13	122.8	25.5	85	152	13	0.241	36.479	0.718	18.6
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	46.58	10.46	32.0	68.0	12	0.0784	18.8950	0.577	8.96
CHLORIDE, DISSOLVED	12	19.75	9.61	12.0	48.0	12	0.0762	-7.1702	0.610	7.99
DISSOLVED SOLIDS, SUM OF CONST	12	200.5	42.1	132	274	12	0.420	52.236	0.768	28.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	213.3	44.1	141	274	12	0.380	79.130	0.664	34.6
HARDNESS, TOTAL	12	140.0	22.2	100	170	12	0.210	65.719	0.730	15.9
HARDNESS, NONCARBONATE	12	39.7	5.2	30	48	12	0.025	30.973	0.367 *	5.0
TURBIDITY (JTU)	13	60.0	26.2	30	100	13	-0.052	78.484	-0.150 *	27.1
FLOURIDE, DISSOLVED	12	0.33	0.31	0.0	1.2	12	0.0005	0.1400	0.137 *	0.32

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	16.78	11.59	2.58	95	2.30

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07289000 -- MISSISSIPPI RIVER AT VICKSBURG, MS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	4	4	0	4
CADMIUM (CD), UG/L	4	0	4	4	0	2
CHROMIUM (CR), UG/L	4	< 10	50	4	0	0
COBALT (CO), UG/L	4	1	5	4	0	1
COPPER (CU), UG/L	4	11	18	4	2	5
IRON (FE), UG/L	4	1700	6400	4	20	50
LEAD (PB), UG/L	4	6	30	4	0	10
MANGANESE (MN), UG/L	4	150	360	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	60	90	4	6	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	4.2	10.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07290000 NAME: BIG BLACK RIVER NR BOVINA, MS.

LAT 32D20M51S LONG 090D41M48S
DRAINAGE AREA: 2810 SQ MI (7278 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.95	7.29	8.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	146.3	65.9	66	270					
STREAMFLOW (CUBIC FT/SEC)	12	5388.0	5083.6	256	15300	12	-66.034	15045.426	-0.855	2761.3
PH (STANDARD UNITS)	12	6.65	0.49	6.2	8.0	12	0.0041	6.0432	0.553*	0.43
PHOSPHORUS, TOTAL	12	0.271	0.149	0.14	0.63	12	0.00001	0.26888	0.006*	0.157
NITRITE + NITRATE, TOTAL	12	0.217	0.145	0.02	0.53	12	0.00076	0.10656	0.344*	0.143
NITROGEN, KJELDAHL, TOTAL	12	0.873	0.314	0.56	1.40	12	-0.00213	1.18493	-0.447*	0.294
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2618.3	4413.3	110	12000	12	26.497	-1256.796	0.395*	4251.5
SEDIMENT, SUSPENDED	7	162.4	118.2	60	411					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	7363.8	20868.3	60	63000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	1245.9	2021.3	200	6500					
SILICA, DISSOLVED	12	9.67	3.00	4.7	14.0	12	0.0420	3.5264	0.924	1.20
CALCIUM, DISSOLVED	12	9.83	4.15	3.8	19.0	12	0.0467	3.0013	0.741	2.92
MAGNESIUM, DISSOLVED	12	3.82	1.87	1.5	7.6	12	0.0231	0.4376	0.815	1.13
SODIUM, DISSOLVED	12	11.94	6.92	5.2	28.0	12	0.0980	-2.3956	0.933	2.62
POTASSIUM, DISSOLVED	12	2.62	0.67	1.2	3.6	12	0.0054	1.8315	0.535*	0.59
BICARBONATE, ION	12	42.2	20.4	13	85	12	0.234	7.919	0.756	14.0
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	8.50	1.97	5.8	12.0	12	0.0152	6.2725	0.508*	1.78
CHLORIDE, DISSOLVED	12	16.16	11.79	6.1	44.0	12	0.1587	-7.0446	0.886	5.72
DISSOLVED SOLIDS, SUM OF CONST	12	83.9	34.0	47	143	12	0.507	9.816	0.982	6.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	96.7	49.3	38	170	12	0.723	-9.141	0.967	13.3
HARDNESS, TOTAL	12	40.3	17.9	16	79	12	0.214	9.004	0.787	11.6
HARDNESS, NONCARBONATE	12	5.8	3.8	0	14	12	0.020	2.904	0.346*	3.7
TURBIDITY (JTU)	12	104.6	79.8	35	290	12	-0.199	133.657	-0.164*	82.5
FLOURIDE, DISSOLVED	12	0.34	0.26	0.0	0.9	12	-0.0001	0.3549	-0.023*	0.27

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.04	9.19	2.77	88	2.85

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07290000 -- BIG BLACK RIVER NR BOVINA, MS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	6	4	0	2
CADMIUM (CD), UG/L	4	1	3	4	0	3
CHROMIUM (CR), UG/L	4	< 10	20	4	0	0
COBALT (CO), UG/L	4	1	5	4	0	1
COPPER (CU), UG/L	4	9	18	4	8	22
IRON (FE), UG/L	4	630	5200	4	60	380
LEAD (PB), UG/L	4	10	28	4	3	6
MANGANESE (MN), UG/L	4	150	510	4	90	300
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	130	4	40	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	4.7	10.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07292500 NAME: HOMOCHITTO RIVER AT ROSETTA, MS.

LAT 31D19M20S LONG 091D06M20S
DRAINAGE AREA: 750 SQ MI (1943 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, -B-	CONSTANT, -B-	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.61	7.48	9.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	77.7	20.8	44	120					
STREAMFLOW (CUBIC FT/SEC)	12	1250.8	884.6	150	2900	12	-30.027	3582.902	-0.706	657.5
PH (STANDARD UNITS)	12	6.37	0.38	5.9	7.1	12	0.0120	5.4375	0.651	0.30
PHOSPHORUS, TOTAL	12	0.055	0.056	0.01	0.19	12	-0.00076	0.11432	-0.286 *	0.056
NITRITE + NITRATE, TOTAL	12	0.046	0.024	0.01	0.10	12	-0.00053	0.08712	-0.462 *	0.022
NITROGEN, KJELDAHL, TOTAL	11	0.308	0.263	0.08	0.97	11	-0.00517	0.70879	-0.428 *	0.251
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	631.5	536.0	59	1600	12	4.887	251.915	0.190 *	552.0
SEDIMENT, SUSPENDED	9	299.3	310.1	56	909					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	7	6077.6	12844.9	100	35000					
STREPTOCOCCI, FECAL (COL/100 ML)	7	1341.7	858.1	175	2800					
SILICA, DISSOLVED	12	12.95	1.74	8.4	14.0	12	0.0553	8.6587	0.662	1.36
CALCIUM, DISSOLVED	12	4.13	1.56	2.2	6.8	12	0.0528	0.0327	0.702	1.17
MAGNESIUM, DISSOLVED	12	1.22	0.42	0.5	2.0	12	0.0105	0.3985	0.517 *	0.38
SODIUM, DISSOLVED	12	8.37	2.61	4.3	13.0	12	0.0997	0.6198	0.795	1.66
POTASSIUM, DISSOLVED	12	1.31	0.27	1.0	1.9	12	-0.0014	1.4157	-0.106 *	0.28
BICARBONATE, ION	12	15.3	4.8	7	27	12	0.197	-0.001	0.850	2.7
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	3.82	2.06	2.1	9.8	12	-0.0050	4.2106	-0.050 *	2.16
CHLORIDE, DISSOLVED	12	12.59	4.43	5.8	20.0	12	0.1589	0.2494	0.746	3.10
DISSOLVED SOLIDS, SUM OF CONST	12	52.3	11.1	33	72	12	0.467	15.971	0.872	5.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	54.8	19.6	12	80	12	0.409	23.043	0.435 *	18.5
HARDNESS, TOTAL	12	15.4	4.8	8	23	12	0.175	1.793	0.766	3.2
HARDNESS, NONCARBONATE	12	2.7	3.3	0	12	12	0.017	1.365	0.105 *	3.5
TURBIDITY (JTU)	12	36.7	40.3	10	130	12	-1.338	140.573	-0.690	30.6
FLOURIDE, DISSOLVED	12	0.19	0.24	0.0	0.9	12	-0.0062	0.6710	-0.536 *	0.21

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	20.73	9.47	2.76	89	2.69

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07292500 -- HOMOCHITTO RIVER AT ROSETTA, MS.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	5	4	0	0
CADMIUM (CD), UG/L	4	0	3	4	0	2
CHROMIUM (CR), UG/L	4	< 10	10	4	0	0
COBALT (CO), UG/L	4	0	5	4	0	3
COPPER (CU), UG/L	4	3	14	4	1	13
IRON (FE), UG/L	4	1200	4500	4	60	180
LEAD (PB), UG/L	4	4	35	4	1	10
MANGANESE (MN), UG/L	4	150	240	4	95	200
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	60	4	20	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	3.7	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07297910 NAME: PDTF RED RIVER NEAR WAYSIDE, TEX.

LAT 34D50M15S LONG 101D24M49S
DRAINAGE AREA: 4211 SQ MI (10906 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	16.36	7.56	5.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	6886.1	4177.4	521	12000					
STREAMFLOW (CUBIC FT/SEC)	11	32.8	68.2	0.28	184	11	-0.012	118.714	-0.764	46.3
PH (STANDARD UNITS)	11	8.03	0.18	7.6	8.3	11	0.0000	7.9427	0.278 *	0.19
PHOSPHORUS, TOTAL	11	0.453	0.880	0.00	2.80	11	-0.00017	1.60902	-0.798	0.559
NITRITE + NITRATE, TOTAL	10	0.392	0.638	0.00	2.00	10	-0.00012	1.15041	-0.772	0.430
NITROGEN, KJELDAHL, TOTAL	11	1.710	2.434	0.08	6.70	11	-0.00051	5.21353	-0.873	1.251
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	6942.7	11505.4	570	37000	11	-1.969	20501.133	-0.715	8480.1
SEDIMENT, SUSPENDED	11	4680.0	9342.5	2	28500					
SEDIMENT, CLAY-SILT (PERCENT)	10	78.6	28.7	20	100					
COLIFORM, FECAL (COL/100 ML)	11	11783.3	21245.8	4	54000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	9982.7	17621.2	12	45000					
SILICA, DISSOLVED	11	20.45	7.01	8.8	26.0	11	0.0015	10.0848	0.898	3.25
CALCIUM, DISSOLVED	11	378.64	216.94	31.0	570.0	11	0.0497	36.3723	0.957	66.28
MAGNESIUM, DISSOLVED	11	82.99	47.43	6.2	130.0	11	0.0110	7.2254	0.969	12.34
SODIUM, DISSOLVED	11	1109.27	708.70	62.0	2000.0	11	0.1690	-54.5222	0.996	64.98
POTASSIUM, DISSOLVED	11	21.85	12.76	4.0	40.0	11	0.0030	1.2138	0.981	2.59
BICARBONATE, ION	11	143.3	22.3	101	174	11	0.004	114.058	0.796	14.2
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	1252.73	689.20	130.0	1800.0	11	0.1578	166.2239	0.956	212.29
CHLORIDE, DISSOLVED	11	1592.27	1090.25	17.0	3000.0	11	0.2595	-194.9426	0.994	120.87
DISSOLVED SOLIDS, SUM OF CONST	11	4533.1	2738.3	320	7640	11	0.654	29.227	0.998	192.2
DISSOLVED SOLIDS, ROE 180 DEG C	11	4724.5	2839.3	332	7980	11	0.678	57.207	0.997	223.8
HARDNESS, TOTAL	11	1297.3	742.8	100	1900	11	0.171	121.687	0.960	219.0
HARDNESS, NONCARBONATE	11	1172.5	723.6	8	1800	11	0.166	32.013	0.956	223.3
TURBIDITY (JTU)	11	2511.1	5398.1	1	17500	11	-0.915	8813.191	-0.708	4017.0
FLOURIDE, DISSOLVED	9	1.09	0.24	0.6	1.5	9	0.0000	0.8030	0.633 *	0.20

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 325

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	29900	26400	19900	14200	11200	8790	5880	1820	792	30236

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
324	18.89	10.52	2.84	74	4.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07297910 -- PDTF RED RIVER NEAR WAYSIDE, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	240	4	3	7
CADMIUM (CD), UG/L	4	< 10	20	4	0	<1
CHROMIUM (CR), UG/L	4	10	290	4	0	10
COBALT (CO), UG/L	4	< 50	250	4	0	0
COPPER (CU), UG/L	4	10	360	4	0	20
IRON (FE), UG/L	4	60	180000	4	0	1700
LEAD (PB), UG/L	4	< 100	400	4	0	3
MANGANESE (MN), UG/L	3	110	2900	4	5	130
MERCURY (HG), UG/L	4	0.1	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	5	4	1	5
ZINC (ZN), UG/L	4	20	790	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	4.59	6.79			
BIOMASS, ASH WT., G/SQ M	3	3.79	5.50			
CHLOROPHYLL A, MG/SQ M	3	.6	3.0			
CHLOROPHYLL B, MG/SQ M	3	.0	.5			
ORGANIC CARBON, MG/L	3	.5	110.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07300000 NAME: SALT FORK RED RIVER NR WELLINGTON, TX

LAT 34D57M27S LONG 100D13M14S
DRAINAGE AREA: 1222 SQ MI (3165 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	17.46	9.34	2.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	2953.1	378.2	2270	3330					
STREAMFLOW (CUBIC FT/SEC)	13	25.1	27.7	0	105	13	0.010	-3.639	0.133*	28.7
PH (STANDARD UNITS)	13	7.88	0.22	7.5	8.3	13	0.0000	7.8135	0.042*	0.23
PHOSPHORUS, TOTAL	12	0.068	0.075	0.01	0.24	12	-0.00015	0.52633	-0.675	0.058
NITRITE + NITRATE, TOTAL	12	0.962	0.371	0.43	1.40	12	0.00086	-1.62655	0.769	0.249
NITROGEN, KJELDAHL, TOTAL	12	0.583	0.398	0.13	1.40	12	-0.00070	2.69905	-0.586	0.338
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3673.3	3110.1	600	12000	12	-0.386	4835.512	-0.041*	3259.1
SEDIMENT, SUSPENDED	12	242.8	298.9	23	1000					
SEDIMENT, CLAY-SILT (PERCENT)	12	66.3	28.9	17	94					
COLIFORM, FECAL (COL/100 ML)	12	850.8	1788.2	6	6100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1477.2	2841.3	31	10000					
SILICA, DISSOLVED	13	19.08	1.66	15.0	22.0	13	-0.0011	22.4379	-0.260*	1.67
CALCIUM, DISSOLVED	13	402.31	103.86	250.0	540.0	13	0.2604	-366.7568	0.948	34.43
MAGNESIUM, DISSOLVED	13	79.69	10.23	59.0	95.0	13	0.0237	9.6845	0.876	5.15
SODIUM, DISSOLVED	13	213.85	20.63	180.0	240.0	13	0.0281	130.9928	0.514*	18.48
POTASSIUM, DISSOLVED	13	5.14	0.85	3.9	6.7	13	-0.0016	9.9239	-0.723	0.61
BICARBONATE, ION	13	193.8	16.0	164	215	13	0.014	151.675	0.338*	15.7
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	1163.85	270.02	750.0	1600.0	13	0.6770	-835.2917	0.948	89.67
CHLORIDE, DISSOLVED	13	291.54	33.13	240.0	350.0	13	0.0652	99.0795	0.744	23.12
DISSOLVED SOLIDS, SUM OF CONST	13	2271.5	407.4	1600	2810	13	1.057	-849.248	0.981	82.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	2481.7	382.5	1710	2900	12	1.139	-948.225	0.988	61.0
HARDNESS, TOTAL	13	1341.5	303.8	870	1700	13	0.775	-947.407	0.965	83.3
HARDNESS, NONCARBONATE	13	1160.8	279.1	710	1500	13	0.713	-944.742	0.966	75.3
TURBIDITY (JTU)	12	76.8	114.3	3	400	12	-0.182	625.832	-0.530*	101.6
FLOURIDE, DISSOLVED	11	0.65	0.10	0.5	0.8	11	-0.0002	1.2001	-0.710	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	3520	3430	3390	3330	3270	3170	3040	2650	2400	1410

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
322	19.44	11.47	2.80	74	4.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07300000 -- SALT FORK RED RIVER NR WELLINGTON, TX

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	18	4	0	4
CADMIUM (CD), UG/L	4	< 10	< 10	3	0	0
CHROMIUM (CR), UG/L	4	0	40	3	0	10
COBALT (CO), UG/L	4	< 50	< 50	3	0	2
COPPER (CU), UG/L	4	10	20	3	0	1
IRON (FE), UG/L	4	60	14000	3	10	40
LEAD (PB), UG/L	4	< 100	< 100	3	0	1
MANGANESE (MN), UG/L	3	40	520	3	10	40
MERCURY (HG), UG/L	4	0.0	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	4	3	11	4	0	8
ZINC (ZN), UG/L	4	20	230	3	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.3	70.00			
BIOMASS, ASH WT., G/SQ M	4	1.5	65.00			
CHLOROPHYLL A, MG/SQ M	4	.2	8.7			
CHLOROPHYLL B, MG/SQ M	4	.0	1.1			
ORGANIC CARBON, MG/L	4	.9	12.0			

Table 14,--Summary of measurements at each station--Continued

STATION NUMBER: 07305000 NAME: NORTH FORK RED RIVER NR HEADRICK, OK

LAT 34D38M04S LONG 099D05M47S
DRAINAGE AREA: 4244 SQ MI (10992 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	19.05	9.12	4.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	43	5240.8	2542.9	706	11300					
STREAMFLOW (CUBIC FT/SEC)	48	622.0	1476.0	24	7840	43	-0.213	1799.014	-0.350	1469.5
PH (STANDARD UNITS)	46	7.98	0.37	7.2	8.8	42	0.0001	7.7030	0.357	0.35
PHOSPHORUS, TOTAL	12	0.138	0.126	0.02	0.48	9	-0.00003	0.29431	-0.488 *	0.129
NITRITE + NITRATE, TOTAL	19	0.703	0.420	0.00	1.50	14	-0.00007	1.06736	-0.379 *	0.409
NITROGEN, KJELDAHL, TOTAL	16	1.310	0.891	0.47	3.00	13	-0.00011	1.96457	-0.275 *	0.928
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	6956.3	6880.0	350	22000	7	-1.158	11798.363	-0.361 *	7561.1
SEDIMENT, SUSPENDED	8	469.8	540.5	42	1440					
SEDIMENT, CLAY-SILT (PERCENT)	8	83.0	33.3	1	99					
COLIFORM, FECAL (COL/100 ML)	5	385.4	371.6	11	850					
STREPTOCOCCI, FECAL (COL/100 ML)	6	178.0	171.5	20	453					
SILICA, DISSOLVED	12	7.67	2.57	1.6	11.0	9	0.0003	5.6321	0.279 *	2.87
CALCIUM, DISSOLVED	46	250.28	97.49	40.0	410.0	41	0.0296	93.1331	0.788	60.34
MAGNESIUM, DISSOLVED	45	76.22	35.40	8.2	180.0	40	0.0092	25.3733	0.716	23.33
SODIUM, DISSOLVED	45	909.27	520.64	54.0	2200.0	41	0.1709	-27.1460	0.867	255.13
POTASSIUM, DISSOLVED	42	8.90	1.81	5.3	13.0	37	0.0003	7.3213	0.338	1.66
BICARBONATE, ION	48	203.7	59.5	98	309	43	0.008	158.031	0.344	58.4
CARBONATE, ION	46	0.0	0.0	0	0	42	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	48	713.63	280.72	44.0	1100.0	43	0.0885	233.4089	0.773	187.23
CHLORIDE, DISSOLVED	46	1479.35	806.42	100.0	3600.0	41	0.2759	-44.2559	0.900	348.64
DISSOLVED SOLIDS, SUM OF CONST	10	3786.0	1520.1	1200	6290	8	0.163	2549.796	0.335 *	1171.7
DISSOLVED SOLIDS, ROE 180 DEG C	46	3796.5	1746.7	316	7530	41	0.592	436.462	0.856	916.6
HARDNESS, TOTAL	44	920.5	359.6	130	1400	39	0.110	338.942	0.789	222.5
HARDNESS, NONCARBONATE	44	740.0	349.5	46	1300	39	0.101	199.656	0.755	229.5
TURBIDITY (JTU)	12	125.1	238.3	3	700	9	-0.059	436.235	-0.526 *	243.6
FLOURIDE, DISSOLVED	12	0.34	0.12	0.1	0.6	9	0.0000	0.3444	0.000 *	0.15

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 362

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	11300	9010	8590	8120	7470	6160	4930	2800	2200	1590

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	16.14	11.54	2.98	87	3.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07305000 -- NORTH FORK RED RIVER NR HEADRICK, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	4	24	4	2	10
CADMIUM (CD), UG/L	4	<10	10	4	0	8
CHROMIUM (CR), UG/L	4	0	50	4	0	20
COBALT (CO), UG/L	4	0	100	4	0	0
COPPER (CU), UG/L	4	20	50	4	4	50
IRON (FE), UG/L	4	810	36000	4	20	130
LEAD (PB), UG/L	4	< 100	100	4	1	14
MANGANESE (MN), UG/L	5	60	760	4	20	60
MERCURY (HG), UG/L	3	0.0	0.9	4	0.0	0.6
SELENIUM (SE), UG/L	4	2	3	4	1	2
ZINC (ZN), UG/L	4	80	770	4	0	460
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	7	3.7	24.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07308500 NAME: RED RIVER NR BURKBURNETT, TX

LAT 34D06M30S LONG 098D32M00S
DRAINAGE AREA: 20570 SQ MI (53276 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	17.47	8.05	6.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	6503.3	2407.5	1030	10200					
STREAMFLOW (CUBIC FT/SEC)	16	1775.3	2390.7	257	9230	15	-0.815	7156.355	-0.800	1526.7
PH (STANDARD UNITS)	15	7.84	0.20	7.6	8.2	15	0.0000	7.7480	0.171 *	0.20
PHOSPHORUS, TOTAL	12	0.263	0.239	0.06	0.92	12	-0.00010	0.99376	-0.789	0.154
NITRITE + NITRATE, TOTAL	12	0.352	0.421	0.00	0.94	12	0.00002	0.20459	0.090 *	0.440
NITROGEN, KJELDAHL, TOTAL	12	1.595	0.858	0.81	3.20	12	-0.00032	3.87562	-0.685	0.656
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	39484.5	42119.1	130	120000	11	0.544	35521.172	0.025 *	44382.9
SEDIMENT, SUSPENDED	10	1554.3	2178.4	148	7460					
SEDIMENT, CLAY-SILT (PERCENT)	10	46.6	26.4	10	90					
COLIFORM, FECAL (COL/100 ML)	12	335.2	534.2	0	1800					
STREPTOCOCCI, FECAL (COL/100 ML)	12	929.3	1499.4	10	4000					
SILICA, DISSOLVED	15	8.90	3.12	2.8	15.0	15	-0.0001	9.6116	-0.084 *	3.23
CALCIUM, DISSOLVED	15	308.87	102.92	63.0	440.0	15	0.0407	44.1201	0.952	32.60
MAGNESIUM, DISSOLVED	15	84.27	33.91	14.0	120.0	15	0.0132	-1.5700	0.937	12.28
SODIUM, DISSOLVED	15	1016.00	421.93	120.0	1700.0	15	0.1739	-115.0989	0.992	53.93
POTASSIUM, DISSOLVED	15	10.59	2.14	6.4	14.0	15	0.0004	8.0979	0.431 *	2.00
BICARBONATE, ION	15	167.5	49.6	96	272	15	0.010	101.082	0.495 *	44.7
CARBONATE, ION	15	0.0	0.0	0	0	15	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	15	867.33	318.76	110.0	1200.0	15	0.1255	51.3789	0.948	105.67
CHLORIDE, DISSOLVED	15	1624.00	669.24	190.0	2800.0	15	0.2764	-173.6475	0.994	73.65
DISSOLVED SOLIDS, SUM OF CONST	15	4004.3	1535.5	574	6400	15	0.635	-126.972	0.996	142.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	4619.2	1184.7	2110	6500	12	0.622	117.023	0.980	249.0
HARDNESS, TOTAL	15	1116.7	388.9	220	1600	15	0.155	106.260	0.962	110.7
HARDNESS, NONCARBONATE	15	980.7	370.6	120	1400	15	0.147	26.140	0.954	115.8
TURBIDITY (JTU)	12	340.0	489.9	35	1500	12	-0.185	1680.045	-0.705	364.3
FLOURIDE, DISSOLVED	13	0.39	0.10	0.2	0.6	13	0.0000	0.2208	0.600	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	10000	9670	9070	8670	8330	7280	6230	4000	2980	1210

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
280	17.22	10.81	2.84	84	3.32

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07308500 -- RED RIVER NR BURKBURNETT, TX

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	5	19	4	3	7
CADMIUM (CD), UG/L	4	<10	10	4	0	4
CHROMIUM (CR), UG/L	4	0	50	4	0	10
COBALT (CO), UG/L	4	<50	100	4	0	3
COPPER (CU), UG/L	4	<10	60	4	1	80
IRON (FE), UG/L	4	1500	34000	4	20	6700
LEAD (PB), UG/L	4	<100	100	4	0	50
MANGANESE (MN), UG/L	4	130	1200	4	0	50
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	1	3	4	1	2
ZINC (ZN), UG/L	4	60	190	4	0	120
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	6.29				
BIOMASS, ASH WT., G/SQ M	1	2.19				
CHLOROPHYLL A, MG/SQ M	1	.1				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	4	10.0	30.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07331000 NAME: WASHITA RIVER NR DURWOOD, OK

LAT 34D14M03S LONG 096D58M32S
DRAINAGE AREA: 7202 SQ MI (18653 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	18.50	7.44	5.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	895.2	378.7	248	1400					
STREAMFLOW (CUBIC FT/SEC)	18	3668.9	5759.3	404	24800	16	-9.847	12520.477	-0.611	4967.4
PH (STANDARD UNITS)	17	8.08	0.42	7.4	8.9	15	0.0003	7.8469	0.232 *	0.46
PHOSPHORUS, TOTAL	11	0.292	0.138	0.13	0.47	9	-0.00035	0.61105	-0.863	0.076
NITRITE + NITRATE, TOTAL	14	0.388	0.215	0.01	0.69	12	-0.00013	0.52566	-0.244 *	0.202
NITROGEN, KJELDAHL, TOTAL	14	1.458	0.917	0.41	4.10	12	-0.00138	2.72471	-0.492 *	0.904
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	18658.9	28565.7	730	76000	7	44.708	-18524.543	0.458 *	30633.0
SEDIMENT, SUSPENDED	6	780.2	522.0	135	1420					
SEDIMENT, CLAY-SILT (PERCENT)	6	79.5	35.0	11	100					
COLIFORM, FECAL (COL/100 ML)	2	1145.0	360.6	890	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	6	450.3	767.4	40	2000					
SILICA, DISSOLVED	11	9.29	1.60	6.8	13.0	9	0.0029	6.4142	0.585 *	1.53
CALCIUM, DISSOLVED	15	93.93	35.46	35.0	150.0	13	0.0984	8.7260	0.986	6.66
MAGNESIUM, DISSOLVED	17	37.46	17.14	6.9	68.0	15	0.0455	-3.5707	0.932	6.87
SODIUM, DISSOLVED	16	50.81	24.03	13.0	89.0	14	0.0647	-6.0934	0.940	8.94
POTASSIUM, DISSOLVED	13	4.68	1.12	3.2	7.0	11	-0.0004	4.9462	-0.116 *	1.26
BICARBONATE, ION	17	250.0	71.1	130	380	15	0.184	86.228	0.908	32.9
CARBONATE, ION	17	0.0	0.0	0	0	15	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	17	205.06	113.19	18.0	400.0	15	0.2942	-62.3555	0.917	49.77
CHLORIDE, DISSOLVED	17	66.06	31.59	17.0	110.0	15	0.0765	-3.8441	0.922	12.47
DISSOLVED SOLIDS, SUM OF CONST	9	594.2	237.7	294	924	7	0.722	-51.103	0.950	92.3
DISSOLVED SOLIDS, ROE 180 DEG C	16	660.5	242.8	214	1000	14	0.722	-20.279	0.948	85.8
HARDNESS, TOTAL	15	380.7	157.6	120	600	13	0.432	6.795	0.973	40.8
HARDNESS, NONCARBONATE	15	183.3	111.2	9	410	13	0.280	-61.380	0.899	54.0
TURBIDITY (JTU)	11	225.1	200.3	2	570	9	-0.433	646.006	-0.746	145.0
FLOURIDE, DISSOLVED	11	0.32	0.06	0.2	0.4	9	0.0001	0.2245	0.533 *	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1580	1500	1440	1320	1230	1030	848	551	472	374

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	19.63	10.35	2.78	87	2.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07331000 -- WASHITA RIVER NR DURWOOD, OK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	4	26	3	3	8
CADMIUM (CD), UG/L	3	10	10	3	0	4
CHROMIUM (CR), UG/L	3	0	40	3	0	0
COBALT (CO), UG/L	3	<50	100	3	0	3
COPPER (CU), UG/L	3	20	50	3	2	40
IRON (FE), UG/L	3	3700	26000	3	20	2800
LEAD (PB), UG/L	3	< 100	100	3	2	17
MANGANESE (MN), UG/L	3	130	1100	3	0	810
MERCURY (HG), UG/L	3	0.1	0.2	3	0.1	0.1
SELENIUM (SE), UG/L	2	0	1	3	0	0
ZINC (ZN), UG/L	3	70	440	3	0	370
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	5	5.5	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07331600 NAME: RED RIVER AT DENISON DAM NR DENISON, TX

LAT 33D49M08S LONG 096D33M47S
DRAINAGE AREA: 39720 SQ MI (102875 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	16.58	6.15	9.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	1328.5	143.7	1100	1550					
STREAMFLOW (CUBIC FT/SEC)	12	10509.2	9786.1	2850	37700	12	19.172	-15325.078	0.258 *	9915.3
PH (STANDARD UNITS)	12	7.76	0.22	7.3	8.1	12	0.0012	6.1622	0.712	0.16
PHOSPHORUS, TOTAL	12	0.033	0.015	0.02	0.06	12	-0.00006	0.11508	-0.534 *	0.013
NITRITE + NITRATE, TOTAL	12	0.105	0.052	0.02	0.19	12	0.00002	0.08280	0.042 *	0.055
NITROGEN, KJELDAHL, TOTAL	12	0.515	0.178	0.13	0.86	12	0.00003	0.46963	0.025 *	0.187
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10555.8	10432.8	270	28000	12	-22.016	40222.215	-0.278 *	10509.9
SEDIMENT, SUSPENDED	12	7.4	4.6	3	18					
SEDIMENT, CLAY-SILT (PERCENT)	12	85.7	9.4	70	98					
COLIFORM, FECAL (COL/100 ML)	12	50.0	98.6	0	300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	41.6	60.2	0	160					
SILICA, DISSOLVED	12	3.89	1.73	0.7	5.6	12	-0.0099	17.1982	-0.755	1.19
CALCIUM, DISSOLVED	12	81.17	6.93	72.0	92.0	12	0.0371	31.2379	0.705	5.15
MAGNESIUM, DISSOLVED	12	23.08	1.78	21.0	27.0	12	0.0033	18.6965	0.241 *	1.81
SODIUM, DISSOLVED	12	159.17	21.93	130.0	200.0	12	0.1610	-57.7149	0.968	5.81
POTASSIUM, DISSOLVED	12	5.67	1.24	4.7	9.0	12	-0.0022	8.6558	-0.236 *	1.26
BICARBONATE, ION	12	154.8	14.9	131	176	12	-0.011	169.032	-0.094 *	15.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	158.33	18.01	130.0	190.0	12	0.1284	-14.6777	0.940	6.44
CHLORIDE, DISSOLVED	12	248.33	38.10	200.0	310.0	12	0.2790	-127.6342	0.966	10.39
DISSOLVED SOLIDS, SUM OF CONST	12	756.6	79.7	647	886	12	0.592	-40.848	0.979	17.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	795.4	89.4	630	941	12	0.640	-67.102	0.944	30.8
HARDNESS, TOTAL	12	297.5	21.8	270	330	12	0.103	158.494	0.624	17.9
HARDNESS, NONCARBONATE	12	170.8	18.8	130	200	12	0.125	2.934	0.873	9.6
TURBIDITY (JTU)	12	2.2	1.0	1	4	12	0.002	-0.335	0.238 *	1.0
FLOURIDE, DISSOLVED	10	0.25	0.05	0.2	0.3	10	-0.0001	0.4100	-0.252 *	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 357

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1560	1540	1520	1450	1440	1370	1320	1200	1170	1150

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
232	17.08	11.29	2.44	98	1.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07331600 -- RED RIVER AT DENISON DAM NR DENISON, TX

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	4	4	1	3
CADMIUM (CD), UG/L	4	<10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	<10	20	4	0	3
IRON (FE), UG/L	4	20	350	4	10	80
LEAD (PB), UG/L	4	<100	< 100	4	0	2
MANGANESE (MN), UG/L	4	10	160	4	0	140
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	80	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	3.3	6.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07344410 NAME: RED RIVER AB SHREVEPORT

LAT 32D32M57S LONG 093D45M51S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	26	19.23	7.96	6.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	26	579.0	256.3	213	1020					
STREAMFLOW (CUBIC FT/SEC)	26	44096.2	37521.3	3800	133000	26	-84.714	93145.438	-0.579	31234.0
PH (STANDARD UNITS)	26	7.67	0.21	7.3	8.1	26	0.0004	7.4431	0.474	0.19
PHOSPHORUS, TOTAL	24	0.140	0.073	0.02	0.33	24	-0.00011	0.20119	-0.353*	0.070
NITRITE + NITRATE, TOTAL	25	0.128	0.119	0.00	0.53	25	-0.00011	0.19140	-0.234*	0.118
NITROGEN, KJELDAHL, TOTAL	25	0.739	0.264	0.22	1.30	25	-0.00027	0.88825	-0.247*	0.262
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	18311.7	42339.8	440	150000	12	76.036	-25656.059	0.524*	37834.8
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	23	397.7	732.4	5	3400					
STREPTOCOCCI, FECAL (COL/100 ML)	23	329.4	446.5	5	2000					
SILICA, DISSOLVED	26	5.64	1.83	0.5	8.4	26	-0.0020	6.8184	-0.285*	1.79
CALCIUM, DISSOLVED	23	40.83	15.33	21.0	72.0	23	0.0600	8.2950	0.963	4.23
MAGNESIUM, DISSOLVED	23	9.93	5.15	4.1	20.0	23	0.0204	-1.1233	0.973	1.21
SODIUM, DISSOLVED	21	48.48	29.51	10.0	110.0	21	0.1133	-12.5738	0.988	4.62
POTASSIUM, DISSOLVED	22	3.05	0.63	2.2	4.7	22	0.0021	1.9006	0.853	0.33
BICARBONATE, ION	25	118.7	41.2	65	216	25	0.133	42.911	0.831	23.4
CARBONATE, ION	23	0.0	0.0	0	0	23	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	26	54.04	28.78	13.0	110.0	26	0.1018	-4.8853	0.906	12.42
CHLORIDE, DISSOLVED	25	78.20	43.09	12.0	170.0	25	0.1694	-17.4220	0.985	7.59
DISSOLVED SOLIDS, SUM OF CONST	19	273.2	132.6	118	559	19	0.537	1.632	0.997	9.8
DISSOLVED SOLIDS, ROE 180 DEG C	26	333.7	158.8	128	618	26	0.616	-23.001	0.995	16.9
HARDNESS, TOTAL	23	142.7	58.6	73	260	23	0.232	17.057	0.972	14.1
HARDNESS, NONCARBONATE	23	56.6	50.0	1	220	23	0.164	-32.193	0.806	30.3
TURBIDITY (JTU)	26	73.8	55.4	10	260	26	-0.122	144.716	-0.566	46.6
FLOURIDE, DISSOLVED	26	0.19	0.09	0.0	0.3	26	0.0001	0.1060	0.402*	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 362

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1181	1080	984	886	698	538	403	290	242	211

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
346	19.78	9.46	2.75	90	2.22

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07344410 -- RED RIVER AB SHREVEPORT

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	26	1	10	13	0	2
CADMIUM (CD), UG/L	26	0	4	14	0	2
CHROMIUM (CR), UG/L	25	2	30	13	0	1
COBALT (CO), UG/L	25	0	22	14	0	3
COPPER (CU), UG/L	25	2	23	14	1	9
IRON (FE), UG/L	26	540	25000	14	0	110
LEAD (PB), UG/L	25	0	22	14	0	4
MANGANESE (MN), UG/L	25	100	690	13	0	160
MERCURY (HG), UG/L	26	0.0	0.7	12	0.0	0.3
SELENIUM (SE), UG/L	25	0	1	13	0	1
ZINC (ZN), UG/L	26	4	140	14	0	90
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	26	4.0	26.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07355500 NAME: RED R AT ALEXANDRIA

LAT 31D18M46S LONG 092D26M34S
DRAINAGE AREA: 67500 SQ MI (174825 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	18.14	8.01	8.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	462.2	242.5	209	1010					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.57	0.28	7.2	8.2	12	0.0004	7.3696	0.380 *	0.27
PHOSPHORUS, TOTAL	11	0.221	0.118	0.12	0.54	11	-0.00007	0.25341	-0.142 *	0.123
NITRITE + NITRATE, TOTAL	12	0.132	0.090	0.01	0.33	12	0.00007	0.10051	0.186 *	0.093
NITROGEN, KJELDAHL, TOTAL	12	0.812	0.198	0.48	1.10	12	0.00004	0.79147	0.054 *	0.207
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5795.3	13377.9	44	48000	12	17.196	-2152.266	0.312 *	13331.6
SEDIMENT, SUSPENDED	28	1144.4	965.6	111	4210					
SEDIMENT, CLAY-SILT (PERCENT)	28	81.6	8.7	60	95					
COLIFORM, FECAL (COL/100 ML)	12	1922.5	1309.9	380	5000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	600.5	562.3	10	1900					
SILICA, DISSOLVED	12	5.93	1.36	2.4	7.6	12	-0.0000	5.9403	-0.003 *	1.42
CALCIUM, DISSOLVED	12	34.42	15.32	18.0	66.0	12	0.0622	5.6669	0.985	2.79
MAGNESIUM, DISSOLVED	12	8.47	4.52	3.9	18.0	12	0.0181	0.1184	0.970	1.15
SODIUM, DISSOLVED	11	42.00	30.11	15.0	110.0	11	0.1180	-12.1431	0.996	2.96
POTASSIUM, DISSOLVED	12	2.82	0.63	2.2	4.4	12	0.0024	1.7148	0.931	0.24
BICARBONATE, ION	11	92.5	30.5	58	148	11	0.106	43.410	0.885	15.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	42.50	29.89	11.0	110.0	12	0.1212	-13.5104	0.983	5.73
CHLORIDE, DISSOLVED	12	64.83	44.73	20.0	170.0	12	0.1832	-19.8448	0.993	5.44
DISSOLVED SOLIDS, SUM OF CONST	10	247.0	149.6	116	554	10	0.558	-9.384	0.999	5.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	275.6	155.3	114	605	11	0.630	-26.764	0.997	12.4
HARDNESS, TOTAL	12	120.6	57.3	64	240	12	0.232	13.240	0.982	11.3
HARDNESS, NONCARBONATE	11	44.3	36.0	16	120	11	0.140	-20.343	0.986	6.4
TURBIDITY (JTU)	12	101.7	55.7	45	250	12	-0.033	116.951	-0.144 *	57.8
FLOURIDE, DISSOLVED	12	0.18	0.08	0.0	0.3	12	0.0002	0.0701	0.711	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 344

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	906	764	708	571	468	346	288	226	216	189

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
331	19.28	9.97	2.76	92	2.12

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07355500 -- RED R AT ALEXANDRIA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	7	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	0
CHROMIUM (CR), UG/L	4	< 10	20	4	0	1
COBALT (CO), UG/L	4	7	14	4	0	3
COPPER (CU), UG/L	4	6	24	4	3	32
IRON (FE), UG/L	4	2700	6200	4	20	80
LEAD (PB), UG/L	4	8	32	4	1	2
MANGANESE (MN), UG/L	4	110	540	4	0	20
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	60	4	4	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	8.0	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07362000 NAME: OUACHITA RIVER AT CAMDEN, ARK.

LAT 33D35M47S LONG 092D49M05S
DRAINAGE AREA: 5391 SQ MI (13963 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	16.05	7.11	7.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	82.7	15.6	62	112					
STREAMFLOW (CUBIC FT/SEC)	10	9386.7	9466.7	957	29700	10	-377.706	40623.008	-0.657	7567.8
PH (STANDARD UNITS)	11	7.02	0.38	6.3	7.4	11	0.0012	6.9148	0.052 *	0.40
PHOSPHORUS, TOTAL	11	0.070	0.080	0.02	0.29	11	0.00246	-0.13358	0.478 *	0.074
NITRITE + NITRATE, TOTAL	11	0.221	0.132	0.10	0.53	11	0.00126	0.11682	0.149 *	0.137
NITROGEN, KJELDAHL, TOTAL	11	0.507	0.155	0.22	0.77	11	0.00055	0.46216	0.055 *	0.163
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	532.0	625.6	120	2200	10	21.741	-1237.699	0.549 *	554.4
SEDIMENT, SUSPENDED	6	126.3	251.4	12	639					
SEDIMENT, CLAY-SILT (PERCENT)	6	84.7	28.4	27	99					
COLIFORM, FECAL (COL/100 ML)	10	235.1	434.1	11	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	10	540.7	1262.3	8	4100					
SILICA, DISSOLVED	11	6.38	1.12	5.0	8.8	11	-0.0248	8.4330	-0.347 *	1.10
CALCIUM, DISSOLVED	11	7.40	1.72	5.2	11.0	11	0.0930	-0.2926	0.843	0.98
MAGNESIUM, DISSOLVED	11	1.47	0.25	1.0	1.9	11	0.0026	1.2587	0.165 *	0.26
SODIUM, DISSOLVED	11	5.66	1.27	3.8	8.6	11	0.0386	2.4730	0.473 *	1.18
POTASSIUM, DISSOLVED	11	1.46	0.48	0.7	2.5	11	0.0154	0.1869	0.502 *	0.44
BICARBONATE, ION	11	19.2	5.9	11	32	11	0.111	10.017	0.294 *	5.9
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	7.90	1.95	5.7	12.0	11	0.0139	6.7519	0.111 *	2.04
CHLORIDE, DISSOLVED	11	7.98	2.68	5.5	14.0	11	0.1518	-4.5800	0.886	1.31
DISSOLVED SOLIDS, SUM OF CONST	11	48.2	6.7	37	60	11	0.354	18.862	0.828	4.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	55.6	8.1	40	67	11	0.325	28.709	0.629	6.6
HARDNESS, TOTAL	11	24.6	4.7	19	34	11	0.237	5.060	0.780	3.1
HARDNESS, NONCARBONATE	11	9.1	4.2	0	14	11	0.137	-2.266	0.513 *	3.8
TURBIDITY (JTU)	11	19.9	12.2	2	40	11	0.255	-1.219	0.326 *	12.2
FLOURIDE, DISSOLVED	11	0.16	0.13	0.1	0.5	11	0.0049	-0.2392	0.592 *	0.11

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07362000 -- OUACHITA RIVER AT CAMDEN, ARK.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	2	5	0	2
CADMIUM (CD), UG/L	5	< 10	10	5	0	2
CHROMIUM (CR), UG/L	5	0	160	5	0	10
COBALT (CO), UG/L	5	< 50	< 50	5	0	2
COPPER (CU), UG/L	5	10	55	5	2	25
IRON (FE), UG/L	5	1100	7200	5	50	870
LEAD (PB), UG/L	5	< 100	< 100	5	0	3
MANGANESE (MN), UG/L	5	80	610	5	40	170
MERCURY (HG), UG/L	4	0.0	0.2	5	0.0	0.2
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	30	90	5	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	8.89	16.00			
BIOMASS, ASH WT., G/SQ M	2	6.79	16.00			
CHLOROPHYLL A, MG/SQ M	2	1.1	12.0			
CHLOROPHYLL B, MG/SQ M	2	.1	3.3			
ORGANIC CARBON, MG/L	5	2.2	7.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07367640 NAME: OUACHITA RIVER AT COLUMBIA, LA.

LAT 32D06M28S LONG 092D04M27S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	19.77	7.99	10.0	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	119.8	35.0	75	171					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	6.62	0.21	6.2	7.0	12	0.0012	6.4739	0.196*	0.22
PHOSPHORUS, TOTAL	12	0.066	0.013	0.04	0.08	12	0.00021	0.04121	0.548*	0.012
NITRITE + NITRATE, TOTAL	12	0.165	0.114	0.06	0.45	12	0.00224	-0.10354	0.687	0.087
NITROGEN, KJELDAHL, TOTAL	11	0.552	0.159	0.34	0.82	11	0.00191	0.31799	0.428*	0.152
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	415.3	423.4	43	1500	12	-0.977	532.188	-0.081*	442.6
SEDIMENT, SUSPENDED	12	39.0	19.5	14	68					
SEDIMENT, CLAY-SILT (PERCENT)	12	68.3	21.7	32	100					
COLIFORM, FECAL (COL/100 ML)	11	664.5	1147.9	120	4000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	184.0	240.1	10	830					
SILICA, DISSOLVED	12	6.35	2.09	2.3	9.0	12	0.0478	0.6246	0.802	1.31
CALCIUM, DISSOLVED	12	6.69	1.56	4.6	10.0	12	0.0392	2.0017	0.877	0.79
MAGNESIUM, DISSOLVED	12	1.54	0.34	1.0	2.0	12	0.0096	0.3938	0.979	0.07
SODIUM, DISSOLVED	11	11.74	4.36	6.2	20.0	11	0.1317	-3.4308	0.987	0.73
POTASSIUM, DISSOLVED	12	1.73	0.36	1.3	2.2	12	0.0074	0.8481	0.718	0.26
BICARBONATE, ION	12	15.5	3.8	11	23	12	0.073	6.724	0.674	2.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.75	1.29	4.8	9.3	12	0.0171	4.6989	0.464*	1.20
CHLORIDE, DISSOLVED	11	20.36	7.50	11.0	36.0	11	0.2247	-5.5146	0.980	1.57
DISSOLVED SOLIDS, SUM OF CONST	11	62.4	17.2	41	91	11	0.522	2.207	0.992	2.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	79.1	22.5	53	136	12	0.519	16.930	0.807	13.9
HARDNESS, TOTAL	12	23.2	5.1	16	33	12	0.137	6.819	0.931	2.0
HARDNESS, NONCARBONATE	12	10.3	4.0	3	18	12	0.079	0.850	0.691	3.0
TURBIDITY (JTU)	12	16.8	3.2	10	20	12	-0.009	17.815	-0.097*	3.4
FLOURIDE, DISSOLVED	12	0.14	0.09	0.0	0.3	12	-0.0000	0.1423	-0.002*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 161

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	271	196	173	139	118	103	94	81	76	72

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07367640 -- OUACHITA RIVER AT COLUMBIA, LA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	< 10	< 10	4	0	0
COBALT (CO), UG/L	4	0	2	4	0	1
COPPER (CU), UG/L	4	1	9	4	2	7
IRON (FE), UG/L	4	1100	2000	4	100	470
LEAD (PB), UG/L	4	3	10	4	0	5
MANGANESE (MN), UG/L	4	50	480	4	22	450
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	50	4	5	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	3.7	6.5			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07369500 NAME: TENSAS RIVER AT TENDAL, LOUISIANA

LAT 32D25M55S LONG 091D22M00S
DRAINAGE AREA: 309 SQ MI (800 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.58	6.83	9.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	264.3	168.5	55	538					
STREAMFLOW (CUBIC FT/SEC)	12	765.3	1036.5	17	3630	12	-4.265	1892.713	-0.693	783.4
PH (STANDARD UNITS)	12	7.30	0.32	6.8	7.9	12	0.0016	6.8882	0.823	0.19
PHOSPHORUS, TOTAL	12	0.309	0.169	0.11	0.58	12	-0.00081	0.52291	-0.807	0.105
NITRITE + NITRATE, TOTAL	12	0.428	0.457	0.14	1.80	12	-0.00064	0.59797	-0.237*	0.466
NITROGEN, KJELDAHL, TOTAL	12	1.052	0.459	0.53	2.20	12	-0.00133	1.40323	-0.487*	0.420
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2412.5	3894.5	110	11000	12	18.075	-2365.383	0.782	2545.6
SEDIMENT, SUSPENDED	12	187.8	155.5	30	461					
SEDIMENT, CLAY-SILT (PERCENT)	12	89.1	14.7	47	99					
COLIFORM, FECAL (COL/100 ML)	10	1136.5	1146.7	30	2800					
STREPTOCOCCI, FECAL (COL/100 ML)	9	3310.1	4459.5	60	14000					
SILICA, DISSOLVED	12	11.18	5.29	4.9	21.0	12	0.0291	3.4870	0.927	2.09
CALCIUM, DISSOLVED	12	28.80	18.89	5.8	59.0	12	0.1107	-0.4589	0.987	3.17
MAGNESIUM, DISSOLVED	12	9.22	6.45	1.4	20.0	12	0.0381	-0.8487	0.996	0.64
SODIUM, DISSOLVED	11	9.58	8.01	1.4	26.0	11	0.0458	-1.8486	0.962	2.31
POTASSIUM, DISSOLVED	12	3.90	1.06	2.0	5.6	12	0.0018	3.4121	0.293*	1.06
BICARBONATE, ION	12	142.8	98.3	28	302	12	0.581	-10.774	0.996	9.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.46	2.66	2.3	9.5	12	0.0057	4.9458	0.363*	2.60
CHLORIDE, DISSOLVED	12	7.74	5.84	1.5	18.0	12	0.0318	-0.6535	0.916	2.46
DISSOLVED SOLIDS, SUM OF CONST	11	141.2	93.7	35	306	11	0.557	2.273	0.999	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	10	146.7	93.9	56	306	10	0.543	16.262	0.989	14.5
HARDNESS, TOTAL	12	110.4	73.6	20	230	12	0.434	-4.265	0.993	9.1
HARDNESS, NONCARBONATE	12	0.5	1.2	0	4	12	-0.003	1.172	-0.345*	1.2
TURBIDITY (JTU)	12	97.2	86.3	6	300	12	-0.399	202.566	-0.779	56.7
FLOURIDE, DISSOLVED	12	0.22	0.09	0.1	0.4	12	0.0003	0.1438	0.496*	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 109

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	640	617	589	539	263	149	126	90	74	57

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
105	19.57	9.74	2.71	85	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07369500 -- TENSAS RIVER AT TENDAL, LOUISIANA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	14	4	2	4
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	<10	4	0	1
COBALT (CO), UG/L	4	0	4	4	0	1
COPPER (CU), UG/L	4	3	19	4	3	10
IRON (FE), UG/L	4	660	20000	4	10	30
LEAD (PB), UG/L	4	4	15	4	1	2
MANGANESE (MN), UG/L	4	230	370	4	40	340
MERCURY (HG), UG/L	4	0.1	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	6	90	4	3	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	5	5.7	17.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07373420 NAME: MISSISSIPPI RIVER NEAR ST. FRANCISVILLE, LA

LAT 30D45M30S LONG 091D23M45S
DRAINAGE AREA: 1243000 SQ MI (3219370 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	14.83	6.24	7.5	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	349.0	76.6	263	475					
STREAMFLOW (CUBIC FT/SEC)	10	594200.0	291382.0	228000	1050000	10	-3365.802	1768864.000	-0.884	144197.1
PH (STANDARD UNITS)	10	7.60	0.28	7.3	8.2	10	0.0028	6.6258	0.756	0.20
PHOSPHORUS, TOTAL	8	0.121	0.066	0.05	0.27	8	-0.00012	0.16212	-0.153 *	0.070
NITRITE + NITRATE, TOTAL	9	0.874	0.329	0.23	1.30	9	-0.00342	2.07656	-0.840	0.191
NITROGEN, KJELDAHL, TOTAL	9	0.506	0.192	0.29	0.88	9	-0.00063	0.72576	-0.265 *	0.197
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	7187.0	10173.4	650	34000	10	-2.033	7896.563	-0.015 *	10789.2
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	311.3	209.9	50	600					
STREPTOCOCCI, FECAL (COL/100 ML)	8	222.5	171.2	40	570					
SILICA, DISSOLVED	9	5.98	0.68	4.8	6.7	9	-0.0081	8.7024	-0.791	0.45
CALCIUM, DISSOLVED	10	35.00	6.16	27.0	45.0	10	0.0775	7.9560	0.963	1.77
MAGNESIUM, DISSOLVED	10	10.32	2.38	7.4	15.0	10	0.0285	0.3688	0.917	1.01
SODIUM, DISSOLVED	9	16.89	6.53	10.0	29.0	9	0.0754	-8.9094	0.899	3.05
POTASSIUM, DISSOLVED	10	2.78	0.46	2.2	3.4	10	0.0051	1.0081	0.851	0.25
BICARBONATE, ION	10	115.4	22.5	90	150	10	0.287	15.260	0.975	5.3
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	46.20	14.38	32.0	80.0	10	0.1736	-14.3829	0.924	5.83
CHLORIDE, DISSOLVED	10	18.80	6.70	13.0	35.0	10	0.0538	0.0166	0.615 *	5.60
DISSOLVED SOLIDS, SUM OF CONST	8	180.0	34.3	142	252	8	0.517	11.872	0.963	10.0
DISSOLVED SOLIDS, ROE 180 DEG C	8	203.9	47.8	154	284	8	0.592	6.176	0.901	22.4
HARDNESS, TOTAL	10	129.8	24.8	98	170	10	0.312	20.989	0.964	7.0
HARDNESS, NONCARBONATE	10	35.3	7.3	24	46	10	0.078	8.163	0.812	4.5
TURBIDITY (JTU)	10	56.0	23.3	20	95	10	-0.211	129.480	-0.692	17.9
FLOURIDE, DISSOLVED	10	0.25	0.16	0.0	0.6	10	0.0003	0.1429	0.142 *	0.17

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	487	450	437	422	405	358	309	278	261	248

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	17.85	11.07	2.62	98	1.18

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07373420 -- MISSISSIPPI RIVER NEAR ST. FRANCISVILLE, LA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	8	0	5	9	0	1
CADMIUM (CD), UG/L	9	0	20	9	0	1
CHROMIUM (CR), UG/L	9	0	20	9	0	1
COBALT (CO), UG/L	9	1	<50	9	0	1
COPPER (CU), UG/L	8	0	10	9	3	8
IRON (FE), UG/L	9	960	7200	10	0	50
LEAD (PB), UG/L	9	0	<100	9	0	4
MANGANESE (MN), UG/L	9	50	290	9	0	70
MERCURY (HG), UG/L	10	0.0	0.5	9	0.0	0.2
SELENIUM (SE), UG/L	9	0	2	9	0	2
ZINC (ZN), UG/L	9	5	50	10	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	15.00				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	10	4.0	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07374508 NAME: MISSISSIPPI RIVER AT NEW ORLEANS, LA.

LAT 29D57M03S LONG 090D08M17S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.54	8.23	7.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	388.0	70.7	257	492					
STREAMFLOW (CUBIC FT/SEC)	12	582500.0	299142.1	197000	1200000	12	-3897.164	2094599.000	-0.921	122442.1
PH (STANDARD UNITS)	12	7.63	0.28	7.1	8.1	12	0.0024	6.6869	0.607	0.24
PHOSPHORUS, TOTAL	12	0.302	0.192	0.13	0.86	12	0.00062	0.06119	0.228*	0.196
NITRITE + NITRATE, TOTAL	12	1.099	0.439	0.30	2.00	12	-0.00222	1.95896	-0.357*	0.430
NITROGEN, KJELDAHL, TOTAL	11	0.733	0.293	0.39	1.40	11	-0.00348	2.12548	-0.715	0.216
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	4052.2	5286.0	240	17000	9	55.870	-16508.090	0.722	3908.8
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	350.0	442.5	100	1500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	368.7	296.3	24	1000					
SILICA, DISSOLVED	11	6.30	0.64	5.0	7.4	11	0.0003	6.1727	0.034*	0.68
CALCIUM, DISSOLVED	12	39.50	5.84	29.0	48.0	12	0.0755	10.2199	0.913	2.49
MAGNESIUM, DISSOLVED	12	10.89	1.94	7.5	14.0	12	0.0235	1.7884	0.857	1.05
SODIUM, DISSOLVED	11	20.64	8.16	9.0	35.0	11	0.1075	-20.4131	0.930	3.16
POTASSIUM, DISSOLVED	12	2.89	0.51	2.0	3.4	12	0.0061	0.5258	0.841	0.29
BICARBONATE, ION	12	120.4	18.5	90	145	12	0.240	27.449	0.916	7.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	50.25	12.80	30.0	76.0	12	0.1685	-15.1182	0.930	4.93
CHLORIDE, DISSOLVED	12	25.25	9.29	11.0	45.0	12	0.1092	-17.1164	0.830	5.43
DISSOLVED SOLIDS, SUM OF CONST	10	204.8	37.3	139	261	10	0.580	-10.106	0.991	5.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	237.7	42.4	145	290	11	0.486	47.107	0.832	24.8
HARDNESS, TOTAL	12	142.5	23.0	100	170	12	0.299	26.397	0.919	9.5
HARDNESS, NONCARBONATE	12	43.4	8.3	26	52	12	0.101	4.242	0.865	4.3
TURBIDITY (JTU)	12	61.3	45.6	5	180	12	-0.031	73.397	-0.048*	47.8
FLOURIDE, DISSOLVED	12	0.51	0.25	0.3	1.1	12	0.0021	-0.2876	0.579	0.21

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 341

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	485	468	458	436	419	370	327	269	254	245

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
337	17.82	11.56	2.56	98	1.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07374508 -- MISSISSIPPI RIVER AT NEW ORLEANS, LA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	4	4	0	2
CADMIUM (CD), UG/L	4	0	20	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	< 50	4	0	1
COPPER (CU), UG/L	4	0	17	4	4	8
IRON (FE), UG/L	4	740	6700	4	0	40
LEAD (PB), UG/L	4	4	< 100	4	1	3
MANGANESE (MN), UG/L	4	40	300	4	0	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	60	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	48.00				
BIOMASS, ASH WT., G/SQ M	2	43.00	120.00			
CHLOROPHYLL A, MG/SQ M	1	11.0				
CHLOROPHYLL B, MG/SQ M	1	1.7				
ORGANIC CARBON, MG/L	4	5.3	7.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07378510 NAME: AMITE R AT 4H CAMP NR DENHAM SPRINGS

LAT 30D26M30S LONG 090D58M20S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.77	6.71	12.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	54.4	10.3	39	76					
STREAMFLOW (CUBIC FT/SEC)	12	1640.1	815.0	446	3020	12	-48.888	4300.391	-0.617	672.8
PH (STANDARD UNITS)	11	6.67	0.38	6.0	7.4	11	0.0183	5.6669	0.520 *	0.34
PHOSPHORUS, TOTAL	12	0.086	0.031	0.05	0.15	12	0.00033	0.06801	0.107 *	0.033
NITRITE + NITRATE, TOTAL	12	0.158	0.072	0.00	0.25	12	-0.00064	0.19303	-0.091 *	0.075
NITROGEN, KJELDAHL, TOTAL	12	0.651	0.411	0.30	1.80	12	0.00543	0.35530	0.136 *	0.428
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1876.4	2163.2	100	6600	11	165.694	-7206.695	0.818	1310.3
SEDIMENT, SUSPENDED	12	109.8	53.2	38	234					
SEDIMENT, CLAY-SILT (PERCENT)	12	80.3	16.9	48	99					
COLIFORM, FECAL (COL/100 ML)	11	1495.2	3828.4	25	13000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	443.6	630.1	20	2100					
SILICA, DISSOLVED	4	11.20	2.14	8.8	13.0	4	0.2316	-0.2633	0.819 *	1.50
CALCIUM, DISSOLVED	4	2.92	0.68	1.9	3.3	4	0.0851	-1.2868	0.938 *	0.29
MAGNESIUM, DISSOLVED	4	1.22	0.19	1.1	1.5	4	-0.0237	2.3974	-0.945 *	0.08
SODIUM, DISSOLVED	3	4.07	0.12	4.0	4.2	3	0.0083	3.6750	0.500 *	0.14
POTASSIUM, DISSOLVED	4	1.82	0.29	1.6	2.2	4	-0.0132	2.4763	-0.346 *	0.33
BICARBONATE, ION	10	15.5	3.7	11	22	10	0.264	0.992	0.806	2.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	2.77	0.95	1.8	4.0	4	-0.1202	8.7238	-0.952 *	0.36
CHLORIDE, DISSOLVED	4	5.52	0.59	4.7	6.0	4	-0.0096	6.0025	-0.123 *	0.72
DISSOLVED SOLIDS, SUM OF CONST	3	36.0	2.0	34	38	3	0.250	24.250	0.866 *	1.4
DISSOLVED SOLIDS, ROE 180 DEG C	3	60.7	11.7	52	74	3	1.095	7.000	0.857 *	8.6
HARDNESS, TOTAL	4	12.5	1.0	11	13	4	0.123	6.421	0.927 *	0.5
HARDNESS, NONCARBONATE	4	1.3	1.5	0	3	4	-0.096	6.026	-0.486 *	1.6
TURBIDITY (JTU)	12	35.0	15.2	15	55	12	-0.632	69.393	-0.427 *	14.4
FLOURIDE, DISSOLVED	4	0.07	0.05	0.0	0.1	4	-0.0044	0.2921	-0.662 *	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 317

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	84	65	59	54	51	47	43	38	35	31

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
324	20.51	6.46	2.86	79	2.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07378510 -- AMITE R AT 4H CAMP NR DENHAM SPRINGS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	< 10	< 10	4	0	0
COBALT (CO), UG/L	4	0	7	4	0	0
COPPER (CU), UG/L	4	4	21	4	2	13
IRON (FE), UG/L	4	860	3000	4	50	210
LEAD (PB), UG/L	4	2	13	4	0	3
MANGANESE (MN), UG/L	4	220	330	4	30	230
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	3	20	4	0	4
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.79				
BIOMASS, ASH WT., G/SQ M	1	.50				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	5	3.0	6.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07381490 NAME: ATCHAFALAYA RIVER AT SIMMESPORT, LA.

LAT 30D58M57S LONG 091D47M54S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	2	19.75	2.47	18.0	21.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	4	432.3	45.3	376	470					
STREAMFLOW (CUBIC FT/SEC)	3	149000.0	28688.0	130000	182000	3	-532.948	382431.375	-0.998 *	2773.3
PH (STANDARD UNITS)	4	7.75	0.31	7.4	8.1	4	-0.0008	8.1111	-0.122 *	0.38
PHOSPHORUS, TOTAL	1	0.160	0.000	0.16						
NITRITE + NITRATE, TOTAL	1	0.450	0.000	0.45						
NITROGEN, KJELDAHL, TOTAL	1	0.560	0.000	0.56						
PHYTOPLANKTON, TOTAL (CELLS/ML)	1	5200.0	0.0	5200						
SEDIMENT, SUSPENDED	66	459.2	327.6	115	1490					
SEDIMENT, CLAY-SILT (PERCENT)	66	80.7	11.7	52	97					
COLIFORM, FECAL (COL/100 ML)	2	1650.0	777.8	1100	2200					
STREPTOCOCCI, FECAL (COL/100 ML)	2	252.0	294.2	44	460					
SILICA, DISSOLVED	4	5.25	1.00	3.8	6.0	4	-0.0100	9.5587	-0.453 *	1.09
CALCIUM, DISSOLVED	4	37.50	5.57	30.0	43.0	4	0.1180	-13.5097	0.961 *	1.89
MAGNESIUM, DISSOLVED	4	10.50	1.78	8.5	12.0	4	0.0326	-3.5934	0.831 *	1.21
SODIUM, DISSOLVED	3	31.00	2.65	28.0	33.0	3	0.0838	-6.7764	0.988 *	0.59
POTASSIUM, DISSOLVED	4	3.07	0.29	2.7	3.4	4	0.0054	0.7454	0.851 *	0.18
BICARBONATE, ION	4	123.5	9.8	111	135	4	0.186	43.112	0.859 *	6.2
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	50.00	7.53	41.0	59.0	4	0.1101	2.3910	0.663 *	6.90
CHLORIDE, DISSOLVED	4	37.50	2.08	35.0	40.0	4	0.0328	23.3014	0.715 *	1.78
DISSOLVED SOLIDS, SUM OF CONST	3	242.3	18.4	222	258	3	0.570	-14.685	0.964 *	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	4	259.5	40.6	224	318	4	0.643	-18.336	0.717 *	34.7
HARDNESS, TOTAL	4	137.5	22.2	110	160	4	0.482	-70.921	0.986 *	4.6
HARDNESS, NONCARBONATE	4	35.8	13.1	23	48	4	0.277	-84.167	0.962 *	4.4
TURBIDITY (JTU)	2	180.0	169.7	60	300					
FLOURIDE, DISSOLVED	4	0.25	0.06	0.2	0.3	4	-0.0003	0.3797	-0.236 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 320

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	494	483	472	413	362	299	265	244	239	228

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
326	16.47	11.84	2.68	87	3.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07381490 -- ATCHAFALAYA RIVER AT SIMMESPORT, LA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	1	6		2	1	2
CADMIUM (CD), UG/L	1	0		2	0	0
CHROMIUM (CR), UG/L	1	< 10		1	0	
COBALT (CO), UG/L	1	3		1	0	
COPPER (CU), UG/L	1	5		2	3	4
IRON (FE), UG/L	1	4700		2	10	30
LEAD (PB), UG/L	1	4		2	0	4
MANGANESE (MN), UG/L	1	190		2	22	150
MERCURY (HG), UG/L	2	0.0	0.3	1	0.2	
SELENIUM (SE), UG/L	1	0		1	0	
ZINC (ZN), UG/L	1	10		2	3	8
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	1	6.8				

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 07385700 NAME: BAYOU TECHE AT KEYSTONE LOCK, NR ST.MARTINVILLE

LAT 30D04M15S LONG 091D49M45S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.59	6.17	11.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	116.8	21.7	87	157					
STREAMFLOW (CUBIC FT/SEC)	10	604.6	229.1	269	1010	10	-5.716	1259.061	-0.533 *	205.6
PH (STANDARD UNITS)	12	7.14	0.25	6.8	7.7	12	0.0041	6.6630	0.351 *	0.25
PHOSPHORUS, TOTAL	12	0.244	0.067	0.15	0.40	12	-0.00178	0.45160	-0.573 *	0.058
NITRITE + NITRATE, TOTAL	8	0.177	0.071	0.08	0.31	8	0.00010	0.16704	0.025 *	0.077
NITROGEN, KJELDAHL, TOTAL	8	0.716	0.181	0.51	1.10	8	-0.00111	0.83845	-0.112 *	0.194
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	166.8	107.9	31	380	12	1.057	43.296	0.213 *	110.6
SEDIMENT, SUSPENDED	12	128.4	112.8	34	422					
SEDIMENT, CLAY-SILT (PERCENT)	12	81.0	18.0	44	99					
COLIFORM, FECAL (COL/100 ML)	12	1523.3	4563.5	31	16000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	391.2	440.6	32	1400					
SILICA, DISSOLVED	11	8.50	1.80	6.0	11.0	11	0.0270	5.2890	0.322 *	1.80
CALCIUM, DISSOLVED	12	9.53	2.23	6.5	14.0	12	0.0965	-1.7360	0.938	0.81
MAGNESIUM, DISSOLVED	12	3.98	1.08	2.4	5.6	12	0.0457	-1.3608	0.919	0.45
SODIUM, DISSOLVED	11	6.69	1.32	5.2	8.9	11	0.0620	-0.3307	0.872	0.68
POTASSIUM, DISSOLVED	12	2.81	0.80	2.2	5.0	12	-0.0125	4.2656	-0.338 *	0.79
BICARBONATE, ION	11	46.6	9.4	32	64	11	0.406	-1.104	0.980	2.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	5.86	1.57	3.8	8.4	12	0.0396	1.2375	0.549 *	1.37
CHLORIDE, DISSOLVED	12	9.16	2.88	6.1	17.0	12	0.0997	-2.4855	0.751	2.00
DISSOLVED SOLIDS, SUM OF CONST	10	67.7	11.6	56	91	10	0.571	2.862	0.957	3.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	81.2	24.0	52	126	11	1.026	-39.845	0.959	7.2
HARDNESS, TOTAL	12	40.1	9.8	27	57	12	0.437	-11.007	0.970	2.5
HARDNESS, NONCARBONATE	11	3.1	2.7	0	8	11	0.076	-5.793	0.643	2.2
TURBIDITY (JTU)	12	37.9	18.8	20	75	12	-0.366	80.639	-0.423 *	17.8
FLOURIDE, DISSOLVED	12	0.22	0.11	0.1	0.5	12	0.0022	-0.0303	0.450 *	0.10

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 360

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	216	190	172	141	128	112	101	88	82	72

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	21.08	7.56	2.84	85	2.22

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

07385700 -- BAYOU TECHE AT KEYSTONE LOCK, NR ST.MARTINVILLE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	4	4	1	2
CADMIUM (CD), UG/L	4	0	0	4	0	2
CHROMIUM (CR), UG/L	4	<10	<10	4	0	0
COBALT (CO), UG/L	4	0	7	4	0	1
COPPER (CU), UG/L	4	7	9	4	6	8
IRON (FE), UG/L	4	1000	3000	4	80	320
LEAD (PB), UG/L	4	3	9	4	1	5
MANGANESE (MN), UG/L	4	64	150	4	13	140
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	30	4	5	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	53.00				
BIOMASS, ASH WT., G/SQ M	2	1.50	45.00			
CHLOROPHYLL A, MG/SQ M	2	7.5	98.0			
CHLOROPHYLL B, MG/SQ M	2	5.7	12.0			
ORGANIC CARBON, MG/L	5	9.0	16.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08015900 NAME: CALCASIEU R NR LAKE CHARLES

LAT 30D17M59S LONG 093D11M18S
DRAINAGE AREA: 2310 SQ MI (5983 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.45	5.61	12.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1043.2	2119.2	36	6530					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	6.58	0.35	5.9	7.3	12	0.0001	6.4743	0.635	0.28
PHOSPHORUS, TOTAL	11	0.075	0.025	0.06	0.14	11	-0.00000	0.07681	-0.108*	0.026
NITRITE + NITRATE, TOTAL	12	0.143	0.163	0.04	0.64	12	0.00006	0.08033	0.784	0.106
NITROGEN, KJELDAHL, TOTAL	12	0.672	0.195	0.38	1.10	12	-0.00001	0.68373	-0.117*	0.203
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	459.2	408.7	11	1400	11	0.114	330.915	0.613	340.4
SEDIMENT, SUSPENDED	11	193.4	341.7	14	1010					
SEDIMENT, CLAY-SILT (PERCENT)	11	85.6	10.1	59	97					
COLIFORM, FECAL (COL/100 ML)	11	229.9	231.4	33	810					
STREPTOCOCCI, FECAL (COL/100 ML)	10	459.9	775.5	20	2200					
SILICA, DISSOLVED	12	9.93	3.79	4.0	16.0	12	0.0011	8.7952	0.611	3.14
CALCIUM, DISSOLVED	12	10.87	15.18	2.6	49.0	12	0.0071	3.4171	0.998	1.03
MAGNESIUM, DISSOLVED	12	18.92	38.82	0.5	120.0	12	0.0183	-0.1891	1.000	0.40
SODIUM, DISSOLVED	12	178.37	381.99	2.9	1200.0	12	0.1800	-9.4158	0.999	20.05
POTASSIUM, DISSOLVED	12	8.24	15.22	1.0	49.0	12	0.0072	0.7621	0.999	0.84
BICARBONATE, ION	12	18.2	11.9	8	41	12	0.005	12.985	0.885	5.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000	0.0
SULFATE, DISSOLVED	12	47.65	94.46	3.0	290.0	12	0.0446	1.1648	1.000	2.34
CHLORIDE, DISSOLVED	12	304.23	648.12	3.6	2000.0	12	0.3057	-14.7146	1.000	15.02
DISSOLVED SOLIDS, SUM OF CONST	12	587.3	1200.2	26	3740	12	0.566	-3.359	1.000	30.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	607.4	1216.7	39	3830	12	0.574	8.879	0.999	43.6
HARDNESS, TOTAL	12	105.8	199.2	9	620	12	0.094	7.715	1.000	2.4
HARDNESS, NONCARBONATE	12	89.7	188.0	0	580	12	0.089	-2.854	1.000	4.0
TURBIDITY (JTU)	12	22.3	9.9	8	45	12	-0.002	24.872	-0.521*	8.9
FLOURIDE, DISSOLVED	12	0.22	0.23	0.0	0.9	12	0.0000	0.1876	0.254*	0.24

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 329

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	12300	9430	1962	239	105	60	49	42	40	37

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
329	21.01	7.95	2.73	88	2.07

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08015900 -- CALCASIEU R NR LAKE CHARLES

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	3
CHROMIUM (CR), UG/L	4	< 10	10	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	1
COPPER (CU), UG/L	4	3	5	4	4	10
IRON (FE), UG/L	4	620	2100	4	90	320
LEAD (PB), UG/L	4	2	7	4	0	5
MANGANESE (MN), UG/L	4	85	370	4	20	320
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	90	4	5	90
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.39				
BIOMASS, ASH WT., G/SQ M	1	1.09				
CHLOROPHYLL A, MG/SQ M	1	.1				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	5	7.6	31.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08030500 NAME: SABINE RIVER NR RULIFF, TEX.

LAT 30D18M13S LONG 093D44M37S
DRAINAGE AREA: 9329 SQ MI (24162 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	61	20.27	6.27	9.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	60	124.8	22.6	75	162					
STREAMFLOW (CUBIC FT/SEC)	60	14810.4	9181.1	760	40520	60	37.663	10111.348	0.093 *	9219.8
PH (STANDARD UNITS)	17	6.75	0.22	6.3	7.1	17	0.0077	5.8084	0.692	0.17
PHOSPHORUS, TOTAL	13	0.042	0.017	0.01	0.07	12	-0.00027	0.07551	-0.320 *	0.017
NITRITE + NITRATE, TOTAL	13	0.081	0.052	0.01	0.18	12	0.00096	-0.02853	0.382 *	0.050
NITROGEN, KJELDAHL, TOTAL	13	0.692	0.242	0.40	1.20	12	-0.00781	1.65030	-0.681	0.181
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2185.6	4745.6	27	17000	12	-44.307	7483.914	-0.191 *	4885.2
SEDIMENT, SUSPENDED	12	39.7	16.0	20	68					
SEDIMENT, CLAY-SILT (PERCENT)	12	71.1	20.7	41	100					
COLIFORM, FECAL (COL/100 ML)	12	238.2	216.0	60	820					
STREPTOCOCCI, FECAL (COL/100 ML)	12	332.3	568.7	29	2000					
SILICA, DISSOLVED	17	7.97	2.48	5.0	15.0	17	-0.0428	13.2179	-0.349 *	2.40
CALCIUM, DISSOLVED	17	6.55	1.28	4.3	8.5	17	0.0541	-0.0937	0.854	0.69
MAGNESIUM, DISSOLVED	17	2.20	0.73	1.0	3.2	17	0.0284	-1.2834	0.789	0.46
SODIUM, DISSOLVED	17	11.47	1.73	7.1	15.0	17	0.0785	1.8412	0.921	0.69
POTASSIUM, DISSOLVED	17	2.25	0.53	1.4	3.4	17	0.0101	1.0179	0.383 *	0.51
BICARBONATE, ION	17	20.5	4.6	13	28	17	0.176	-1.096	0.776	3.0
CARBONATE, ION	17	0.0	0.0	0	0	17	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	60	12.62	3.69	3.2	23.0	60	0.0732	3.4827	0.450	3.32
CHLORIDE, DISSOLVED	60	18.32	4.30	9.2	29.0	60	0.1554	-1.0734	0.818	2.50
DISSOLVED SOLIDS, SUM OF CONST	17	68.6	9.0	48	86	17	0.424	16.697	0.950	2.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	82.7	8.8	72	105	12	0.316	44.849	0.735	6.3
HARDNESS, TOTAL	17	25.5	5.6	16	33	17	0.253	-5.473	0.921	2.2
HARDNESS, NONCARBONATE	17	8.7	3.7	1	13	17	0.106	-4.338	0.589	3.0
TURBIDITY (JTU)	12	28.8	12.1	15	50	12	-0.300	64.624	-0.509 *	10.9
FLOURIDE, DISSOLVED	15	0.08	0.04	0.0	0.1	15	0.0007	-0.0060	0.342 *	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	343	157	149	140	135	124	113	86	75	58

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	20.60	7.47	2.71	91	1.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08030500 -- SABINE RIVER NR RULIFF, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	< 10	20	4	0	0
CHROMIUM (CR), UG/L	4	0	0	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	4	0	1
COPPER (CU), UG/L	4	< 10	< 10	4	0	4
IRON (FE), UG/L	4	960	1800	4	10	250
LEAD (PB), UG/L	4	< 100	100	4	0	8
MANGANESE (MN), UG/L	4	70	400	4	10	380
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	190	4	30	120
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.50	93.00			
BIOMASS, ASH WT., G/SQ M	4	.79	84.00			
CHLOROPHYLL A, MG/SQ M	4	.2	32.0			
CHLOROPHYLL B, MG/SQ M	4	.3	3.0			
ORGANIC CARBON, MG/L	12	6.3	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08041000 NAME: NECHES RIVER AT EVADALE, TEX.

AT 30D21M22S LONG 094D05M36S
RAINAGE AREA: 7951 SQ MI (20593 SQ KM)
ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.42	6.56	11.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	138.3	17.2	109	163					
STREAMFLOW (CUBIC FT/SEC)	12	9908.3	4755.9	2200	19000	12	-128.661	27695.750	-0.465*	4416.3
PH (STANDARD UNITS)	12	6.72	0.22	6.3	7.1	12	-0.0005	6.7872	-0.040*	0.23
PHOSPHORUS, TOTAL	12	0.050	0.015	0.02	0.07	12	-0.00001	0.05170	-0.014*	0.015
NITRITE + NITRATE, TOTAL	12	0.050	0.037	0.00	0.14	12	-0.00093	0.17896	-0.437*	0.035
NITROGEN, KJELDAHL, TOTAL	12	0.762	0.323	0.39	1.50	12	-0.01145	2.34612	-0.609	0.269
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1840.0	1550.9	180	4300	11	53.432	-5470.402	0.594*	1314.5
SEDIMENT, SUSPENDED	12	28.8	10.6	16	48					
SEDIMENT, CLAY-SILT (PERCENT)	12	88.4	13.4	52	100					
COLIFORM, FECAL (COL/100 ML)	12	163.9	74.5	56	280					
STREPTOCOCCI, FECAL (COL/100 ML)	12	288.6	379.5	47	1400					
SILICA, DISSOLVED	12	9.87	2.17	6.4	14.0	12	-0.0587	17.9750	-0.464*	2.02
CALCIUM, DISSOLVED	12	7.42	0.72	6.2	8.5	12	0.0334	2.8012	0.797	0.46
MAGNESIUM, DISSOLVED	12	2.67	0.46	1.7	3.3	12	0.0156	0.5181	0.578	0.40
SODIUM, DISSOLVED	12	12.27	1.88	9.5	16.0	12	0.1051	-2.2638	0.963	0.53
POTASSIUM, DISSOLVED	12	2.50	0.23	2.1	3.0	12	0.0043	1.8997	0.325*	0.23
BICARBONATE, ION	12	20.6	3.5	14	26	12	0.171	-3.006	0.837	2.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	16.00	2.17	13.0	21.0	12	0.0905	3.4870	0.715	1.59
CHLORIDE, DISSOLVED	12	17.50	2.15	13.0	21.0	12	0.1073	2.6674	0.856	1.17
DISSOLVED SOLIDS, SUM OF CONST	12	78.6	7.1	68	89	12	0.392	24.392	0.952	2.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	101.5	14.8	83	139	11	-0.051	108.735	-0.056*	15.6
HARDNESS, TOTAL	12	29.6	3.0	24	34	12	0.139	10.420	0.794	1.9
HARDNESS, NONCARBONATE	12	12.8	1.9	9	16	12	0.009	11.526	0.082*	1.9
TURBIDITY (JTU)	12	32.5	5.4	25	40	12	-0.124	49.631	-0.392*	5.2
FLOURIDE, DISSOLVED	10	0.09	0.06	0.0	0.2	10	0.0009	-0.0301	0.217*	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	172	165	158	150	147	142	131	115	108	104

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
354	20.26	7.95	2.73	87	2.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08041000 -- NECHES RIVER AT EVADALE, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	2
CADMIUM (CD), UG/L	4	< 10	20	4	0	< 1
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	1
COPPER (CU), UG/L	4	< 10	10	4	2	8
IRON (FE), UG/L	4	1300	2000	4	90	210
LEAD (PB), UG/L	4	< 100	100	4	0	7
MANGANESE (MN), UG/L	4	0	180	4	10	20
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	220	4	30	210
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.39	25.00			
BIOMASS, ASH WT., G/SQ M	3	1.50	11.00			
CHLOROPHYLL A, MG/SQ M	3	.0	.2			
CHLOROPHYLL B, MG/SQ M	3	.0	.0			
ORGANIC CARBON, MG/L	11	3.1	20.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08065350 NAME: TRINITY RIVER NR CROCKETT, TEX.

LAT 31D20M08S LONG 095D39M27S
DRAINAGE AREA: 13911 SQ MI (36029 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	18.17	7.87	9.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	433.4	123.7	282	734					
STREAMFLOW (CUBIC FT/SEC)	15	15367.3	13027.3	760	41300	10	-79.046	48155.125	-0.481*	13308.8
PH (STANDARD UNITS)	12	7.40	0.28	7.0	7.8	12	0.0010	6.9468	0.468*	0.26
PHOSPHORUS, TOTAL	12	0.624	0.545	0.11	2.20	12	0.00415	-1.17417	0.942	0.192
NITRITE + NITRATE, TOTAL	10	1.135	0.691	0.30	2.40	10	0.00494	-1.06139	0.945	0.240
NITROGEN, KJELDAHL, TOTAL	12	1.081	0.581	0.57	2.70	12	0.00290	-0.17536	0.617	0.480
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	6702	4993	930	15000	10	17.747	-2159.746	0.541*	3786.9
SEDIMENT, SUSPENDED	15	258.9	150.4	14	585					
SEDIMENT, CLAY-SILT (PERCENT)	15	77.6	23.0	25	100					
COLIFORM, FECAL (COL/100 ML)	12	978.1	888.9	6	3100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	623.1	1237.0	32	4500					
SILICA, DISSOLVED	12	8.16	2.53	4.7	13.0	12	0.0144	1.9033	0.705	1.88
CALCIUM, DISSOLVED	12	46.33	9.37	25.0	58.0	12	0.0599	20.3550	0.791	6.02
MAGNESIUM, DISSOLVED	12	4.82	1.25	2.8	7.0	12	0.0076	1.5195	0.754	0.86
SODIUM, DISSOLVED	12	30.67	16.77	16.0	78.0	12	0.1295	-25.4818	0.956	5.17
POTASSIUM, DISSOLVED	12	5.05	1.52	2.3	8.8	12	0.0088	1.2265	0.718	1.11
BICARBONATE, ION	12	138.0	29.8	76	191	12	0.217	43.777	0.904	13.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	45.42	13.41	28.0	77.0	12	0.0999	2.1031	0.922	5.44
CHLORIDE, DISSOLVED	12	33.08	14.66	18.0	71.0	12	0.1117	-15.3430	0.943	5.13
DISSOLVED SOLIDS, SUM OF CONST	12	242.1	67.1	156	403	12	0.541	7.721	0.997	5.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	249.5	49.8	178	330	11	0.536	31.866	0.899	22.9
HARDNESS, TOTAL	12	134.7	26.9	76	170	12	0.176	58.450	0.809	16.6
HARDNESS, NONCARBONATE	12	22.4	10.0	6	36	12	0.003	21.091	0.038*	10.5
TURBIDITY (JTU)	12	68.3	38.6	10	150	12	-0.212	160.079	-0.678	29.8
FLOURIDE, DISSOLVED	10	0.36	0.15	0.2	0.7	10	0.0010	-0.1016	0.912	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	814	740	687	533	479	411	373	296	268	224

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
211	19.76	10.33	2.69	95	1.40

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08065350 -- TRINITY RIVER NR CROCKETT, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	12	4	2	9
CADMIUM (CD), UG/L	3	<10	<10	4	1	1
CHROMIUM (CR), UG/L	3	<10	30	4	0	0
COBALT (CO), UG/L	3	<50	<50	4	0	1
COPPER (CU), UG/L	3	<10	10	4	0	6
IRON (FE), UG/L	3	710	5000	4	20	440
LEAD (PB), UG/L	3	<100	<100	4	1	34
MANGANESE (MN), UG/L	3	60	130	4	0	0
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	40	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	10	4.3	13.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08066500 NAME: TRINITY R AT ROMAYOR, TEXAS

LAT 30D25M30S LONG 094D51M02S
DRAINAGE AREA: 17186 SQ MI (44512 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	19.27	6.24	10.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	328.4	28.6	293	367					
STREAMFLOW (CUBIC FT/SEC)	15	17240.0	11815.2	1240	40000	12	-295.362	114093.375	-0.668	9857.2
PH (STANDARD UNITS)	12	7.13	0.49	6.3	7.8	12	0.0050	5.5071	0.287*	0.49
PHOSPHORUS, TOTAL	12	0.162	0.039	0.10	0.22	12	-0.00057	0.34939	-0.416*	0.037
NITRITE + NITRATE, TOTAL	12	0.293	0.189	0.01	0.52	12	-0.00426	1.69209	-0.645	0.151
NITROGEN, KJELDAHL, TOTAL	12	0.763	0.198	0.52	1.10	12	0.00271	-0.12545	0.390*	0.191
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	49975.0	95514.7	1000	280000	12	1819.161	-547467.375	0.544*	84058.0
SEDIMENT, SUSPENDED	15	75.7	100.9	17	385					
SEDIMENT, CLAY-SILT (PERCENT)	15	60.5	25.8	5	92					
COLIFORM, FECAL (COL/100 ML)	12	277.2	598.4	18	2100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	330.8	698.3	14	2500					
SILICA, DISSOLVED	12	6.52	2.02	3.5	9.3	12	-0.0237	14.3008	-0.335*	2.00
CALCIUM, DISSOLVED	12	37.42	3.45	33.0	44.0	12	0.1006	4.3691	0.833	2.00
MAGNESIUM, DISSOLVED	12	3.41	0.49	2.6	4.0	12	0.0114	-0.3490	0.663	0.39
SODIUM, DISSOLVED	12	19.83	3.33	16.0	27.0	12	0.0831	-7.4648	0.714	2.44
POTASSIUM, DISSOLVED	12	4.23	0.44	3.6	5.2	12	-0.0047	5.7694	-0.301*	0.44
BICARBONATE, ION	12	111.3	12.7	96	132	12	0.260	25.785	0.585	10.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	30.17	4.80	23.0	40.0	12	0.0254	21.8156	0.151*	4.98
CHLORIDE, DISSOLVED	12	22.17	2.72	19.0	28.0	12	0.0815	-4.5947	0.854	1.49
DISSOLVED SOLIDS, SUM OF CONST	12	179.0	13.1	160	197	12	0.403	46.505	0.877	6.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	186.6	15.5	160	211	12	0.450	38.896	0.830	9.1
HARDNESS, TOTAL	12	109.1	12.3	96	130	12	0.372	-13.002	0.867	6.4
HARDNESS, NONCARBONATE	12	16.4	7.6	0	33	12	0.086	-11.873	0.323*	7.6
TURBIDITY (JTU)	12	27.1	30.3	10	120	12	-0.450	174.783	-0.423*	28.8
FLOURIDE, DISSOLVED	10	0.22	0.04	0.2	0.3	10	-0.0008	0.4933	-0.550*	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	377	368	362	355	348	325	309	291	281	272

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
283	19.26	8.18	2.74	92	1.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08066500 -- TRINITY R AT ROMAYOR, TEXAS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	8	4	0	7
CADMIUM (CD), UG/L	4	< 10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	< 50	50	4	0	0
COPPER (CU), UG/L	4	< 10	10	4	1	5
IRON (FE), UG/L	4	630	2300	4	10	430
LEAD (PB), UG/L	4	< 100	< 100	4	1	15
MANGANESE (MN), UG/L	4	60	100	4	0	0
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	180	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	21.00	330.00			
BIOMASS, ASH WT., G/SQ M	2	16.00	330.00			
CHLOROPHYLL A, MG/SQ M	2	.3	7.3			
CHLOROPHYLL B, MG/SQ M	2	.0	1.0			
ORGANIC CARBON, MG/L	10	6.5	11.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08068000 NAME: WEST FORK SAN JACINTO RIVER NR CONROE, TX

LAT 30D14M41S LONG 095D27M26S
DRAINAGE AREA: 809 SQ MI (2095 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.54	4.70	13.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	269.3	45.9	210	366					
STREAMFLOW (CUBIC FT/SEC)	17	498.1	563.4	55	2200	12	-5.162	1966.240	-0.363 *	636.8
PH (STANDARD UNITS)	12	6.82	0.33	6.4	7.5	12	0.0020	6.2784	0.280 *	0.33
PHOSPHORUS, TOTAL	12	0.115	0.060	0.06	0.26	12	0.00068	-0.06801	0.520 *	0.054
NITRITE + NITRATE, TOTAL	12	0.170	0.067	0.09	0.35	12	0.00097	-0.09198	0.667	0.052
NITROGEN, KJELDAHL, TOTAL	12	0.805	0.339	0.34	1.70	12	-0.00345	1.73417	-0.467 *	0.314
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5325.0	9760.5	1200	36000	12	-35.461	14873.000	-0.167 *	10093.7
SEDIMENT, SUSPENDED	17	53.2	55.8	12	244					
SEDIMENT, CLAY-SILT (PERCENT)	17	80.9	18.0	41	100					
COLIFORM, FECAL (COL/100 ML)	12	541.8	827.1	21	2300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	696.5	1268.1	31	3900					
SILICA, DISSOLVED	12	12.05	5.02	5.5	19.0	12	0.0537	-2.4034	0.490 *	4.59
CALCIUM, DISSOLVED	12	29.42	4.62	19.0	36.0	12	0.0718	10.0879	0.712	3.40
MAGNESIUM, DISSOLVED	12	2.69	0.53	1.9	3.6	12	0.0098	0.0587	0.841	0.30
SODIUM, DISSOLVED	12	16.52	5.68	9.6	28.0	12	0.1111	-13.3818	0.897	2.63
POTASSIUM, DISSOLVED	12	2.83	0.30	2.4	3.3	12	-0.0004	2.9357	-0.058 *	0.32
BICARBONATE, ION	12	83.7	13.3	53	97	12	0.126	49.647	0.435 *	12.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	6.42	1.43	3.2	8.6	12	0.0205	0.8941	0.661	1.12
CHLORIDE, DISSOLVED	12	33.08	11.77	18.0	57.0	12	0.2338	-29.8785	0.911	5.10
DISSOLVED SOLIDS, SUM OF CONST	12	144.5	26.8	112	198	12	0.563	-7.180	0.963	7.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	161.7	29.8	126	222	12	0.641	-11.038	0.987	5.0
HARDNESS, TOTAL	12	84.9	13.8	57	110	12	0.242	19.679	0.805	8.6
HARDNESS, NONCARBONATE	12	16.0	7.8	3	30	12	0.114	-14.772	0.676	6.0
TURBIDITY (JTU)	12	27.1	14.1	10	55	12	-0.125	60.792	-0.408 *	13.5
FLOURIDE, DISSOLVED	10	0.12	0.08	0.0	0.3	10	0.0001	0.0941	0.053 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	415	359	325	289	275	248	229	194	179	147

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
331	20.90	8.12	2.75	87	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08068000 -- WEST FORK SAN JACINTO RIVER NR CONROE, TX

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	1	2
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	<10	4	0	< 10
COBALT (CO), UG/L	4	<50	<50	4	0	3
COPPER (CU), UG/L	4	<10	90	4	0	3
IRON (FE), UG/L	4	510	2200	4	50	80
LEAD (PB), UG/L	4	<100	200	4	0	2
MANGANESE (MN), UG/L	3	20	160	4	0	60
MERCURY (HG), UG/L	4	< 0.1	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	290	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.19	11.00			
BIOMASS, ASH WT., G/SQ M	3	.19	7.79			
CHLOROPHYLL A, MG/SQ M	3	.0	7.8			
CHLOROPHYLL B, MG/SQ M	3	.0	2.3			
ORGANIC CARBON, MG/L	12	7.0	18.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08082000 NAME: SALT FK BRAZOS R NR ASPERMONT, TX

LAT 33D20M02S LONG 100D14M24S
DRAINAGE AREA: 4830 SQ MI (12510 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE (MICROMHOS)

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	20.42	8.45	8.0	34.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	36763.1	19755.0	6220	72000					
STREAMFLOW (CUBIC FT/SEC)	13	75.2	174.6	1	646	13	-0.005	261.156	-0.573	149.5
PH (STANDARD UNITS)	13	7.91	0.20	7.4	8.2	13	0.0000	7.8396	0.185 *	0.20
PHOSPHORUS, TOTAL	11	0.225	0.499	0.01	1.70	11	-0.00002	0.90226	-0.650	0.400
NITRITE + NITRATE, TOTAL	11	0.332	0.179	0.04	0.57	11	0.00001	0.13334	0.532 *	0.160
NITROGEN, KJELDAHL, TOTAL	11	0.864	1.830	0.00	6.30	11	-0.00007	3.40380	-0.666	1.439
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	13180.8	39975.2	300	140000	12	-0.576	35422.586	-0.279 *	40260.6
SEDIMENT SUSPENDED	12	362.7	945.6	5	3310					
SEDIMENT, CLAY-SILT (PERCENT)	12	69.6	27.6	15	99					
COLIFORM, FECAL (COL/100 ML)	12	2122.0	6896.1	0	24000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2346.2	7458.7	4	26000					
SILICA, DISSOLVED	13	7.28	2.76	2.0	11.0	13	-0.0000	8.9198	-0.319 *	2.73
CALCIUM, DISSOLVED	13	802.31	259.27	280.0	1200.0	13	0.0119	366.5676	0.903	116.27
MAGNESIUM, DISSOLVED	13	200.69	86.20	84.0	310.0	13	0.0037	66.5019	0.836	49.34
SODIUM, DISSOLVED	13	8083.07	4893.88	980.0	7000.0	13	0.2472	1003.1250	0.998	347.56
POTASSIUM, DISSOLVED	13	29.53	15.25	7.9	62.0	13	0.0007	2.8176	0.941	5.37
BICARBONATE, ION	13	142.9	42.5	89	198	13	0.001	99.676	0.546 *	37.2
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	13	2128.46	647.33	770.0	3000.0	13	0.0291	1059.1604	0.888	311.36
CHLORIDE, DISSOLVED	13	2915.38	7806.71	1600.0	8000.0	13	0.3944	1584.1680	0.998	509.32
DISSOLVED SOLIDS, SUM OF CONST	13	24236.9	13581.9	3790	49600	13	0.687	-1019.457	0.999	548.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	25974.2	13580.6	3920	50900	12	0.699	-1045.441	0.998	941.6
HARDNESS, TOTAL	13	2846.2	976.1	1100	4300	13	0.045	1177.937	0.918	403.3
HARDNESS, NONCARBONATE	13	2715.4	958.2	1000	4200	13	0.044	1102.859	0.904	427.1
TURBIDITY (JTU)	12	503.1	1577.8	1	5500	12	-0.046	2278.336	-0.564 *	1366.1
FLOURIDE, DISSOLVED	11	0.40	0.10	0.3	0.6	11	-0.0000	0.4424	-0.206 *	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	80200	67700	60500	52700	48100	40200	27800	12800	9230	4710

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
355	16.09	10.69	2.85	83	3.45

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08082000 -- SALT FK BRAZOS R NR ASPERMONT, TX

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	180	4	0	4
CADMIUM (CD), UG/L	4	10	50	4	0	0
CHROMIUM (CR), UG/L	4	40	120	4	0	30
COBALT (CO), UG/L	4	< 50	450	4	0	2
COPPER (CU), UG/L	4	20	180	4	0	3
IRON (FE), UG/L	4	340	78000	4	10	300
LEAD (PB), UG/L	4	< 100	200	4	0	3
MANGANESE (MN), UG/L	3	100	6100	4	10	110
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	2	7	4	0	7
ZINC (ZN), UG/L	4	30	710	4	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.5	200.00			
BIOMASS, ASH WT., G/SQ M	4	.8	190.00			
CHLOROPHYLL A, MG/SQ M	4	.1	27.0			
CHLOROPHYLL B, MG/SQ M	4	.0	3.4			
ORGANIC CARBON, MG/L	3	2.7	6.1			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08082500 NAME: BRAZOS RIVER AT SEYMOUR, TEX.

LAT 33D34M51S LONG 099D16M02S
DRAINAGE AREA: 14490 SQ MI (37529 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.92	10.00	2.5	31.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	14722.5	7336.2	4370	24600					
STREAMFLOW (CUBIC FT/SEC)	12	371.0	814.8	13	2910	12	-0.054	1159.566	-0.482*	748.6
PH (STANDARD UNITS)	12	7.86	0.17	7.6	8.0	12	0.0000	7.6650	0.575*	0.14
PHOSPHORUS, TOTAL	12	0.290	0.494	0.00	1.60	12	-0.00004	0.92903	-0.644	0.397
NITRITE + NITRATE, TOTAL	11	0.215	0.203	0.00	0.56	11	-0.00000	0.22647	-0.029*	0.214
NITROGEN, KJELDAHL, TOTAL	12	1.342	1.987	0.25	7.50	12	-0.00013	3.27081	-0.484*	1.824
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	21810.0	34133.5	180	93000	12	-1.249	40204.402	-0.269*	34484.3
SEDIMENT, SUSPENDED	11	1118.9	2121.8	6	6780					
SEDIMENT, CLAY-SILT (PERCENT)	11	92.0	15.2	47	100					
COLIFORM, FECAL (COL/100 ML)	12	1718.7	4839.0	1	17000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1839.4	3849.9	11	13000					
SILICA, DISSOLVED	12	6.57	2.98	1.1	11.0	12	-0.0003	10.4012	-0.639	2.41
CALCIUM, DISSOLVED	12	505.83	196.12	190.0	730.0	12	0.0266	114.7590	0.994	23.17
MAGNESIUM, DISSOLVED	12	129.08	73.76	21.0	240.0	12	0.0095	-10.9719	0.946	25.04
SODIUM, DISSOLVED	12	2811.67	1549.34	710.0	4800.0	12	0.2108	-292.1548	0.998	96.04
POTASSIUM, DISSOLVED	12	16.25	6.18	7.0	26.0	12	0.0008	5.0400	0.904	2.78
BICARBONATE, ION	12	151.3	44.3	82	208	12	0.004	94.346	0.640	35.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	1395.00	548.01	540.0	2000.0	12	0.0723	330.0945	0.968	143.57
CHLORIDE, DISSOLVED	12	4479.16	2516.26	950.0	7600.0	12	0.3420	-556.2578	0.997	198.36
DISSOLVED SOLIDS, SUM OF CONST	12	9415.0	4880.1	2650	15400	12	0.664	-353.598	0.997	364.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	9850.9	5291.1	2710	16300	11	0.687	-313.473	0.998	327.0
HARDNESS, TOTAL	12	1792.5	779.7	620	2800	12	0.105	245.434	0.989	122.4
HARDNESS, NONCARBONATE	12	1670.8	754.1	530	2700	12	0.102	174.920	0.988	120.0
TURBIDITY (JTU)	12	714.9	1672.9	2	5800	12	-0.118	2458.118	-0.519*	1499.5
FLOURIDE, DISSOLVED	10	0.54	0.12	0.3	0.7	10	0.0000	0.5042	0.149*	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	25400	22900	21600	19900	18900	14000	8100	3500	2700	1880

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
321	20.87	10.49	2.95	78	3.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08082500 -- BRAZOS RIVER AT SEYMOUR, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	200	4	1	6
CADMIUM (CD), UG/L	4	<10	20	4	0	0
CHROMIUM (CR), UG/L	4	20	110	4	0	10
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	20	160	4	2	4
IRON (FE), UG/L	4	120	74000	4	10	110
LEAD (PB), UG/L	4	<100	200	4	0	4
MANGANESE (MN), UG/L	3	50	5600	4	0	30
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	4	4	1	4
ZINC (ZN), UG/L	4	30	680	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.59	96.00			
BIOMASS, ASH WT., G/SQ M	4	.09	87.00			
CHLOROPHYLL A, MG/SQ M	4	.0	12.0			
CHLOROPHYLL B, MG/SQ M	4	.0	.8			
ORGANIC CARBON, MG/L	4	4.1	59.0			

Table 14.--Summary of measurements at each station--Continued

STATION NUMBER: 08098290 NAME: BRAZOS RIVER NR HIGHBANK, TEX.

LAT 31D08M02S LONG 096D49M29S
DRAINAGE AREA: 29421 SQ MI (76200 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.83	7.65	10.0	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1184.8	293.0	683	1580					
STREAMFLOW (CUBIC FT/SEC)	12	5092.5	6420.9	325	16900	12	-9.748	16642.801	-0.445*	6031.0
PH (STANDARD UNITS)	12	7.78	0.42	6.8	8.5	12	0.0006	7.0779	0.420*	0.40
PHOSPHORUS, TOTAL	12	0.217	0.198	0.08	0.83	12	0.00004	0.17532	0.053*	0.208
NITRITE + NITRATE, TOTAL	11	0.356	0.316	0.00	0.80	11	-0.00025	0.66268	-0.204*	0.326
NITROGEN, KJELDAHL, TOTAL	12	1.023	0.687	0.35	3.10	12	-0.00069	1.83578	-0.293*	0.689
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	26370.0	46256.2	570	130000	11	7.764	17167.184	0.052*	48692.8
SEDIMENT, SUSPENDED	12	359.5	468.1	12	1210					
SEDIMENT, CLAY-SILT (PERCENT)	12	78.2	23.9	19	99					
COLIFORM, FECAL (COL/100 ML)	12	1271.9	2089.6	12	5800					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1006.9	1970.2	9	6900					
SILICA, DISSOLVED	12	6.38	1.66	3.1	10.0	12	-0.0017	8.3639	-0.296*	1.66
CALCIUM, DISSOLVED	12	81.50	14.68	59.0	110.0	12	0.0425	31.0959	0.849	8.13
MAGNESIUM, DISSOLVED	12	15.27	4.96	6.2	22.0	12	0.0154	-2.9697	0.909	2.16
SODIUM, DISSOLVED	12	139.00	47.38	65.0	200.0	12	0.1597	-50.2373	0.988	7.75
POTASSIUM, DISSOLVED	12	4.42	0.87	2.4	5.4	12	0.0003	4.0474	0.108*	0.90
BICARBONATE, ION	12	179.8	33.2	123	222	12	0.032	141.554	0.284*	33.4
CARBONATE, ION	12	1.1	3.8	0	13	12	-0.000	1.162	-0.005*	3.9
SULFATE, DISSOLVED	12	123.00	33.00	72.0	170.0	12	0.1092	-6.3352	0.969	8.52
CHLORIDE, DISSOLVED	12	207.17	76.93	96.0	310.0	12	0.2572	-97.5816	0.980	16.15
DISSOLVED SOLIDS, SUM OF CONST	12	667.0	176.1	376	901	12	0.599	-42.777	0.997	14.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	691.3	183.3	391	927	12	0.624	-47.657	0.997	14.6
HARDNESS, TOTAL	12	266.7	54.8	170	370	12	0.174	60.983	0.928	21.4
HARDNESS, NONCARBONATE	12	116.3	43.0	64	180	12	0.140	-49.216	0.953	13.7
TURBIDITY (JTU)	12	78.8	96.0	10	280	12	-0.212	329.594	-0.646	76.9
FLOURIDE, DISSOLVED	10	0.31	0.06	0.2	0.4	10	0.0001	0.2283	0.395*	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1790	1660	1610	1550	1500	1350	1120	808	629	352

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	20.57	10.96	2.78	90	2.42

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08098290 -- BRAZOS RIVER NR HIGHBANK, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	24	4	2	4
CADMIUM (CD), UG/L	3	<10	<10	4	0	1
CHROMIUM (CR), UG/L	3	10	10	4	0	20
COBALT (CO), UG/L	3	<50	100	4	0	2
COPPER (CU), UG/L	3	<10	10	4	1	6
IRON (FE), UG/L	3	1100	13000	4	10	60
LEAD (PB), UG/L	3	<100	<100	4	0	1
MANGANESE (MN), UG/L	2	100	500	4	0	0
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	3	20	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	80.00	160.00			
BIOMASS, ASH WT., G/SQ M	2	68.00	140.00			
CHLOROPHYLL A, MG/SQ M	2	44.0	67.0			
CHLOROPHYLL B, MG/SQ M	2	.0	3.0			
ORGANIC CARBON, MG/L	7	5.5	14.0			

STATION NUMBER: 08116650 NAME: BRAZOS RIVER NR ROSHARON, TEX.

LAT 29D20M58S LONG 095D34M56S
DRAINAGE AREA: 44340 SQ MI (114841 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.75	6.82	10.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	696.6	254.3	355	1150					
STREAMFLOW (CUBIC FT/SEC)	12	13466.7	9580.4	2700	37000	12	-14.587	23627.492	-0.387 *	9264.4
PH (STANDARD UNITS)	12	7.01	0.51	6.3	7.9	12	0.0011	6.2496	0.542 *	0.45
PHOSPHORUS, TOTAL	12	0.375	0.234	0.15	0.86	12	-0.00028	0.56841	-0.302 *	0.234
NITRITE + NITRATE, TOTAL	9	0.374	0.275	0.01	0.68	9	-0.00050	0.74683	-0.480 *	0.258
NITROGEN, KJELDAHL, TOTAL	12	0.921	0.550	0.39	2.50	12	-0.00091	1.55562	-0.421 *	0.524
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	21701.5	38955.4	27	100000	11	98.881	-48755.770	0.661	30823.0
SEDIMENT, SUSPENDED	11	773.5	676.6	157	2300					
SEDIMENT, CLAY-SILT (PERCENT)	10	90.6	8.2	71	99					
COLIFORM, FECAL (COL/100 ML)	12	722.5	934.2	23	3300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	514.5	560.2	15	1700					
SILICA, DISSOLVED	12	9.06	1.91	6.9	14.0	12	0.0027	7.2099	0.354 *	1.87
CALCIUM, DISSOLVED	12	57.08	14.51	38.0	76.0	12	0.0523	20.6521	0.916	6.10
MAGNESIUM, DISSOLVED	12	11.12	4.25	5.6	18.0	12	0.0159	0.0741	0.949	1.41
SODIUM, DISSOLVED	12	62.67	32.39	22.0	120.0	12	0.1241	-23.8095	0.975	7.61
POTASSIUM, DISSOLVED	12	4.07	0.53	2.9	5.0	12	0.0008	3.5362	0.368 *	0.52
BICARBONATE, ION	12	166.6	45.6	112	244	12	0.136	72.028	0.756	31.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	61.75	23.42	32.0	99.0	12	0.0912	-1.8091	0.991	3.37
CHLORIDE, DISSOLVED	12	91.08	47.79	30.0	170.0	12	0.1815	-35.3677	0.966	12.98
DISSOLVED SOLIDS, SUM OF CONST	12	379.5	136.6	201	611	12	0.536	6.100	0.998	9.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	390.8	136.8	205	621	12	0.537	16.746	0.998	9.2
HARDNESS, TOTAL	12	190.8	54.3	120	270	12	0.201	50.719	0.941	19.3
HARDNESS, NONCARBONATE	12	51.9	23.6	21	91	12	0.084	-6.754	0.907	10.5
TURBIDITY (JTU)	12	203.8	94.1	45	350	12	-0.294	408.777	-0.795	59.9
FLOURIDE, DISSOLVED	10	0.25	0.05	0.2	0.3	10	0.0002	0.1300	0.864	0.03

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1260	1110	1040	932	865	702	569	424	364	318

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	21.03	9.03	2.81	91	1.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08116650 -- BRAZOS RIVER NR ROSHARON, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	4	34	5	2	5
CADMIUM (CD), UG/L	5	<10	<10	5	0	0
CHROMIUM (CR), UG/L	5	10	60	5	0	0
COBALT (CO), UG/L	5	<50	50	5	0	0
COPPER (CU), UG/L	5	10	60	5	1	6
IRON (FE), UG/L	5	2000	43000	5	30	70
LEAD (PB), UG/L	5	<100	<100	5	0	5
MANGANESE (MN), UG/L	5	180	1300	5	0	10
MERCURY (HG), UG/L	5	0.0	0.6	5	0.0	0.3
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	40	210	5	10	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.50	40			
BIOMASS, ASH WT., G/SQ M	1	31.00	31			
CHLOROPHYLL A, MG/SQ M	2	.0	.1			
CHLOROPHYLL B, MG/SQ M	2	.0	.2			
ORGANIC CARBON, MG/L	6	5.2	32.0			

STATION NUMBER: 08123800 NAME: BEALS CRK NR WESTBROOK, TX

LAT 32D11M57S LONG 101D00M49S
DRAINAGE AREA: 9903 SQ MI (25649 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.25	7.65	5.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	8178.3	3836.9	1710	13300					
STREAMFLOW (CUBIC FT/SEC)	13	20.1	37.1	2	140	12	-0.006	70.667	-0.601	32.1
PH (STANDARD UNITS)	12	8.39	0.52	7.2	9.0	12	0.0001	7.5086	0.792	0.33
PHOSPHORUS, TOTAL	12	1.096	0.913	0.36	3.70	12	0.00010	0.28667	0.416*	0.870
NITRITE + NITRATE, TOTAL	12	0.914	1.217	0.01	3.70	12	0.00016	-0.42067	0.514*	1.095
NITROGEN, KJELDAHL, TOTAL	12	1.826	0.838	0.91	3.50	12	-0.00006	2.28750	-0.258*	0.849
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	16466.7	26027.6	1300	92000	12	-1.431	28170.758	-0.211*	26683.2
SEDIMENT, SUSPENDED	11	367.4	1044.0	6	3510					
SEDIMENT, CLAY-SILT (PERCENT)	11	85.3	25.8	20	100					
COLIFORM, FECAL (COL/100 ML)	12	3525.6	11802.2	1	41000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6637.5	21850.9	6	76000					
SILICA, DISSOLVED	12	5.53	3.62	0.7	11.0	12	0.0001	5.0469	0.063*	3.78
CALCIUM, DISSOLVED	12	255.08	113.66	61.0	370.0	12	0.0276	29.6666	0.930	43.69
MAGNESIUM, DISSOLVED	12	283.75	152.14	50.0	530.0	12	0.0385	-31.2903	0.971	37.85
SODIUM, DISSOLVED	12	1216.67	620.27	200.0	2100.0	12	0.1610	-100.3057	0.996	57.24
POTASSIUM, DISSOLVED	12	32.50	12.04	15.0	49.0	12	0.0026	11.0455	0.836	6.93
BICARBONATE, ION	12	180.0	74.3	106	315	12	0.006	132.973	0.297*	74.4
CARBONATE, ION	12	9.7	10.5	0	30	12	0.001	-1.717	0.509*	9.5
SULFATE, DISSOLVED	12	1250.00	639.10	210.0	2100.0	12	0.1646	-96.0291	0.988	103.13
CHLORIDE, DISSOLVED	12	2126.67	1101.36	350.0	3700.0	12	0.2860	-212.6963	0.997	96.32
DISSOLVED SOLIDS, SUM OF CONST	12	5271.3	2634.3	945	8930	12	0.685	-330.414	0.998	189.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	5647.5	2764.2	1030	9460	12	0.720	-240.645	0.999	103.3
HARDNESS, TOTAL	12	1802.5	880.6	360	3000	12	0.227	-56.725	0.991	126.9
HARDNESS, NONCARBONATE	12	1649.2	865.0	270	2900	12	0.222	-170.254	0.987	147.1
TURBIDITY (JTU)	12	277.9	859.1	4	3000	12	-0.124	1294.706	-0.555*	749.3
FLOURIDE, DISSOLVED	10	0.55	0.17	0.2	0.7	10	0.0000	0.3409	0.639	0.14

*Not significant at the 95 percent level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	13700	12600	11700	10800	10400	9810	6850	3010	2000	900

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
326	18.53	9.77	2.92	85	2.86

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08123800 -- BEALS CRK NR WESTBROOK, TX

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	10	4	2	11
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	100	4	0	10
COBALT (CO), UG/L	4	<50	100	4	0	3
COPPER (CU), UG/L	4	<10	70	4	1	4
IRON (FE), UG/L	4	140	47000	4	10	80
LEAD (PB), UG/L	4	<100	100	4	0	3
MANGANESE (MN), UG/L	3	70	850	4	20	770
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	200	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	4.00	62.00			
BIOMASS, ASH WT., G/SQ M	4	2.39	58.00			
CHLOROPHYLL A, MG/SQ M	4	1.8	16.0			
CHLOROPHYLL B, MG/SQ M	4	.0	4.5			
ORGANIC CARBON, MG/L	3	13.0	24.0			

STATION NUMBER: 08136700 NAME: COLORADO RIVER NEAR STACY, TEX.

LAT 31D29M37S LONG 099D34M25S
DRAINAGE AREA: 24040 SQ MI (62264 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	19.65	8.27	5.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	1399.8	406.3	703	2000					
STREAMFLOW (CUBIC FT/SEC)	13	729.5	1035.2	86	3650	13	-1.428	2728.227	-0.560	895.4
PH (STANDARD UNITS)	13	8.01	0.15	7.7	8.2	13	0.0001	7.8548	0.296*	0.15
PHOSPHORUS, TOTAL	12	0.080	0.054	0.01	0.18	12	-0.00005	0.14372	-0.358*	0.053
NITRITE + NITRATE, TOTAL	12	1.959	1.366	0.50	4.20	12	0.00165	-0.31839	0.505*	1.236
NITROGEN, KJELDAHL, TOTAL	12	1.043	0.407	0.42	1.90	12	0.00006	0.96394	0.059*	0.426
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	55833.3	98726.1	1500	330000	12	101.773	-84681.563	0.431*	93426.1
SEDIMENT, SUSPENDED	12	119.7	166.9	28	525					
SEDIMENT, CLAY-SILT (PERCENT)	12	96.9	1.9	93	99					
COLIFORM, FECAL (COL/100 ML)	12	138.2	207.1	3	740					
STREPTOCOCCI, FECAL (COL/100 ML)	12	350.7	432.5	7	1500					
SILICA, DISSOLVED	13	11.39	5.60	3.9	24.0	13	-0.0046	17.7786	-0.331*	5.52
CALCIUM, DISSOLVED	13	97.62	21.67	60.0	130.0	13	0.0464	32.7308	0.869	11.18
MAGNESIUM, DISSOLVED	13	42.31	14.63	18.0	64.0	13	0.0355	-7.4209	0.987	2.45
SODIUM, DISSOLVED	13	125.69	44.52	54.0	190.0	13	0.1083	-25.9435	0.989	6.95
POTASSIUM, DISSOLVED	13	5.39	0.70	4.2	7.0	13	0.0003	4.9475	0.184*	0.72
BICARBONATE, ION	13	193.2	46.6	133	249	13	-0.004	198.858	-0.035*	48.6
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	182.08	81.38	54.0	320.0	13	0.1957	-91.8569	0.977	18.07
CHLORIDE, DISSOLVED	13	245.23	91.43	90.0	390.0	13	0.2199	-62.6206	0.977	20.18
DISSOLVED SOLIDS, SUM OF CONST	13	806.1	244.0	387	1160	13	0.599	-32.761	0.998	15.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	842.5	276.5	405	1260	12	0.659	-67.655	0.997	21.7
HARDNESS, TOTAL	13	416.9	109.6	220	560	13	0.265	46.340	0.981	22.2
HARDNESS, NONCARBONATE	13	259.3	111.1	62	450	13	0.264	-110.714	0.967	29.5
TURBIDITY (JTU)	12	51.3	31.8	10	120	12	-0.039	104.423	-0.506*	28.8
FLOURIDE, DISSOLVED	11	0.40	0.06	0.3	0.5	11	0.0001	0.2275	0.694	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2170	2050	2010	1910	1760	1540	1310	875	700	585

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
301	19.11	9.80	2.83	88	2.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08136700 -- COLORADO RIVER NEAR STACY, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	6	4	1	5
CADMIUM (CD), UG/L	4	< 10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	2
COPPER (CU), UG/L	4	< 10	10	4	1	2
IRON (FE), UG/L	4	670	1600	4	0	50
LEAD (PB), UG/L	4	< 100	< 100	4	0	3
MANGANESE (MN), UG/L	3	50	100	4	0	0
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	1	2	4	0	1
ZINC (ZN), UG/L	4	30	210	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	40.00	82.00			
BIOMASS, ASH WT., G/SQ M	4	36.00	77.00			
CHLOROPHYLL A, MG/SQ M	4	2.2	33.0			
CHLOROPHYLL B, MG/SQ M	4	1.5	3.3			
ORGANIC CARBON, MG/L	4	5.7	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08158000 NAME: COLORADO RIVER AT AUSTIN, TEX.

LAT 30D14M40S LONG 097D41M39S
DRAINAGE AREA: 38400 SQ MI (99456 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.83	5.42	13.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	489.2	26.3	437	531					
STREAMFLOW (CUBIC FT/SEC)	14	4536.1	1736.6	205	6420	12	-25.177	16681.992	-0.362*	1783.9
PH (STANDARD UNITS)	12	7.53	0.20	7.2	7.8	12	-0.0001	7.5887	-0.015*	0.21
PHOSPHORUS, TOTAL	12	0.027	0.021	0.01	0.08	12	-0.00048	0.25904	-0.581	0.018
NITRITE + NITRATE, TOTAL	9	0.310	0.076	0.14	0.38	9	-0.00104	0.82914	-0.227*	0.079
NITROGEN, KJELDAHL, TOTAL	12	0.463	0.186	0.23	0.85	12	-0.00104	0.97187	-0.147*	0.193
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1214.5	1502.7	100	4900	11	12.501	-4936.973	0.211*	1548.2
SEDIMENT, SUSPENDED	12	15.8	17.2	0	63					
SEDIMENT, CLAY-SILT (PERCENT)	12	75.4	23.7	9	91					
COLIFORM, FECAL (COL/100 ML)	12	210.8	272.5	27	760					
STREPTOCOCCI, FECAL (COL/100 ML)	12	261.3	558.4	15	2000					
SILICA, DISSOLVED	12	8.94	0.94	7.9	11.0	12	-0.0056	11.6676	-0.156*	0.97
CALCIUM, DISSOLVED	12	45.67	3.50	40.0	50.0	12	0.1208	-13.4478	0.907	1.55
MAGNESIUM, DISSOLVED	12	17.83	1.53	15.0	21.0	12	0.0484	-5.8554	0.833	0.89
SODIUM, DISSOLVED	12	24.75	1.91	21.0	28.0	12	0.0648	-6.9461	0.890	0.92
POTASSIUM, DISSOLVED	12	3.57	0.48	3.0	4.8	12	0.0026	2.2910	0.143*	0.50
BICARBONATE, ION	12	186.5	10.9	167	204	12	0.398	-8.384	0.964	3.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	30.08	2.75	25.0	35.0	12	0.0660	-2.2146	0.632	2.23
CHLORIDE, DISSOLVED	12	44.50	3.21	37.0	49.0	12	0.0895	0.7123	0.733	2.29
DISSOLVED SOLIDS, SUM OF CONST	12	267.7	16.1	233	289	12	0.586	-18.920	0.957	4.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	273.1	15.1	245	292	12	0.514	21.578	0.893	7.2
HARDNESS, TOTAL	12	187.5	13.6	160	210	12	0.479	-46.916	0.927	5.3
HARDNESS, NONCARBONATE	12	35.0	7.1	23	45	12	0.170	-48.126	0.628	5.8
TURBIDITY (JTU)	12	7.4	5.4	2	20	12	0.000	7.406	0.000*	5.7
FLOURIDE, DISSOLVED	10	0.23	0.05	0.2	0.3	10	0.0004	0.0512	0.138*	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	554	543	534	523	517	501	489	454	445	432

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
269	17.85	6.62	2.37	92	1.35

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08158000 -- COLORADO RIVER AT AUSTIN, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	5	4	1	4
CADMIUM (CD), UG/L	3	< 10	<10	4	0	1
CHROMIUM (CR), UG/L	3	0	10	4	0	10
COBALT (CO), UG/L	3	< 50	<50	4	0	1
COPPER (CU), UG/L	3	< 10	10	4	1	4
IRON (FE), UG/L	3	110	170	4	0	10
LEAD (PB), UG/L	3	<100	<100	4	0	2
MANGANESE (MN), UG/L	3	10	30	4	0	10
MERCURY (HG), UG/L	3	0.0	<0.1	4	0.0	<0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	3	10	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	33.00	200.00			
BIOMASS, ASH WT., G/SQ M	3	24.00	87.00			
CHLOROPHYLL A, MG/SQ M	3	27.0	130.0			
CHLOROPHYLL B, MG/SQ M	3	2.5	29.0			
ORGANIC CARBON, MG/L	10	3.2	27.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08162000 NAME: COLORADO RIVER AT WHARTON, TEX.

LAT 29D18M32S LONG 096D06M13S
DRAINAGE AREA: 41380 SQ MI (107174 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.17	6.28	12.5	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	521.0	47.0	433	575					
STREAMFLOW (CUBIC FT/SEC)	13	4868.5	2436.3	1600	10500	12	-38.284	24804.156	-0.708	1885.4
PH (STANDARD UNITS)	12	7.25	0.52	6.3	8.0	12	0.0050	4.6331	0.458 *	0.48
PHOSPHORUS, TOTAL	12	0.172	0.080	0.06	0.32	12	-0.00075	0.56134	-0.441 *	0.075
NITRITE + NITRATE, TOTAL	11	0.519	0.166	0.25	0.78	11	0.00121	-0.10784	0.356 *	0.164
NITROGEN, KJELDAHL, TOTAL	12	0.541	0.202	0.12	0.85	12	0.00055	0.25453	0.128 *	0.210
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1072.9	1028.6	25	3400	12	8.777	-3499.744	0.401 *	988.1
SEDIMENT, SUSPENDED	12	217.2	148.3	56	630					
SEDIMENT, CLAY-SILT (PERCENT)	12	70.7	25.7	22	98					
COLIFORM, FECAL (COL/100 ML)	12	391.7	702.8	100	2600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	418.2	947.0	32	3400					
SILICA, DISSOLVED	12	10.13	1.89	7.8	15.0	12	0.0074	6.2554	0.185 *	1.95
CALCIUM, DISSOLVED	12	51.75	4.63	42.0	57.0	12	0.0931	3.2301	0.945	1.59
MAGNESIUM, DISSOLVED	12	16.83	2.08	13.0	20.0	12	0.0242	4.2002	0.548 *	1.83
SODIUM, DISSOLVED	12	26.67	2.99	21.0	30.0	12	0.0597	-4.4238	0.937	1.10
POTASSIUM, DISSOLVED	12	3.72	0.22	3.5	4.1	12	-0.0011	4.3200	-0.246 *	0.22
BICARBONATE, ION	12	196.2	17.1	159	220	12	0.346	15.984	0.950	5.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	33.75	4.07	25.0	38.0	12	0.0666	-0.9590	0.770	2.73
CHLORIDE, DISSOLVED	12	44.25	4.31	36.0	49.0	12	0.0760	4.6590	0.829	2.52
DISSOLVED SOLIDS, SUM OF CONST	12	284.3	24.3	233	312	12	0.499	24.250	0.966	6.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	290.9	21.2	248	316	11	0.407	79.381	0.944	7.4
HARDNESS, TOTAL	12	198.3	17.5	160	220	12	0.350	16.116	0.940	6.2
HARDNESS, NONCARBONATE	12	37.8	7.1	27	48	12	0.046	13.619	0.307 *	7.1
TURBIDITY (JTU)	12	60.0	20.6	30	100	12	-0.053	87.729	-0.122 *	21.4
FLOURIDE, DISSOLVED	10	0.26	0.05	0.2	0.3	10	0.0012	-0.3622	0.641	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	635	609	584	572	557	530	486	414	354	264

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
353	21.03	7.80	2.80	87	2.12

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08162000 -- COLORADO RIVER AT WHARTON, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	1	2
CADMIUM (CD), UG/L	4	<10	10	4	0	0
CHROMIUM (CR), UG/L	4	<10	20	4	0	<10
COBALT (CO), UG/L	4	<50	<50	4	0	4
COPPER (CU), UG/L	4	<10	10	4	1	2
IRON (FE), UG/L	4	3100	5700	4	10	30
LEAD (PB), UG/L	4	<100	<100	4	1	5
MANGANESE (MN), UG/L	4	70	210	4	0	0
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	4	30	60	4	0	110
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.3	13.00			
BIOMASS, ASH WT., G/SQ M	4	.79	12.00			
CHLOROPHYLL A, MG/SQ M	4	.0	1.2			
CHLOROPHYLL B, MG/SQ M	4	.0	.1			
ORGANIC CARBON, MG/L	10	4.0	13.0			

STATION NUMBER: 08164500 NAME: NAVIDAD RIVER NR GANADO, TEX.

LAT 29D01M32S LONG 096D33M08S
DRAINAGE AREA: 1063 SQ MI (2753 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.17	5.79	12.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	559.5	226.1	144	801					
STREAMFLOW (CUBIC FT/SEC)	12	426.8	540.0	98	1980	12	-1.868	1471.829	-0.782	353.0
PH (STANDARD UNITS)	12	7.76	0.35	7.0	8.0	12	0.0015	6.9331	0.959	0.10
PHOSPHORUS, TOTAL	12	0.108	0.041	0.06	0.18	12	-0.00014	0.18910	-0.799	0.026
NITRITE + NITRATE, TOTAL	12	0.232	0.169	0.05	0.58	12	0.00049	-0.04279	0.658	0.133
NITROGEN, KJELDAHL, TOTAL	12	0.770	0.321	0.38	1.30	12	-0.00112	1.39877	-0.792	0.206
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2894.5	3019.1	560	8800	11	3.778	638.171	0.242 *	3087.8
SEDIMENT, SUSPENDED	12	97.0	85.0	15	255					
SEDIMENT, CLAY-SILT (PERCENT)	12	82.0	16.9	56	100					
COLIFORM, FECAL (COL/100 ML)	12	954.3	2293.0	31	8200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1439.4	2753.8	63	10000					
SILICA, DISSOLVED	12	20.84	6.11	8.1	30.0	12	0.0158	11.9865	0.585	5.20
CALCIUM, DISSOLVED	12	71.08	35.62	14.0	110.0	12	0.1543	-15.2464	0.979	7.53
MAGNESIUM, DISSOLVED	12	5.95	2.07	2.2	11.0	12	0.0018	4.9685	0.192 *	2.13
SODIUM, DISSOLVED	12	40.83	15.44	11.0	58.0	12	0.0651	4.4006	0.953	4.89
POTASSIUM, DISSOLVED	12	3.50	1.05	2.1	5.4	12	-0.0020	4.6250	-0.431 *	1.00
BICARBONATE, ION	12	236.6	106.6	51	340	12	0.465	-23.558	0.986	18.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	15.57	5.72	6.8	25.0	12	0.0233	2.5192	0.921	2.34
CHLORIDE, DISSOLVED	12	57.25	21.15	17.0	82.0	12	0.0881	7.9808	0.941	7.49
DISSOLVED SOLIDS, SUM OF CONST	12	332.3	130.6	88	473	12	0.577	9.569	0.999	5.9
DISSOLVED SOLIDS, ROE 180 DEG C	11	341.6	126.4	124	467	11	0.534	46.881	0.995	13.4
HARDNESS, TOTAL	12	201.5	89.4	44	300	12	0.392	-17.570	0.991	12.7
HARDNESS, NONCARBONATE	12	8.8	8.1	0	25	12	0.013	1.460	0.369 *	7.9
TURBIDITY (JTU)	12	31.2	45.4	3	170	12	-0.150	115.044	-0.746	31.7
FLOURIDE, DISSOLVED	10	0.31	0.09	0.1	0.4	10	0.0004	0.0815	0.900	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	830	778	752	678	637	527	421	245	202	125

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
243	20.18	7.53	2.93	76	2.84

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08164500 -- NAVIDAD RIVER NR GANADO, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	8	4	1	7
CADMIUM (CD), UG/L	4	< 10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	30	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	0	2
COPPER (CU), UG/L	4	< 10	10	4	0	1
IRON (FE), UG/L	4	0	1000	4	0	470
LEAD (PB), UG/L	4	<100	<100	4	0	1
MANGANESE (MN), UG/L	4	50	100	4	0	20
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	12	4.5	21.0			

STATION NUMBER: 08176500 NAME: GUADALUPE RIVER AT VICTORIA, TEX.

LAT 28D47M34S LONG 097D00M46S
DRAINAGE AREA: 5198 SQ MI (13463 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.88	5.20	14.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	529.8	56.4	422	598					
STREAMFLOW (CUBIC FT/SEC)	12	2839.2	1555.7	1230	6200	12	-19.033	12923.668	-0.691	1180.1
PH (STANDARD UNITS)	12	7.83	0.10	7.7	8.0	12	-0.0001	7.8774	-0.048 *	0.10
PHOSPHORUS, TOTAL	12	0.082	0.043	0.02	0.16	12	-0.00022	0.19991	-0.292 *	0.043
NITRITE + NITRATE, TOTAL	9	0.976	0.228	0.72	1.50	9	0.00261	-0.42782	0.588	0.197
NITROGEN, KJELDAHL, TOTAL	12	0.445	0.080	0.30	0.59	12	0.00001	0.44105	0.005 *	0.084
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	340.3	224.7	84	810	12	0.855	-112.534	0.215 *	230.2
SEDIMENT, SUSPENDED	12	224.0	225.9	19	602					
SEDIMENT, CLAY-SILT (PERCENT)	12	85.9	13.3	55	99					
COLIFORM, FECAL (COL/100 ML)	12	1593.0	2772.0	48	8400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1916.0	2915.3	92	8800					
SILICA, DISSOLVED	12	11.81	1.24	9.7	13.0	12	-0.0033	13.5594	-0.151 *	1.28
CALCIUM, DISSOLVED	12	68.42	6.11	58.0	77.0	12	0.0960	17.5435	0.887	2.96
MAGNESIUM, DISSOLVED	12	15.83	1.47	13.0	18.0	12	0.0142	8.3091	0.546 *	1.29
SODIUM, DISSOLVED	12	23.17	4.75	16.0	29.0	12	0.0736	-15.8456	0.876	2.40
POTASSIUM, DISSOLVED	12	2.57	0.32	2.0	3.0	12	-0.0020	3.6112	-0.346 *	0.31
BICARBONATE, ION	12	255.0	21.2	214	282	12	0.366	61.073	0.973	5.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	29.08	3.48	26.0	36.0	12	0.0426	6.5080	0.692	2.63
CHLORIDE, DISSOLVED	12	33.17	6.35	24.0	44.0	12	0.1056	-22.7790	0.938	2.30
DISSOLVED SOLIDS, SUM OF CONST	12	310.3	29.2	259	348	12	0.507	41.453	0.982	5.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	313.3	28.1	268	347	12	0.455	72.254	0.915	11.9
HARDNESS, TOTAL	12	236.7	17.2	200	260	12	0.291	82.553	0.953	5.5
HARDNESS, NONCARBONATE	12	27.2	6.3	13	34	12	-0.005	29.792	-0.044 *	6.6
TURBIDITY (JTU)	12	37.3	25.1	5	75	12	-0.375	236.260	-0.844	14.1
FLOURIDE, DISSOLVED	10	0.24	0.05	0.2	0.3	10	-0.0000	0.2627	-0.040 *	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	671	619	603	586	570	547	502	398	349	270

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
350	20.94	7.29	2.82	89	1.86

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08176500 -- GUADALUPE RIVER AT VICTORIA, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	4	4	0	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	50	4	0	3
COPPER (CU), UG/L	4	10	<10	4	1	1
IRON (FE), UG/L	4	0	3700	4	0	710
LEAD (PB), UG/L	4	<100	<100	4	0	0
MANGANESE (MN), UG/L	4	10	100	4	0	0
MERCURY (HG), UG/L	4	0.0	1.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	3.0	5.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08188500 NAME: SAN ANTONIO RIVER AT GOLIAD, TEX.

LAT 28D38M58S LONG 097D23M04S
DRAINAGE AREA: 3921 SQ MI (10155 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.75	5.38	12.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	889.0	130.1	673	1100					
STREAMFLOW (CUBIC FT/SEC)	12	775.8	274.5	483	1350	12	-1.843	2414.260	-0.873	140.3
PH (STANDARD UNITS)	12	7.82	0.06	7.7	7.9	12	0.0002	7.6358	0.445 *	0.06
PHOSPHORUS, TOTAL	12	1.382	0.595	0.59	2.20	12	0.00331	-1.55799	0.723	0.431
NITRITE + NITRATE, TOTAL	12	3.492	0.897	1.70	4.60	12	0.00519	-1.11796	0.752	0.620
NITROGEN, KJELDAHL, TOTAL	12	0.969	0.293	0.59	1.60	12	-0.00033	1.26693	-0.149 *	0.304
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2193.6	1741.9	370	5900	11	-0.056	2244.859	-0.004 *	1836.1
SEDIMENT, SUSPENDED	12	277.2	252.9	95	885					
SEDIMENT, CLAY-SILT (PERCENT)	12	97.6	1.6	95	100					
COLIFORM, FECAL (COL/100 ML)	12	1540.5	2048.3	56	6300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1965.8	2421.3	150	8100					
SILICA, DISSOLVED	12	16.08	1.88	12.0	19.0	12	0.0098	7.3525	0.679	1.45
CALCIUM, DISSOLVED	12	93.00	11.34	77.0	110.0	12	0.0747	26.6020	0.857	6.13
MAGNESIUM, DISSOLVED	12	18.92	2.50	15.0	24.0	12	0.0158	4.9082	0.819	1.51
SODIUM, DISSOLVED	12	69.42	18.17	35.0	98.0	12	0.1319	-47.8138	0.944	6.29
POTASSIUM, DISSOLVED	12	5.69	0.97	4.3	7.6	12	0.0045	1.6819	0.602	0.82
BICARBONATE, ION	12	282.4	28.2	242	328	12	0.195	109.444	0.897	13.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	94.08	18.27	64.0	130.0	12	0.1344	-25.4063	0.957	5.57
CHLORIDE, DISSOLVED	12	90.58	22.62	53.0	130.0	12	0.1679	-58.6569	0.966	6.18
DISSOLVED SOLIDS, SUM OF CONST	12	527.9	83.3	395	681	12	0.633	-34.911	0.989	13.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	557.3	88.2	407	700	12	0.672	-39.921	0.990	12.8
HARDNESS, TOTAL	12	311.7	37.6	260	380	12	0.251	88.907	0.866	19.7
HARDNESS, NONCARBONATE	12	79.2	16.2	53	110	12	0.096	-6.455	0.772	10.8
TURBIDITY (JTU)	12	77.9	47.1	35	200	12	-0.202	257.476	-0.558 *	41.0
FLOURIDE, DISSOLVED	10	0.35	0.07	0.3	0.5	10	0.0003	0.0713	0.586	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1160	1110	1070	1010	974	875	799	536	450	328

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	19.09	7.44	2.62	77	2.82

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08188500 -- SAN ANTONIO RIVER AT GOLIAD, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	9	4	0	4
CADMIUM (CD), UG/L	4	<10	< 10	4	0	0
CHROMIUM (CR), UG/L	4	0	30	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	4	0	0
COPPER (CU), UG/L	4	10	20	4	1	2
IRON (FE), UG/L	4	2400	5100	4	10	1100
LEAD (PB), UG/L	4	<100	< 100	4	0	1
MANGANESE (MN), UG/L	4	90	170	4	0	120
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	2	4	1	1
ZINC (ZN), UG/L	4	0	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.09				
BIOMASS, ASH WT., G/SQ M	1	1.09				
CHLOROPHYLL A, MG/SQ M	2	.0	.5			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	12	4.2	24.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08210000 NAME: NUECES RIVER NR. THREE RIVERS, TEX.

LAT 28D26M10S LONG 098D11M06S
DRAINAGE AREA: 15600 SQ MI (40404 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.25	5.70	11.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1182.1	479.0	332	1800					
STREAMFLOW (CUBIC FT/SEC)	12	598.2	746.3	130	2400	12	-1.045	1833.598	-0.671	580.6
PH (STANDARD UNITS)	12	7.77	0.18	7.4	7.9	12	0.0003	7.4564	0.732	0.13
PHOSPHORUS, TOTAL	12	0.131	0.085	0.02	0.28	12	-0.00015	0.30585	-0.834	0.049
NITRITE + NITRATE, TOTAL	12	2.040	1.140	0.17	3.50	12	0.00222	-0.58697	0.934	0.428
NITROGEN, KJELDAHL, TOTAL	12	0.795	0.312	0.36	1.40	12	-0.00029	1.13945	-0.448 *	0.292
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5945.8	11317.4	110	40000	12	3.490	1820.555	0.148 *	11739.5
SEDIMENT, SUSPENDED	12	222.8	421.1	24	1540					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.9	7.8	76	100					
COLIFORM, FECAL (COL/100 ML)	12	1188.1	2032.6	21	7300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1789.3	3300.2	44	12000					
SILICA, DISSOLVED	12	13.42	3.58	7.0	20.0	12	-0.0021	15.9392	-0.286 *	3.60
CALCIUM, DISSOLVED	12	108.58	39.64	31.0	160.0	12	0.0815	12.2025	0.985	7.14
MAGNESIUM, DISSOLVED	12	19.77	8.85	3.1	32.0	12	0.0175	-0.9281	0.948	2.95
SODIUM, DISSOLVED	12	109.42	49.45	30.0	180.0	12	0.1024	-11.6819	0.992	6.46
POTASSIUM, DISSOLVED	12	5.76	1.29	3.5	7.9	12	-0.0008	6.6544	-0.282 *	1.30
BICARBONATE, ION	12	202.8	43.2	94	256	12	0.063	128.416	0.697	32.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	136.92	67.78	34.0	240.0	12	0.1377	-25.8075	0.973	16.47
CHLORIDE, DISSOLVED	12	198.42	100.88	32.0	360.0	12	0.2088	-48.3864	0.991	13.94
DISSOLVED SOLIDS, SUM OF CONST	12	693.0	276.8	193	1050	12	0.577	11.109	0.998	17.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	737.9	301.4	207	1140	12	0.628	-4.246	0.998	20.9
HARDNESS, TOTAL	12	353.3	133.1	90	510	12	0.275	28.505	0.989	20.7
HARDNESS, NONCARBONATE	12	186.8	109.2	13	360	12	0.226	-80.078	0.990	16.1
TURBIDITY (JTU)	12	82.3	113.5	8	330	12	-0.097	197.409	-0.411 *	108.5
FLOURIDE, DISSOLVED	10	0.23	0.08	0.1	0.4	10	0.0000	0.1950	0.181 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2060	1840	1760	1540	1450	1230	949	526	452	352

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
198	22.45	7.90	2.90	89	1.99

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08210000 -- NUECES RIVER NR. THREE RIVERS, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	6	4	0	5
CADMIUM (CD), UG/L	4	<10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	50	4	0	3
COPPER (CU), UG/L	4	<10	<10	4	1	2
IRON (FE), UG/L	4	0	1800	4	0	70
LEAD (PB), UG/L	4	<100	<100	4	0	1
MANGANESE (MN), UG/L	4	50	70	4	0	0
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	6	30	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	6.2	34.00			
BIOMASS, ASH WT., G/SQ M	2	4.59	22.00			
CHLOROPHYLL A, MG/SQ M	2	16.0	21.0			
CHLOROPHYLL B, MG/SQ M	2	1.1	4.5			
ORGANIC CARBON, MG/L	12	2.7	24.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08212400 NAME: LOS OLMOS CREEK NEAR FALFURRIAS, TEX.

LAT 27D15M51S LONG 098D08M08S
DRAINAGE AREA: 480 SQ MI (1243 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	24.05	6.38	10.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	4106.0	1642.3	1180	6910					
STREAMFLOW (CUBIC FT/SEC)	10	0.5	1.6	0	5	10	-0.000	1.097	-0.151 *	1.7
PH (STANDARD UNITS)	10	7.98	0.55	6.9	8.8	10	0.0003	6.8944	0.788	0.36
PHOSPHORUS, TOTAL	10	1.345	0.386	0.75	2.10	10	-0.00004	1.51316	-0.174 *	0.403
NITRITE + NITRATE, TOTAL	10	0.041	0.031	0.01	0.11	10	-0.00001	0.07633	-0.455 *	0.029
NITROGEN, KJELDAHL, TOTAL	10	1.830	0.568	1.20	2.80	10	0.00020	1.02063	0.570 *	0.495
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	60093.0	83175.2	630	230000	10	-11.437	107051.875	-0.226 *	85941.7
SEDIMENT, SUSPENDED	10	23.1	12.9	8	44					
SEDIMENT, CLAY-SILT (PERCENT)	9	96.3	4.2	87	100					
COLIFORM, FECAL (COL/100 ML)	10	1740.0	1189.7	120	3300					
STREPTOCOCCI, FECAL (COL/100 ML)	10	2208.0	1603.3	520	4400					
SILICA, DISSOLVED	10	42.88	16.12	8.8	66.0	10	-0.0025	52.9871	-0.251 *	16.55
CALCIUM, DISSOLVED	10	185.00	75.90	50.0	310.0	10	0.0459	-3.4246	0.993	9.54
MAGNESIUM, DISSOLVED	10	58.90	25.54	17.0	100.0	10	0.0149	-2.2697	0.958	7.79
SODIUM, DISSOLVED	10	660.00	275.08	170.0	1100.0	10	0.1669	-25.1384	0.996	25.24
POTASSIUM, DISSOLVED	10	44.80	18.97	16.0	79.0	10	0.0114	-1.8211	0.983	3.71
BICARBONATE, ION	10	146.4	33.0	78	195	10	0.015	85.259	0.740	23.5
CARBONATE, ION	10	1.4	4.4	0	14	10	0.001	-4.482	0.531 *	4.0
SULFATE, DISSOLVED	10	1013.00	451.07	270.0	1900.0	10	0.2705	-97.5178	0.985	83.27
CHLORIDE, DISSOLVED	10	708.00	307.06	170.0	1200.0	10	0.1851	-52.1433	0.990	45.50
DISSOLVED SOLIDS, SUM OF CONST	10	2790.2	1152.7	762	4770	10	0.701	-89.007	0.999	53.7
DISSOLVED SOLIDS, ROE 180 DEG C	10	2894.3	1223.2	773	4940	10	0.743	-157.646	0.998	82.9
HARDNESS, TOTAL	10	711.0	301.8	190	1200	10	0.182	-35.699	0.990	45.9
HARDNESS, NONCARBONATE	10	588.0	279.2	130	1100	10	0.167	-98.685	0.984	52.9
TURBIDITY (JTU)	10	13.0	7.4	5	30	10	-0.001	16.902	-0.210 *	7.7
FLOURIDE, DISSOLVED	8	1.81	0.82	0.6	3.0	8	0.0004	0.0176	0.987	0.14

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 301

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	7020	6900	6790	5460	4670	4060	3440	2010	1030	220

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
218	21.75	6.93	2.89	76	2.85

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08212400 -- LOS OLMOS CREEK NEAR FALFURRIAS, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	8	18	3	5	17
CADMIUM (CD), UG/L	3	<10	<10	3	0	0
CHROMIUM (CR), UG/L	3	0	20	3	0	20
COBALT (CO), UG/L	3	<50	50	3	0	0
COPPER (CU), UG/L	3	<10	20	3	1	5
IRON (FE), UG/L	3	510	800	3	0	50
LEAD (PB), UG/L	3	<100	200	3	0	1
MANGANESE (MN), UG/L	3	60	200	3	10	10
MERCURY (HG), UG/L	3	0.0	0.0	3	0.0	0.0
SELENIUM (SE), UG/L	3	3	8	3	3	6
ZINC (ZN), UG/L	3	10	40	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	7.7	55.00			
BIOMASS, ASH WT., G/SQ M	3	4.59	43.00			
CHLOROPHYLL A, MG/SQ M	3	8.5	40.0			
CHLOROPHYLL B, MG/SQ M	3	3.3	6.7			
ORGANIC CARBON, MG/L	3	9.3	19.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08251500 NAME: RIO GRANDE NEAR LOBATOS, CO.

LAT 37D04M42S LONG 105D45M22S
DRAINAGE AREA: 7700 SQ MI (19943 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	7	14.86	4.85	6.5	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	7	231.0	41.4	150	285					
STREAMFLOW (CUBIC FT/SEC)	7	797.7	575.1	286	1680	7	-8.423	2743.448	-0.606 *	501.1
PH (STANDARD UNITS)	6	8.45	0.36	8.2	9.0	6	0.0017	8.0696	0.208 *	0.39
PHOSPHORUS, TOTAL	6	0.130	0.046	0.07	0.19	6	-0.00078	0.30984	-0.762 *	0.033
NITRITE + NITRATE, TOTAL	6	0.028	0.036	0.00	0.10	6	-0.00007	0.04512	-0.091 *	0.040
NITROGEN, KJELDAHL, TOTAL	6	0.473	0.199	0.20	0.82	6	-0.00425	1.45871	-0.963	0.060
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	6266.7	2526.4	3300	9600	6	-7.642	7963.211	-0.112 *	2806.8
SEDIMENT, SUSPENDED	6	205.8	329.7	8	861					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	6	22.2	30.3	3	83					
STREPTOCOCCI, FECAL (COL/100 ML)	6	63.3	81.9	8	200					
SILICA, DISSOLVED	7	21.29	2.29	18.0	24.0	7	0.0265	15.1689	0.479 *	2.20
CALCIUM, DISSOLVED	7	22.43	3.99	15.0	28.0	7	0.0948	0.5249	0.982	0.82
MAGNESIUM, DISSOLVED	7	4.27	0.86	2.7	5.5	7	0.0202	-0.4038	0.972	0.22
SODIUM, DISSOLVED	7	14.57	2.64	10.0	17.0	7	0.0590	0.9435	0.926	1.09
POTASSIUM, DISSOLVED	7	3.17	0.29	2.8	3.6	7	0.0038	2.2832	0.543 *	0.27
BICARBONATE, ION	7	78.7	15.6	55	100	7	0.306	7.966	0.810	10.0
CARBONATE, ION	6	0.5	1.2	0	3	6	0.007	-1.038	0.245 *	1.3
SULFATE, DISSOLVED	7	36.29	9.34	23.0	53.0	7	0.1662	-2.1018	0.736 *	6.92
CHLORIDE, DISSOLVED	7	3.79	1.04	2.3	5.3	7	0.0221	-1.3259	0.879	0.54
DISSOLVED SOLIDS, SUM OF CONST	7	145.4	23.7	102	172	7	0.554	17.448	0.966	6.7
DISSOLVED SOLIDS, ROE 180 DEG C	7	152.7	24.1	113	186	7	0.546	26.487	0.940	9.0
HARDNESS, TOTAL	7	73.9	13.4	49	93	7	0.318	0.298	0.986	2.4
HARDNESS, NONCARBONATE	7	8.6	7.0	1	22	7	0.058	-4.832	0.341 *	7.3
TURBIDITY (JTU)	7	13.6	8.0	4	28	7	-0.177	54.388	-0.917	3.5
FLOURIDE, DISSOLVED	7	0.26	0.05	0.2	0.3	7	0.0006	0.1200	0.460 *	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08251500 -- RIO GRANDE NEAR LOBATOS, CO.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	2	7	3	2	4
CADMIUM (CD), UG/L	3	0	<10	3	0	0
CHROMIUM (CR), UG/L	3	0	25	3	0	10
COBALT (CO), UG/L	3	<50	<50	3	0	1
COPPER (CU), UG/L	3	<10	10	3	0	2
IRON (FE), UG/L	3	490	1300	3	20	100
LEAD (PB), UG/L	3	<100	<100	3	0	3
MANGANESE (MN), UG/L	3	90	190	3	0	40
MERCURY (HG), UG/L	3	0.0	1.7	3	0.0	1.0
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	10	50	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.19	42.00			
BIOMASS, ASH WT., G/SQ M	3	2.09	34.00			
CHLOROPHYLL A, MG/SQ M	3	1.0	59.0			
CHLOROPHYLL B, MG/SQ M	3	.5	1.2			
ORGANIC CARBON, MG/L	3	2.7	7.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08313000 NAME: RIO GRANDE AT OTOWI BRIDGE,NM

LAT 35D52M29S LONG 106D08M30S
DRAINAGE AREA: 14300 SQ MI (37037 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	11.47	7.54	0.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	39	343.7	75.7	209	493					
STREAMFLOW (CUBIC FT/SEC)	15	1453.2	1153.7	340	3680	12	-11.664	5659.602	-0.719	934.8
PH (STANDARD UNITS)	27	8.18	0.23	7.8	8.7	27	-0.0001	8.2156	-0.031 *	0.24
PHOSPHORUS, TOTAL	12	0.130	0.075	0.04	0.27	12	-0.00068	0.37551	-0.718	0.055
NITRITE + NITRATE, TOTAL	12	0.132	0.189	0.00	0.70	12	0.00002	0.12397	0.009 *	0.198
NITROGEN, KJELDAHL, TOTAL	12	0.534	0.251	0.09	0.88	12	-0.00194	1.23359	-0.611	0.208
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8525.0	5424.7	3900	22000	12	-14.175	13644.434	-0.207 *	5566.6
SEDIMENT, SUSPENDED	11	3336.3	6335.4	86	18000					
SEDIMENT, CLAY-SILT (PERCENT)	6	41.3	25.7	15	89					
COLIFORM, FECAL (COL/100 ML)	12	600.3	638.9	60	2300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	535.7	718.7	48	2500					
SILICA, DISSOLVED	39	19.18	3.60	15.0	27.0	39	0.0300	8.8610	0.631	2.83
CALCIUM, DISSOLVED	39	40.15	8.46	26.0	56.0	39	0.1029	4.7964	0.921	3.35
MAGNESIUM, DISSOLVED	39	7.14	1.59	4.4	11.0	39	0.0178	1.0329	0.846	0.86
SODIUM, DISSOLVED	39	20.19	6.90	9.7	34.0	39	0.0862	-9.4305	0.946	2.27
POTASSIUM, DISSOLVED	39	2.99	0.57	1.7	4.5	39	0.0056	1.0832	0.737	0.39
BICARBONATE, ION	39	126.2	28.7	85	180	39	0.331	12.459	0.874	14.1
CARBONATE, ION	27	0.1	0.6	0	3	27	0.000	0.084	0.020 *	0.6
SULFATE, DISSOLVED	39	61.44	19.31	28.0	120.0	39	0.2027	-8.2262	0.795	11.88
CHLORIDE, DISSOLVED	39	6.07	2.60	2.6	11.0	39	0.0284	-3.6998	0.830	1.47
DISSOLVED SOLIDS, SUM OF CONST	39	220.6	48.9	131	312	39	0.639	1.176	0.989	7.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	235.3	53.4	152	307	12	0.659	-2.774	0.977	12.0
HARDNESS, TOTAL	39	129.9	27.2	83	180	39	0.340	13.178	0.947	8.8
HARDNESS, NONCARBONATE	39	26.2	15.5	0	66	39	0.061	5.281	0.297 *	15.0
TURBIDITY (JTU)	12	47.9	54.1	7	200	12	-0.256	140.279	-0.374 *	52.6
FLOURIDE, DISSOLVED	39	0.36	0.15	0.2	0.7	39	0.0015	-0.1608	0.773	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	527	477	469	427	393	357	316	253	217	198

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	11.27	9.97	2.72	91	2.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08313000 -- RIO GRANDE AT OTOWI BRIDGE,NM

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	3	4	0	2
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	1
CHROMIUM (CR), UG/L	4	0	30	4	0	< 10
COBALT (CO), UG/L	4	< 50	< 50	4	0	3
COPPER (CU), UG/L	4	< 10	30	4	1	5
IRON (FE), UG/L	4	710	3100	12	10	830
LEAD (PB), UG/L	4	< 100	< 100	4	0	2
MANGANESE (MN), UG/L	4	40	160	4	0	10
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	8	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.29	110.00			
BIOMASS, ASH WT., G/SQ M	2	3.19	100.00			
CHLOROPHYLL A, MG/SQ M	2	2.7	4.0			
CHLOROPHYLL B, MG/SQ M	2	.6	1.0			
ORGANIC CARBON, MG/L	9	3.6	14.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08358300 NAME: RIO GRANDE CV CH AT SAN MARC NM

LAT 33D41M07S LONG 106D59M40S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	18.38	5.25	6.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	19	753.1	112.0	551	879					
STREAMFLOW (CUBIC FT/SEC)	26	531.8	374.7	67	1480	19	-2.965	2695.435	-0.883	181.6
PH (STANDARD UNITS)	7	8.10	0.18	7.9	8.4	7	0.0015	6.9943	0.934	0.07
PHOSPHORUS, TOTAL	17	0.491	0.401	0.13	1.50	17	-0.00139	1.54875	-0.392 *	0.381
NITRITE + NITRATE, TOTAL	15	0.186	0.209	0.02	0.65	15	-0.00122	1.14552	-0.558	0.180
NITROGEN, KJELDAHL, TOTAL	15	1.735	3.190	0.30	13.00	15	-0.00951	9.21222	-0.285 *	3.173
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1993.9	2046.3	27	5800	7	-3.295	4378.063	-0.180 *	2205.1
SEDIMENT, SUSPENDED	15	2865.4	4104.2	390	17200					
SEDIMENT, CLAY-SILT (PERCENT)	5	78.6	20.7	55	95					
COLIFORM, FECAL (COL/100 ML)	7	2794.3	3454.8	200	9700					
STREPTOCOCCI, FECAL (COL/100 ML)	7	1712.9	2529.5	330	7400					
SILICA, DISSOLVED	9	22.11	1.62	20.0	25.0	9	0.0102	15.0434	0.737	1.17
CALCIUM, DISSOLVED	9	63.78	10.71	52.0	82.0	9	0.0904	1.2690	0.984	2.06
MAGNESIUM, DISSOLVED	9	11.90	2.19	9.1	16.0	9	0.0180	-0.5779	0.961	0.65
SODIUM, DISSOLVED	9	67.78	17.18	44.0	100.0	9	0.1382	-27.7640	0.937	6.41
POTASSIUM, DISSOLVED	9	5.46	0.91	4.5	7.4	9	0.0064	1.0478	0.820	0.55
BICARBONATE, ION	9	181.3	23.1	154	217	9	0.178	58.199	0.900	10.8
CARBONATE, ION	7	0.1	0.4	0	1	7	0.002	-1.362	0.614 *	0.3
SULFATE, DISSOLVED	9	142.00	36.28	98.0	210.0	9	0.2988	-64.6630	0.960	10.85
CHLORIDE, DISSOLVED	9	43.00	12.96	26.0	66.0	9	0.1033	-28.4441	0.929	5.13
DISSOLVED SOLIDS, SUM OF CONST	9	448.2	89.5	337	615	9	0.750	-70.212	0.976	20.7
DISSOLVED SOLIDS, ROE 180 DEG C	9	459.2	81.8	356	605	9	0.687	-16.204	0.980	17.4
HARDNESS, TOTAL	9	208.9	35.2	170	270	9	0.299	1.872	0.992	4.7
HARDNESS, NONCARBONATE	9	59.3	18.5	36	91	9	0.151	-44.987	0.949	6.3
TURBIDITY (JTU)	15	1350.5	3617.5	6	14000	15	-7.648	7362.668	-0.202 *	3676.6
FLOURIDE, DISSOLVED	9	0.49	0.12	0.4	0.7	9	0.0004	0.2059	0.409 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 195

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1230	987	885	845	752	675	626	560	518	433

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
196	16.76	7.46	2.57	72	2.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08358300 -- RIO GRANDE CV CH AT SAN MARC NM

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	6	14	3	4	6
CADMIUM (CD), UG/L	3	< 10	20	3	0	0
CHROMIUM (CR), UG/L	3	2	20	3	0	0
COBALT (CO), UG/L	3	< 50	50	3	0	1
COPPER (CU), UG/L	3	20	40	3	1	2
IRON (FE), UG/L	3	17000	25000	9	0	40
LEAD (PB), UG/L	3	< 100	< 100	3	0	0
MANGANESE (MN), UG/L	2	560	740	3	0	0
MERCURY (HG), UG/L	3	0.0	0.0	3	0.0	0.0
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	80	90	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.09	1200.00			
BIOMASS, ASH WT., G/SQ M	3	.79	1100.00			
CHLOROPHYLL A, MG/SQ M	3	1.3	6.3			
CHLOROPHYLL B, MG/SQ M	3	.1	1.0			
ORGANIC CARBON, MG/L	4	7.8	20.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08370500 NAME: RIO GRANDE AT FORT QUITMAN, TEXAS

LAT 31D05M05S LONG 105D36M25S
DRAINAGE AREA: 32035 SQ MI (82971 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.72	6.04	4.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	5640.0	1955.5	2880	9230					
STREAMFLOW (CUBIC FT/SEC)	12	175.6	175.1	31	504	12	-0.069	581.743	-0.874	89.2
PH (STANDARD UNITS)	24	7.98	0.21	7.5	8.3	24	-0.0001	8.2958	-0.532	0.18
PHOSPHORUS, TOTAL	12	0.887	0.762	0.07	2.30	12	-0.00027	2.51112	-0.804	0.475
NITRITE + NITRATE, TOTAL	12	0.332	0.340	0.01	1.00	12	-0.00013	1.08381	-0.832	0.198
NITROGEN, KJELDAHL, TOTAL	12	2.606	1.420	0.93	5.10	12	-0.00043	5.17698	-0.682	1.089
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	28866.7	36447.0	1900	110000	12	7.968	-18258.953	0.487*	33383.9
SEDIMENT, SUSPENDED	10	623.5	951.2	20	2600					
SEDIMENT, CLAY-SILT (PERCENT)	9	65.1	16.3	42	95					
COLIFORM, FECAL (COL/100 ML)	11	3094.5	7694.9	19	26000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1255.3	1700.5	25	4400					
SILICA, DISSOLVED	24	25.29	2.73	18.0	30.0	24	-0.0001	25.7495	-0.058 *	2.78
CALCIUM, DISSOLVED	24	280.83	73.42	170.0	420.0	24	0.0361	77.0005	0.963	20.35
MAGNESIUM, DISSOLVED	24	77.54	30.67	19.0	130.0	24	0.0153	-8.8508	0.976	6.76
SODIUM, DISSOLVED	24	875.00	334.39	400.0	1500.0	24	0.1701	-84.3979	0.995	34.98
POTASSIUM, DISSOLVED	24	15.13	2.33	12.0	19.0	24	0.0010	9.5239	0.834	1.31
BICARBONATE, ION	24	311.0	46.5	228	380	24	-0.001	314.085	-0.023 *	47.5
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	24	900.00	274.53	480.0	1400.0	24	0.1388	117.0991	0.989	41.96
CHLORIDE, DISSOLVED	24	1237.92	516.24	520.0	2100.0	24	0.2625	-242.3306	0.994	56.99
DISSOLVED SOLIDS, SUM OF CONST	24	3571.3	1220.2	1790	5680	24	0.623	58.908	0.998	78.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	3935.0	1488.8	2070	6160	12	0.667	-12.208	0.999	75.9
HARDNESS, TOTAL	24	1020.8	310.7	530	1600	24	0.156	141.840	0.981	61.9
HARDNESS, NONCARBONATE	24	762.9	305.6	290	1300	24	0.152	-96.669	0.975	69.3
TURBIDITY (JTU)	12	229.6	397.2	10	1400	12	-0.036	444.834	-0.204 *	407.8
FLOURIDE, DISSOLVED	9	0.82	0.13	0.7	1.1	9	0.0000	0.6135	0.509 *	0.12

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	9530	9030	8670	8060	7570	6120	4370	3510	2840	1800

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
349	19.14	10.14	3.00	87	2.89

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08370500 -- RIO GRANDE AT FORT QUITMAN, TEXAS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	5	36	4	5	13
CADMIUM (CD), UG/L	4	< 10	10	4	0	0
CHROMIUM (CR), UG/L	4	10	20	4	0	0
COBALT (CO), UG/L	4	< 50	100	4	0	2
COPPER (CU), UG/L	4	10	70	4	1	4
IRON (FE), UG/L	4	410	16000	4	10	1900
LEAD (PB), UG/L	4	< 100	200	4	0	13
MANGANESE (MN), UG/L	4	750	1100	4	30	730
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	180	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	39.00	53.00			
BIOMASS, ASH WT., G/SQ M	3	35.00	47.00			
CHLOROPHYLL A, MG/SQ M	3	6.1	77.0			
CHLOROPHYLL B, MG/SQ M	3	.5	5.5			
ORGANIC CARBON, MG/L	4	7.7	22.0			

STATION NUMBER: 08377200 NAME: RIO GRANDE AT FOSTER RANCH NR LANGTRY, TEXAS

LAT 29D46M50S LONG 101D45M20S
DRAINAGE AREA: 84120 SQ MI (217871 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.83	5.96	11.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	1178.4	309.6	779	1780					
STREAMFLOW (CUBIC FT/SEC)	12	2055.0	1512.1	710	5640	12	-3.592	6948.969	-0.392*	2709.9
PH (STANDARD UNITS)	25	7.83	0.22	7.2	8.1	25	0.0003	7.5243	0.357*	0.21
PHOSPHORUS, TOTAL	12	0.701	0.884	0.01	2.60	12	-0.00190	2.93723	-0.718	0.645
NITRITE + NITRATE, TOTAL	12	0.812	0.302	0.13	1.40	12	-0.00051	1.40636	-0.559*	0.262
NITROGEN, KJELDAHL, TOTAL	12	1.194	1.032	0.28	3.60	12	-0.00145	2.89192	-0.467*	0.957
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	6405.2	6912.7	7	22000	11	-2.422	9146.473	-0.101*	7218.6
SEDIMENT, SUSPENDED	12	2240.8	4335.0	42	14100					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.3	7.3	76	100					
COLIFORM, FECAL (COL/100 ML)	11	673.2	921.6	4	2500					
STREPTOCOCCI, FECAL (COL/100 ML)	11	2213.2	4976.0	23	17000					
SILICA, DISSOLVED	24	22.42	3.73	15.0	29.0	24	0.0017	20.4176	0.141*	3.77
CALCIUM, DISSOLVED	24	93.00	22.49	11.0	130.0	24	0.0459	38.8551	0.632	17.82
MAGNESIUM, DISSOLVED	24	16.54	5.48	8.0	27.0	24	0.0170	-3.4928	0.961	1.55
SODIUM, DISSOLVED	24	131.21	44.02	71.0	220.0	24	0.1403	-34.1178	0.987	7.33
POTASSIUM, DISSOLVED	24	6.58	1.14	5.2	9.8	24	0.0021	4.1242	0.569	0.95
BICARBONATE, ION	24	191.5	25.4	116	228	24	0.035	149.954	0.430*	23.4
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	24	287.08	56.68	200.0	390.0	24	0.1654	92.1150	0.904	24.83
CHLORIDE, DISSOLVED	25	97.24	62.31	23.0	220.0	25	0.1996	-136.2238	0.982	12.17
DISSOLVED SOLIDS, SUM OF CONST	23	763.2	182.4	502	1130	23	0.578	76.095	0.992	24.2
DISSOLVED SOLIDS, ROE 180 DEG C	11	778.6	213.1	525	1140	11	0.608	62.740	0.998	14.4
HARDNESS, TOTAL	23	310.9	55.3	220	430	23	0.166	113.529	0.940	19.3
HARDNESS, NONCARBONATE	23	153.0	49.1	90	250	23	0.135	-6.877	0.858	25.8
TURBIDITY (JTU)	11	1135.9	2178.7	15	7000	11	-3.842	5486.359	-0.554*	1912.1
FLOURIDE, DISSOLVED	10	1.21	0.27	0.7	1.5	10	0.0003	0.9077	0.354*	0.27

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1810	1710	1650	1590	1290	1090	970	837	725	571

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
334	22.20	7.33	2.98	89	1.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08377200 -- RIO GRANDE AT FOSTER RANCH NR LANGTRY, TEXAS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	8	140	4	1	11
CADMIUM (CD), UG/L	4	< 10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	150	4	0	10
COBALT (CO), UG/L	4	0	250	4	0	1
COPPER (CU), UG/L	4	< 10	210	4	1	3
IRON (FE), UG/L	4	260	200000	4	10	3400
LEAD (PB), UG/L	4	<100	500	4	1	20
MANGANESE (MN), UG/L	4	40	5600	4	0	50
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.4
SELENIUM (SE), UG/L	4	1	7	4	1	2
ZINC (ZN), UG/L	4	30	920	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	3.80				
BIOMASS, ASH WT., G/SQ M	1	3.09				
CHLOROPHYLL A, MG/SQ M	1	.6				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	4	3.2	22.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08407500 NAME: PECOS R AT RED BLUFF,NM

LAT 32D04M30S LONG 104D02M21S
DRAINAGE AREA: 19540 SQ MI (50609 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.71	7.26	6.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	11520.8	2705.7	7800	16200					
STREAMFLOW (CUBIC FT/SEC)	12	82.2	51.4	25	178	12	-0.016	261.623	-0.820	30.9
PH (STANDARD UNITS)	12	8.28	0.27	8.0	8.8	12	-0.0001	9.0562	-0.674	0.21
PHOSPHORUS, TOTAL	12	0.073	0.031	0.03	0.14	12	-0.00001	0.16060	-0.652	0.025
NITRITE + NITRATE, TOTAL	12	0.383	0.490	0.00	1.30	12	-0.00012	1.77617	-0.668	0.383
NITROGEN, KJELDAHL, TOTAL	12	1.181	0.366	0.61	1.80	12	0.00003	0.81678	0.234 *	0.373
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	77708.3	73783.6	7500	230000	12	-3.730	120683.938	-0.137 *	76656.6
SEDIMENT, SUSPENDED	12	32.1	19.3	9	80					
SEDIMENT, CLAY-SILT (PERCENT)	12	73.0	26.0	10	98					
COLIFORM, FECAL (COL/100 ML)	12	13.5	14.6	0	40					
STREPTOCOCCI, FECAL (COL/100 ML)	12	20.2	16.5	0	56					
SILICA, DISSOLVED	12	7.67	3.82	0.7	11.0	12	0.0004	3.2325	0.273 *	3.85
CALCIUM, DISSOLVED	12	467.50	72.25	310.0	550.0	12	0.0109	342.3914	0.407 *	69.23
MAGNESIUM, DISSOLVED	12	213.33	61.55	130.0	290.0	12	0.0168	19.4321	0.740	43.42
SODIUM, DISSOLVED	12	2075.00	629.75	1200.0	2900.0	12	0.2182	-439.3306	0.938	229.54
POTASSIUM, DISSOLVED	12	72.83	33.45	26.0	120.0	12	0.0114	-57.9457	0.918	13.90
BICARBONATE, ION	12	129.5	39.3	78	186	12	-0.007	205.193	-0.452 *	36.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	1725.00	349.35	1100.0	2100.0	12	0.0805	797.2676	0.624	286.41
CHLORIDE, DISSOLVED	12	3425.00	1050.65	2000.0	4900.0	12	0.3567	-684.3906	0.919	435.51
DISSOLVED SOLIDS, SUM OF CONST	12	8058.3	2077.8	5350	10900	12	0.694	64.520	0.904	933.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	8280.8	2113.9	5600	11300	12	0.728	-103.980	0.932	806.1
HARDNESS, TOTAL	12	2041.7	405.5	1400	2500	12	0.096	934.139	0.641	326.3
HARDNESS, NONCARBONATE	12	1941.7	437.9	1200	2500	12	0.104	746.867	0.641	352.6
TURBIDITY (JTU)	12	6.7	5.7	1	21	12	0.000	5.658	0.042 *	6.0
FLOURIDE, DISSOLVED	12	0.71	0.12	0.5	0.9	12	0.0000	0.4378	0.546 *	0.1C

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	19500	17600	16700	15700	14900	12500	9090	8140	7050	3370

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	18.95	10.91	2.91	95	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08407500 -- PECOS R AT RED BLUFF,NM

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	2
CADMIUM (CD), UG/L	4	< 10	30	4	0	1
CHROMIUM (CR), UG/L	4	10	30	4	< 10	20
COBALT (CO), UG/L	4	< 50	300	4	0	2
COPPER (CU), UG/L	4	10	40	4	1	12
IRON (FE), UG/L	4	120	490	12	10	20
LEAD (PB), UG/L	4	100	200	4	0	1
MANGANESE (MN), UG/L	4	80	170	4	30	90
MERCURY (HG), UG/L	4	0.0	< 0.1	4	0.0	< 0.1
SELENIUM (SE), UG/L	4	1	2	4	1	2
ZINC (ZN), UG/L	4	20	60	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	13.00				
BIOMASS, ASH WT., G/SQ M	1	12.00				
CHLOROPHYLL A, MG/SQ M	1	5.0				
CHLOROPHYLL B, MG/SQ M	1	.6				
ORGANIC CARBON, MG/L	9	6.5	14.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08447410 NAME: PECOS R NR LANGTRY, TEXAS

LAT 29D48M10S LONG 101D26M45S
DRAINAGE AREA: 35179 SQ MI (91114 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.13	6.83	8.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	3858.3	1224.5	2050	5400					
STREAMFLOW (CUBIC FT/SEC)	12	627.5	769.1	270	3000	12	-0.117	1055.269	-0.207 *	789.1
PH (STANDARD UNITS)	24	7.92	0.16	7.5	8.1	24	0.0000	7.7788	0.291 *	0.16
PHOSPHORUS, TOTAL	12	0.045	0.100	0.00	0.36	12	-0.00003	0.17536	-0.443 *	0.094
NITRITE + NITRATE, TOTAL	12	1.837	0.723	0.95	3.00	12	0.00034	0.54918	0.607	0.603
NITROGEN, KJELDAHL, TOTAL	12	0.404	0.185	0.17	0.86	12	-0.00009	0.74935	-0.634	0.150
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4813.3	5704.4	760	18000	12	-0.040	4964.914	-0.009 *	5982.5
SEDIMENT, SUSPENDED	12	74.5	190.2	3	677					
SEDIMENT, CLAY-SILT (PERCENT)	12	78.3	22.7	32	99					
COLIFORM, FECAL (COL/100 ML)	12	223.8	748.3	2	2600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	591.3	1923.9	15	6700					
SILICA, DISSOLVED	24	15.06	3.07	9.4	19.0	24	-0.0010	19.0185	-0.410 *	2.86
CALCIUM, DISSOLVED	24	176.21	49.92	99.0	250.0	24	0.0374	31.9343	0.917	20.34
MAGNESIUM, DISSOLVED	24	80.08	27.58	36.0	120.0	24	0.0221	-4.9989	0.979	5.74
SODIUM, DISSOLVED	24	533.33	194.68	260.0	770.0	24	0.1584	-78.0154	0.997	16.45
POTASSIUM, DISSOLVED	24	9.83	2.75	5.4	15.0	24	0.0019	2.3352	0.864	1.42
BICARBONATE, ION	24	194.8	24.4	140	242	24	0.013	144.519	0.653	18.9
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	24	513.75	180.65	230.0	760.0	24	0.1414	-31.9338	0.959	52.56
CHLORIDE, DISSOLVED	24	882.08	333.28	410.0	1300.0	24	0.2706	-162.0615	0.994	36.47
DISSOLVED SOLIDS, SUM OF CONST	24	2312.1	785.0	1170	3310	24	0.640	-155.406	0.998	56.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	2334.5	856.8	1320	3380	11	0.650	-69.750	0.999	39.0
HARDNESS, TOTAL	24	767.5	227.6	430	1100	24	0.182	65.971	0.978	48.2
HARDNESS, NONCARBONATE	24	610.8	217.8	270	890	24	0.173	-55.655	0.971	53.0
TURBIDITY (JTU)	12	25.9	73.8	1	260	12	-0.024	116.421	-0.418 *	70.3
FLOURIDE, DISSOLVED	10	0.83	0.14	0.7	1.2	10	0.0001	0.5756	0.593 *	0.12

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	20.26	8.43	2.70	86	2.83

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08447410 -- PECOS R NR LANGTRY, TEXAS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	12	4	1	4
CADMIUM (CD), UG/L	4	< 10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	50	4	0	1
COPPER (CU), UG/L	4	< 10	30	4	0	1
IRON (FE), UG/L	4	140	7600	4	10	70
LEAD (PB), UG/L	4	< 100	< 100	4	0	3
MANGANESE (MN), UG/L	4	20	460	4	0	0
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	30	110	4	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.09	3.10			
BIOMASS, ASH WT., G/SQ M	2	.00	1.50			
CHLOROPHYLL A, MG/SQ M	2	.2	1.8			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	4	1.5	25.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08459000 NAME: RIO GRANDE AT LAREDO, TEX.

LAT 27D29M50S LONG 099D29M40S
DRAINAGE AREA: 135976 SQ MI (352178 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.83	5.47	14.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	887.5	109.9	590	1070					
STREAMFLOW (CUBIC FT/SEC)	12	5381.7	4015.7	1660	13800	12	-21.388	24538.504	-0.615	3319.5
PH (STANDARD UNITS)	24	7.82	0.17	7.5	8.1	24	0.0003	7.5965	0.164 *	0.17
PHOSPHORUS, TOTAL	12	0.101	0.095	0.01	0.38	12	-0.00045	0.50419	-0.546 *	0.084
NITRITE + NITRATE, TOTAL	12	0.549	0.132	0.30	0.73	12	-0.00022	0.74417	-0.191 *	0.136
NITROGEN, KJELDAHL, TOTAL	12	0.517	0.175	0.26	0.88	12	-0.00028	0.76925	-0.186 *	0.180
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3513.3	7215.3	120	26000	12	26.265	-20011.273	0.421 *	6865.3
SEDIMENT, SUSPENDED	12	302.5	676.3	9	2440					
SEDIMENT, CLAY-SILT (PERCENT)	12	82.8	17.1	47	100					
COLIFORM, FECAL (COL/100 ML)	12	1289.5	2358.0	84	7800					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2013.3	3485.8	120	11000					
SILICA, DISSOLVED	14	14.57	1.55	11.0	17.0	14	0.0051	9.9693	0.356 *	1.51
CALCIUM, DISSOLVED	24	73.04	6.58	63.0	90.0	24	0.0450	33.1119	0.751	4.44
MAGNESIUM, DISSOLVED	24	15.23	2.23	9.5	19.0	24	0.0188	-1.4931	0.931	0.83
SODIUM, DISSOLVED	24	87.04	13.60	44.0	110.0	24	0.1190	-18.5935	0.962	3.80
POTASSIUM, DISSOLVED	14	4.73	0.54	3.9	5.7	14	0.0008	3.9800	0.167 *	0.55
BICARBONATE, ION	24	155.9	10.6	134	184	24	0.042	119.023	0.433 *	9.7
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	14	174.29	23.11	140.0	220.0	14	0.1941	-0.9116	0.911	9.94
CHLORIDE, DISSOLVED	24	94.38	18.89	51.0	120.0	24	0.1637	-50.9537	0.953	5.86
DISSOLVED SOLIDS, SUM OF CONST	14	550.4	63.8	441	656	14	0.574	31.946	0.976	14.4
DISSOLVED SOLIDS, RUE 180 DEG C	12	569.8	67.6	468	674	12	0.578	52.268	0.987	11.4
HARDNESS, TOTAL	24	245.4	24.5	200	290	24	0.195	72.529	0.874	12.1
HARDNESS, NONCARBONATE	24	118.1	20.9	73	160	24	0.163	-26.806	0.861	10.9
TURBIDITY (JTU)	11	38.2	17.9	20	70	11	-0.014	50.770	-0.094 *	18.8
FLOURIDE, DISSOLVED	10	0.61	0.07	0.5	0.7	10	0.0006	0.0693	0.669	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1120	1060	1030	1000	972	916	863	774	732	569

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	24.48	1.22	4.29	28	1.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08459000 -- RIO GRANDE AT LAREDO, TEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	8	4	0	5
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	0	2
COPPER (CU), UG/L	4	< 10	20	4	1	1
IRON (FE), UG/L	4	0	2200	4	0	670
LEAD (PB), UG/L	4	<100	< 100	4	0	0
MANGANESE (MN), UG/L	4	30	80	4	0	5
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.2
SELENIUM (SE), UG/L	4	1	4	4	0	1
ZINC (ZN), UG/L	4	8	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	2.8	15.0			

STATION NUMBER: 08475000 NAME: RIO GRANDE NEAR BROWNSVILLE, TEXAS

LAT 25D52M35S LONG 097D27M15S
DRAINAGE AREA: 182215 SQ MI (471937 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	26.88	5.16	15.0	33.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1160.6	175.7	945	1460					
STREAMFLOW (CUBIC FT/SEC)	8	7901.3	3254.3	2220	13000					
PH (STANDARD UNITS)	12	7.75	0.21	7.2	8.0	12	0.0003	7.3915	0.257 *	0.21
PHOSPHORUS, TOTAL	12	0.234	0.106	0.07	0.40	12	-0.00009	0.34305	-0.156 *	0.110
NITRITE + NITRATE, TOTAL	12	0.302	0.412	0.01	1.50	12	0.00011	0.17490	0.047 *	0.432
NITROGEN, KJELDAHL, TOTAL	12	1.193	0.659	0.44	2.90	12	0.00226	-1.42980	0.603	0.551
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	67750.0	64766.9	10000	230000	12	-71.114	150283.438	-0.193 *	66650.9
SEDIMENT, SUSPENDED	21	578.7	633.7	22	2500					
SEDIMENT, CLAY-SILT (PERCENT)	21	93.9	5.5	81	100					
COLIFORM, FECAL (COL/100 ML)	12	2723.3	3065.1	16	7100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2553.5	3093.1	20	8200					
SILICA, DISSOLVED	12	13.33	1.78	10.0	17.0	12	0.0052	7.2832	0.516 *	1.59
CALCIUM, DISSOLVED	12	83.17	15.61	64.0	110.0	12	0.0683	3.8552	0.769	10.46
MAGNESIUM, DISSOLVED	12	22.17	4.49	17.0	30.0	12	0.0205	-1.6073	0.802	2.81
SODIUM, DISSOLVED	12	130.00	22.96	110.0	180.0	12	0.1121	-0.0456	0.857	12.39
POTASSIUM, DISSOLVED	12	5.90	0.79	5.0	7.9	12	0.0032	2.2048	0.707	0.59
BICARBONATE, ION	12	159.4	32.2	120	215	12	0.128	11.162	0.696	24.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	235.00	34.25	190.0	310.0	12	0.1714	36.0524	0.880	17.08
CHLORIDE, DISSOLVED	12	147.50	28.00	120.0	200.0	12	0.1477	-23.8804	0.927	11.04
DISSOLVED SOLIDS, SUM OF CONST	12	716.9	106.3	586	930	12	0.593	28.315	0.981	21.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	750.5	109.8	598	942	11	0.589	62.761	0.978	24.2
HARDNESS, TOTAL	12	300.0	57.2	230	400	12	0.260	-1.193	0.797	36.2
HARDNESS, NONCARBONATE	12	169.2	31.2	130	220	12	0.152	-6.956	0.855	16.9
TURBIDITY (JTU)	11	67.1	63.8	8	230	11	-0.231	329.327	-0.564 *	55.5
FLOURIDE, DISSOLVED	10	0.65	0.13	0.4	0.9	10	0.0004	0.1463	0.605 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2150	1590	1500	1370	1280	1160	1100	1000	935	694

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
19	25.28	5.76	2.64	57	3.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08475000 -- RIO GRANDE NEAR BROWNSVILLE, TEXAS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	6	4	0	4
CADMIUM (CD), UG/L	4	< 10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	20
COBALT (CO), UG/L	4	< 50	< 50	4	0	0
COPPER (CU), UG/L	4	< 10	20	4	1	1
IRON (FE), UG/L	4	0	6000	4	0	40
LEAD (PB), UG/L	4	<100	100	4	0	0
MANGANESE (MN), UG/L	4	100	220	4	0	100
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	6.0	12.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 08481500 NAME: RIO TULAROSA NEAR BENT, N. MEX.

LAT 33D08M41S LONG 105D53M50S
DRAINAGE AREA: 120 SQ MI (311 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	12.42	5.75	3.0	21.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	1534.3	164.8	1360	2100					
STREAMFLOW (CUBIC FT/SEC)	19	11.6	1.1	9	14	16	-0.003	15.667	-0.370 *	1.2
PH (STANDARD UNITS)	13	7.91	0.25	7.7	8.4	13	0.0002	7.5309	0.174 *	0.26
PHOSPHORUS, TOTAL	8	0.154	0.220	0.01	0.66	8	0.00015	-0.07333	0.152 *	0.235
NITRITE + NITRATE, TOTAL	8	0.421	0.093	0.24	0.55	8	0.00010	0.26105	0.254 *	0.097
NITROGEN, KJELDAHL, TOTAL	8	0.587	0.561	0.20	1.90	8	0.00024	0.22022	0.097 *	0.604
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	922.5	676.4	0	1700	8	0.545	70.892	0.186 *	717.8
SEDIMENT, SUSPENDED	11	347.8	385.4	38	1240					
SEDIMENT, CLAY-SILT (PERCENT)	11	72.5	18.5	34	90					
COLIFORM, FECAL (COL/100 ML)	8	54.4	89.4	0	260					
STREPTOCOCCI, FECAL (COL/100 ML)	8	235.8	434.0	5	1300					
SILICA, DISSOLVED	13	14.15	1.21	12.0	16.0	13	-0.0008	15.4199	-0.122 *	1.26
CALCIUM, DISSOLVED	13	231.54	41.60	200.0	360.0	13	0.2197	-108.4855	0.958	12.45
MAGNESIUM, DISSOLVED	13	61.62	4.84	52.0	68.0	13	0.0111	44.3821	0.417 *	4.59
SODIUM, DISSOLVED	13	46.23	4.02	38.0	52.0	13	0.0071	35.2372	0.320 *	3.98
POTASSIUM, DISSOLVED	13	1.91	0.62	1.4	3.7	13	-0.0001	2.0321	-0.023 *	0.65
BICARBONATE, ION	13	240.2	19.8	200	274	13	0.054	156.956	0.493 *	18.0
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	13	608.46	104.15	530.0	920.0	13	0.5318	-214.5894	0.926	40.97
CHLORIDE, DISSOLVED	13	63.23	5.70	54.0	71.0	13	0.0056	54.6277	0.177 *	5.86
DISSOLVED SOLIDS, SUM OF CONST	13	1150.0	150.8	1010	1600	13	0.797	-83.925	0.959	44.4
DISSOLVED SOLIDS, ROE 180 DEG C	9	1222.2	161.3	1040	1600	9	0.707	113.419	0.949	54.6
HARDNESS, TOTAL	13	833.8	121.1	730	1200	13	0.640	-156.096	0.958	36.1
HARDNESS, NONCARBONATE	13	636.2	106.0	550	960	13	0.545	-207.535	0.933	39.7
TURBIDITY (JTU)	8	69.6	71.4	4	180	8	0.125	-125.118	0.403 *	70.6
FLOURIDE, DISSOLVED	13	0.49	0.08	0.4	0.7	13	0.0001	0.3749	0.181 *	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
16	12.96	6.87	2.73	55	4.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

08481500 -- RIO TULAROSA NEAR BENT, N. MEX.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	19	3	1	2
CADMIUM (CD), UG/L	3	< 10	10	3	0	0
CHROMIUM (CR), UG/L	3	10	50	3	0	10
COBALT (CO), UG/L	3	< 50	50	3	0	2
COPPER (CU), UG/L	3	10	50	3	1	2
IRON (FE), UG/L	3	850	25000	9	0	40
LEAD (PB), UG/L	3	100	100	3	0	1
MANGANESE (MN), UG/L	3	40	950	3	0	30
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.1
SELENIUM (SE), UG/L	3	1	2	3	1	1
ZINC (ZN), UG/L	3	30	110	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.00	13.00			
BIOMASS, ASH WT., G/SQ M	3	1.69	13.00			
CHLOROPHYLL A, MG/SQ M	3	.0	1.5			
CHLOROPHYLL B, MG/SQ M	3	.0	.1			
ORGANIC CARBON, MG/L	5	2.0	9.5			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09152500 NAME: GUNNISON RIVER NEAR GRAND JUNCTION, CO.

LAT 38D59M00S LONG 108D27M00S
DRAINAGE AREA: 7928 SQ MI (20534 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	11.44	7.67	0.5	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	1060.8	432.3	414	1600					
STREAMFLOW (CUBIC FT/SEC)	8	2586.3	2007.2	880	7000	8	-3.812	6392.309	-0.791	1325.9
PH (STANDARD UNITS)	8	7.68	.40	7.0	8.1	8	0.0005	7.2907	0.747	0.23
PHOSPHORUS, TOTAL	4	0.167	0.069	0.09	0.24	4	-0.00000	0.16841	-0.006 *	0.085
NITRITE + NITRATE, TOTAL	4	1.137	0.579	0.35	1.70	4	0.00111	-0.14826	0.946 *	0.231
NITROGEN, KJELDAHL, TOTAL	4	0.685	0.367	0.38	1.20	4	0.00004	0.63786	0.055 *	0.449
PHYTOPLANKTON, TOTAL (CELLS/ML)	4	4250.0	2000.8	1800	6700	4	1.274	2769.387	0.315 *	2325.5
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	4	170.0	66.8	70	210					
STREPTOCOCCI, FECAL (COL/100 ML)	2	110.0	14.1	100	120					
SILICA, DISSOLVED	9	13.87	2.88	9.8	18.0	9	0.0041	9.4884	0.619 *	2.42
CALCIUM, DISSOLVED	9	113.78	50.98	46.0	180.0	9	0.1144	-7.5702	0.970	13.24
MAGNESIUM, DISSOLVED	9	40.22	17.40	14.0	66.0	9	0.0396	-1.8331	0.985	3.20
SODIUM, DISSOLVED	9	70.44	31.19	24.0	110.0	9	0.0716	-5.4808	0.992	4.22
POTASSIUM, DISSOLVED	9	3.99	1.21	2.1	5.9	9	0.0027	1.1238	0.963	0.35
BICARBONATE, ION	9	180.4	42.6	104	232	9	0.094	80.583	0.954	13.6
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	416.67	216.91	100.0	720.0	9	0.4970	-110.5310	0.991	31.87
CHLORIDE, DISSOLVED	9	9.91	4.25	3.5	15.0	9	0.0089	0.4651	0.907	1.92
DISSOLVED SOLIDS, SUM OF CONST	9	762.2	343.3	265	1210	9	0.789	-74.925	0.994	40.9
DISSOLVED SOLIDS, ROE 180 DEG C	0									
HARDNESS, TOTAL	9	450.0	197.4	170	700	9	0.451	-28.311	0.988	33.0
HARDNESS, NONCARBONATE	9	303.1	163.4	68	520	9	0.370	-89.847	0.980	34.6
TURBIDITY (JTU)	0									
FLOURIDE, DISSOLVED	9	0.42	0.17	0.2	0.6	9	0.0003	0.0552	0.872	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
34	10.82	10.86	2.63	88	1.91

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09152500 -- GUNNISON RIVER NEAR GRAND JUNCTION, CO.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	1	2		1	1	
CADMIUM (CD), UG/L	1	< 10		1	1	
CHROMIUM (CR), UG/L	1	10		1	10	
COBALT (CO), UG/L	1	< 50		1	0	
COPPER (CU), UG/L	1	10		1	5	
IRON (FE), UG/L	1	1000		9	10	90
LEAD (PB), UG/L	1	< 100		1	2	
MANGANESE (MN), UG/L	1	60		9	0	40
MERCURY (HG), UG/L	1	0.0		1	0.0	
SELENIUM (SE), UG/L	1	21		1	16	
ZINC (ZN), UG/L	1	30		1	0	
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	1	4.7				

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09163530 NAME: COLORADO RIVER BELOW COLORADO-UTAH STATE LINE

LAT 39D05M18S LONG 109D06M01S
DRAINAGE AREA: 17900 SQ MI (46361 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	7	13.29	7.83	0.0	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	7	1008.4	381.2	420	1430					
STREAMFLOW (CUBIC FT/SEC)	7	7928.6	6990.6	2500	22000	7	-15.036	23091.449	-0.820	4382.8
PH (STANDARD UNITS)	4	8.10	0.16	7.9	8.3	4	0.0003	7.8502	0.742 *	0.13
PHOSPHORUS, TOTAL	4	0.175	0.070	0.11	0.24	4	0.00006	0.12138	0.374 *	0.079
NITRITE + NITRATE, TOTAL	4	0.660	0.375	0.27	1.10	4	0.00079	-0.10169	0.984 *	0.083
NITROGEN, KJELDAHL, TOTAL	4	0.695	0.289	0.43	1.10	4	0.00033	0.37475	0.538 *	0.298
PHYTOPLANKTON, TOTAL (CELLS/ML)	4	2450.0	1436.4	1000	4200	4	0.884	1596.499	0.288 *	1684.7
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	4	184.5	76.9	78	250					
STREPTOCOCCI, FECAL (COL/100 ML)	2	150.0	70.7	100	200					
SILICA, DISSOLVED	7	10.39	1.46	8.5	13.0	7	0.0023	8.0543	0.602 *	1.28
CALCIUM, DISSOLVED	7	96.43	39.11	44.0	150.0	7	0.0942	1.4609	0.918	16.99
MAGNESIUM, DISSOLVED	7	32.29	13.34	14.0	47.0	7	0.0340	-2.0509	0.973	3.36
SODIUM, DISSOLVED	7	85.57	38.39	26.0	120.0	7	0.0995	-14.7994	0.988	6.39
POTASSIUM, DISSOLVED	7	3.81	1.23	1.8	5.1	7	0.0031	0.6625	0.965	0.35
BICARBONATE, ION	7	172.3	35.4	115	223	7	0.087	84.770	0.936	13.7
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	7	303.29	159.93	93.0	500.0	7	0.3949	-94.9768	0.941	59.08
CHLORIDE, DISSOLVED	7	68.29	30.69	19.0	98.0	7	0.0771	-9.4993	0.958	9.60
DISSOLVED SOLIDS, SUM OF CONST	7	688.9	294.1	265	1040	7	0.754	-71.255	0.977	68.7
DISSOLVED SOLIDS, ROE 180 DEG C	0									
HARDNESS, TOTAL	7	374.3	151.1	170	570	7	0.375	-4.159	0.947	53.2
HARDNESS, NONCARBONATE	7	233.3	129.1	73	400	7	0.306	-75.789	0.905	60.1
TURBIDITY (JTU)	0									
FLOURIDE, DISSOLVED	7	0.36	0.11	0.2	0.5	7	0.0002	0.1194	0.793	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2280	1870	1700	1500	1400	1130	921	480	448	404

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
274	12.33	7.98	2.57	83	2.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09163530 -- COLORADO RIVER BELOW COLORADO-UTAH STATE LINE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	1	3		1	1	
CADMIUM (CD), UG/L	1	< 10		1	2	
CHROMIUM (CR), UG/L	1	10		1	10	
COBALT (CO), UG/L	1	< 50		1	0	
COPPER (CU), UG/L	1	< 10		1	5	
IRON (FE), UG/L	1	1700		7	0	50
LEAD (PB), UG/L	1	< 100		1	0	
MANGANESE (MN), UG/L	1	60		7	0	50
MERCURY (HG), UG/L	1	0.0		1	0.0	
SELENIUM (SE), UG/L	1	16		1	15	
ZINC (ZN), UG/L	1	70		1	10	
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	1	4.7				

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09180500 NAME: COLORADO RIVER NEAR CISCO UTAH

LAT 38D48M38S LONG 109D17M34S
DRAINAGE AREA: 24100 SQ MI (62419 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	11.30	6.34	0.0	21.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	1173.3	423.2	330	1550					
STREAMFLOW (CUBIC FT/SEC)	14	8155.0	8186.9	2970	27000	14	-16.522	27179.430	-0.868	4227.5
PH (STANDARD UNITS)	15	8.20	0.27	7.8	8.5	15	0.0001	8.1263	0.099 *	0.28
PHOSPHORUS, TOTAL	12	0.204	0.180	0.03	0.57	12	-0.00015	0.37153	-0.378 *	0.175
NITRITE + NITRATE, TOTAL	12	0.684	0.346	0.10	1.30	12	0.00066	-0.04492	0.858	0.187
NITROGEN, KJELDAHL, TOTAL	12	1.018	0.544	0.37	1.90	12	-0.00035	1.41101	-0.294 *	0.545
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4908.3	3503.4	1400	12000	12	0.335	4537.227	0.043 *	3670.9
SEDIMENT, SUSPENDED	8	1298.1	1673.0	138	5230					
SEDIMENT, CLAY-SILT (PERCENT)	2	536.5	618.7	99	974					
COLIFORM, FECAL (COL/100 ML)	12	102.7	141.1	2	460					
STREPTOCOCCI, FECAL (COL/100 ML)	12	153.2	140.8	11	430					
SILICA, DISSOLVED	13	9.68	1.47	7.2	13.0	13	0.0025	6.8849	0.745	1.02
CALCIUM, DISSOLVED	13	95.23	37.05	37.0	150.0	13	0.0757	9.1895	0.907	16.28
MAGNESIUM, DISSOLVED	13	32.42	13.49	9.5	49.0	13	0.0291	-0.6454	0.958	4.05
SODIUM, DISSOLVED	13	111.85	53.13	17.0	160.0	13	0.1160	-20.0803	0.970	13.44
POTASSIUM, DISSOLVED	13	4.94	1.63	1.6	6.7	13	0.0035	0.9362	0.961	0.47
BICARBONATE, ION	13	174.2	39.8	99	222	13	0.088	74.380	0.980	8.2
CARBONATE, ION	13	1.1	2.8	0	10	13	0.002	-1.239	0.329 *	2.7
SULFATE, DISSOLVED	13	302.31	155.58	59.0	540.0	13	0.3228	-64.6726	0.922	63.06
CHLORIDE, DISSOLVED	13	117.15	61.65	13.0	200.0	13	0.1233	-22.9933	0.888	29.59
DISSOLVED SOLIDS, SUM OF CONST	13	761.5	324.2	198	1110	13	0.720	-56.686	0.986	56.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	763.2	331.5	217	1170	12	0.723	-38.029	0.984	61.8
HARDNESS, TOTAL	13	372.3	148.9	130	580	13	0.313	16.477	0.933	55.8
HARDNESS, NONCARBONATE	13	228.1	114.2	45	390	13	0.232	-35.846	0.903	51.3
TURBIDITY (JTU)	12	193.8	219.9	8	700	12	-0.113	319.353	-0.232 *	224.4
FLOURIDE, DISSOLVED	13	0.30	0.13	0.1	0.5	13	0.0002	0.0239	0.836	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 344

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1860	1740	1650	1500	1380	1230	1010	510	471	430

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
343	11.17	9.81	2.71	90	2.31

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09180500 -- COLORADO RIVER NEAR CISCO UTAH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	14	4	1	4
CADMIUM (CD), UG/L	4	< 10	20	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	< 50	50	4	0	2
COPPER (CU), UG/L	4	< 10	1900	4	2	3
IRON (FE), UG/L	4	410	19000	4	10	20
LEAD (PB), UG/L	4	< 100	100	4	1	4
MANGANESE (MN), UG/L	4	20	500	4	0	20
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	5	14	4	3	14
ZINC (ZN), UG/L	4	40	150	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	6.50	13.00			
BIOMASS, ASH WT., G/SQ M	4	3.09	12.00			
CHLOROPHYLL A, MG/SQ M	4	.0	6.0			
CHLOROPHYLL B, MG/SQ M	4	.0	.7			
ORGANIC CARBON, MG/L	4	3.6	16.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09234500 NAME: GREEN RIVER NEAR GREENDALE, UTAH

LAT 40D54M30S LONG 109D25M20S
DRAINAGE AREA: 15100 SQ MI (39109 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	5.75	1.74	3.0	8.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	750.7	29.4	710	820					
STREAMFLOW (CUBIC FT/SEC)	14	3128.3	1233.8	856	4280	14	1.650	1887.151	0.040*	1283.1
PH (STANDARD UNITS)	15	7.99	0.34	7.6	8.7	15	0.0025	6.1285	0.211*	0.35
PHOSPHORUS, TOTAL	11	0.016	0.021	0.00	0.07	11	0.00005	-0.02270	0.078*	0.022
NITRITE + NITRATE, TOTAL	11	0.663	0.199	0.13	0.88	11	0.00320	-1.73534	0.497*	0.182
NITROGEN, KJELDAHL, TOTAL	11	0.380	0.101	0.21	0.56	11	-0.00161	1.59063	-0.494*	0.093
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	580.2	688.5	14	2300	11	-8.004	6583.246	-0.360*	677.1
SEDIMENT, SUSPENDED	3	2.3	2.3	1	5					
SEDIMENT, CLAY-SILT (PERCENT)	5	62.4	38.1	10	97					
COLIFORM, FECAL (COL/100 ML)	7	0.0	0.0	0	0					
STREPTOCOCCI, FECAL (COL/100 ML)	7	1.3	2.6	0	7					
SILICA, DISSOLVED	13	4.26	0.59	3.3	5.2	13	0.0025	2.3642	0.131*	0.61
CALCIUM, DISSOLVED	13	69.08	1.75	66.0	72.0	13	-0.0075	74.7673	-0.131*	1.82
MAGNESIUM, DISSOLVED	13	26.31	1.11	24.0	28.0	13	0.0184	12.4210	0.505*	1.00
SODIUM, DISSOLVED	13	58.77	2.05	55.0	62.0	13	0.0235	41.0194	0.350*	2.00
POTASSIUM, DISSOLVED	13	2.98	0.82	2.4	5.6	13	0.0042	-0.1911	0.157*	0.84
BICARBONATE, ION	13	185.3	4.1	177	190	13	0.024	167.349	0.178*	4.2
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	219.23	9.54	210.0	240.0	13	0.1925	74.1415	0.614	7.87
CHLORIDE, DISSOLVED	13	18.31	0.75	17.0	20.0	13	0.0031	15.9584	0.126*	0.78
DISSOLVED SOLIDS, SUM OF CONST	13	491.1	12.1	470	517	13	0.262	293.866	0.660	9.5
DISSOLVED SOLIDS, ROE 180 DEG C	11	523.1	14.2	492	545	11	0.234	347.295	0.510*	12.9
HARDNESS, TOTAL	13	281.5	8.0	270	290	13	0.056	239.273	0.213*	8.2
HARDNESS, NONCARBONATE	13	128.5	5.5	120	140	13	0.025	109.668	0.137*	5.7
TURBIDITY (JTU)	11	1.7	1.2	1	5	11	-0.006	6.415	-0.163*	1.2
FLOURIDE, DISSOLVED	13	0.27	0.05	0.2	0.3	13	-0.0000	0.3005	-0.026*	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 301

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	832	825	820	818	810	791	782	770	769	760

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
299	6.00	2.08	1.16	84	0.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09234500 -- GREEN RIVER NEAR GREENDALE, UTAH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	1	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	3
COPPER (CU), UG/L	4	<10	10	4	1	3
IRON (FE), UG/L	4	110	150	4	10	10
LEAD (PB), UG/L	4	<100	<100	4	1	4
MANGANESE (MN), UG/L	4	0	20	4	0	10
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	1	2	4	0	2
ZINC (ZN), UG/L	4	20	60	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.00	11.00			
BIOMASS, ASH WT., G/SQ M	4	1.50	17.00			
CHLOROPHYLL A, MG/SQ M	4	.2	64.0			
CHLOROPHYLL B, MG/SQ M	4	.0	11.0			
ORGANIC CARBON, MG/L	4	3.5	5.8			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09251000 NAME: YAMPA RIVER NEAR MAYBELL, CO.

LAT 40D30M10S LONG 108D01M45S
DRAINAGE AREA: 3410 SQ MI (8832 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	9.31	7.37	0.5	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	503.8	177.8	144	720					
STREAMFLOW (CUBIC FT/SEC)	11	1629.3	3316.5	124	11000	9	-5.008	3400.286	-0.567 *	1134.9
PH (STANDARD UNITS)	10	8.33	0.61	7.3	9.1	9	0.0007	7.9804	0.204 *	0.67
PHOSPHORUS, TOTAL	8	0.107	0.144	0.00	0.45	8	-0.00028	0.24584	-0.397 *	0.143
NITRITE + NITRATE, TOTAL	8	0.276	0.254	0.01	0.63	8	0.00048	0.03502	0.393 *	0.252
NITROGEN, KJELDAHL, TOTAL	8	0.577	0.273	0.25	1.20	8	-0.00025	0.70266	-0.190 *	0.289
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	861.4	794.8	190	2500	5	0.917	186.631	0.573 *	323.5
SEDIMENT, SUSPENDED	6	163.0	251.8	2	588					
SEDIMENT, CLAY-SILT (PERCENT)	3	74.0	12.1	63	87					
COLIFORM, FECAL (COL/100 ML)	6	35.3	66.7	0	170					
STREPTOCOCCI, FECAL (COL/100 ML)	7	17.1	19.3	0	55					
SILICA, DISSOLVED	7	9.59	3.35	4.8	14.0	7	0.0019	8.5831	0.120 *	3.65
CALCIUM, DISSOLVED	7	42.14	14.48	15.0	58.0	7	0.0661	7.5218	0.956	4.66
MAGNESIUM, DISSOLVED	7	21.63	10.85	5.4	37.0	7	0.0490	-4.0367	0.946	3.86
SODIUM, DISSOLVED	7	44.21	23.10	6.5	67.0	7	0.1082	-12.4401	0.981	4.92
POTASSIUM, DISSOLVED	7	4.53	2.10	2.7	7.8	7	-0.0046	6.9606	-0.462 *	2.04
BICARBONATE, ION	7	179.7	66.9	60	255	7	0.288	29.099	0.900	32.0
CARBONATE, ION	6	1.2	2.9	0	7	6	0.006	-1.756	0.453 *	2.8
SULFATE, DISSOLVED	7	114.71	62.09	18.0	210.0	7	0.2810	-32.3805	0.947	21.78
CHLORIDE, DISSOLVED	7	17.73	7.95	4.8	25.0	7	0.0350	-0.6162	0.923	3.34
DISSOLVED SOLIDS, SUM OF CONST	7	344.3	144.5	99	497	7	0.685	-14.006	0.992	20.5
DISSOLVED SOLIDS, ROE 180 DEG C	7	348.6	140.0	116	508	7	0.656	5.202	0.981	29.6
HARDNESS, TOTAL	7	194.3	78.1	60	280	7	0.365	3.193	0.979	17.5
HARDNESS, NONCARBONATE	7	45.6	36.1	10	120	7	0.125	-19.707	0.723 *	27.3
TURBIDITY (JTU)	7	31.7	49.4	2	130	7	-0.186	129.293	-0.790	33.1
FLOURIDE, DISSOLVED	7	0.19	0.11	0.0	0.3	7	0.0001	0.1500	0.134 *	0.12

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
54	8.73	11.50	2.84	90	1.87

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09251000 -- YAMPA RIVER NEAR MAYBELL, CO.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	0	2
CADMIUM (CD), UG/L	4	< 10	10	5	0	2
CHROMIUM (CR), UG/L	3	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	5	0	20
COPPER (CU), UG/L	4	< 10	360	5	2	12
IRON (FE), UG/L	4	110	510	5	10	140
LEAD (PB), UG/L	4	< 100	< 100	5	0	23
MANGANESE (MN), UG/L	4	20	20	5	0	30
MERCURY (HG), UG/L	4	0.0	< 0.1	5	0.0	< 0.1
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	4	20	60	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	71.00				
BIOMASS, ASH WT., G/SQ M	1	39.00				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	4.5	15.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09260000 NAME: LITTLE SNAKE RIVER NEAR LILY, CO.

LAT 40D32M50S LONG 108D25M25S
DRAINAGE AREA: 3730 SQ MI (9661 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	9.94	7.78	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	671.1	355.3	175	1330					
STREAMFLOW (CUBIC FT/SEC)	8	426.3	950.3	11	2770	5	-0.070	148.494	-0.202 *	116.1
PH (STANDARD UNITS)	10	8.26	0.50	7.5	9.3	10	0.0002	8.0839	0.189 *	0.52
PHOSPHORUS, TOTAL	8	0.507	0.912	0.02	2.70	8	0.00086	-0.12081	0.359 *	0.919
NITRITE + NITRATE, TOTAL	8	0.114	0.127	0.01	0.40	8	0.00019	-0.02622	0.574 *	0.112
NITROGEN, KJELDAHL, TOTAL	8	0.839	0.809	0.25	2.60	8	0.00044	0.51833	0.207 *	0.855
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	1456.0	1928.9	180	4800	4	0.155	490.336	0.149 *	665.1
SEDIMENT, SUSPENDED	5	1916.4	1869.8	55	4560					
SEDIMENT, CLAY-SILT (PERCENT)	3	60.0	39.5	20	99					
COLIFORM, FECAL (COL/100 ML)	5	82.2	151.9	0	350					
STREPTOCOCCI, FECAL (COL/100 ML)	5	210.6	408.0	10	940					
SILICA, DISSOLVED	9	14.96	4.40	6.6	21.0	9	0.0026	13.0771	0.208 *	4.60
CALCIUM, DISSOLVED	8	47.00	16.58	18.0	72.0	8	0.0129	37.7050	0.296 *	17.11
MAGNESIUM, DISSOLVED	8	14.01	5.26	4.5	22.0	8	0.0037	11.3571	0.266 *	5.48
SODIUM, DISSOLVED	8	73.00	63.58	10.0	220.0	8	0.0985	2.2379	0.587 *	55.59
POTASSIUM, DISSOLVED	8	3.25	1.68	0.7	6.2	8	0.0032	0.9694	0.715	1.27
BICARBONATE, ION	9	255.3	167.9	79	670	9	0.162	137.072	0.344 *	168.5
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	8	123.00	76.53	18.0	280.0	8	0.1118	42.6252	0.554 *	68.81
CHLORIDE, DISSOLVED	8	24.10	23.07	2.4	77.0	8	0.0338	-0.1970	0.556 *	20.71
DISSOLVED SOLIDS, SUM OF CONST	8	401.8	193.0	105	772	8	0.327	166.639	0.643 *	159.7
DISSOLVED SOLIDS, ROE 180 DEG C	7	390.6	189.5	115	743	7	0.311	167.937	0.672 *	153.6
HARDNESS, TOTAL	8	175.4	63.6	63	270	8	0.045	142.736	0.271 *	66.1
HARDNESS, NONCARBONATE	8	18.9	15.6	0	45	8	-0.009	25.512	-0.224 *	16.5
TURBIDITY (JTU)	7	154.1	213.8	15	550	7	-0.156	266.080	-0.300 *	223.5
FLOURIDE, DISSOLVED	8	0.36	0.19	0.1	0.7	8	0.0002	0.1864	0.483 *	0.18

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
76	11.05	10.91	1.77	51	5.10

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09260000 -- LITTLE SNAKE RIVER NEAR LILY, CO.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	26	3	1	18
CADMIUM (CD), UG/L	4	< 10	10	4	0	1
CHROMIUM (CR), UG/L	3	0	60	3	0	40
COBALT (CO), UG/L	4	< 50	100	4	0	2
COPPER (CU), UG/L	4	< 10	120	4	2	9
IRON (FE), UG/L	4	880	63000	6	10	3700
LEAD (PB), UG/L	4	<100	100	4	0	4
MANGANESE (MN), UG/L	4	30	340	6	0	150
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	4	20	130	4	10	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	4.2	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09315000 NAME: GREEN RV AT GREEN RV UT

.AT 38D59M10S LONG 110D09M02S
)RAINAGE AREA: 40600 SQ MI (105154 SQ KM)
'ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	27	12.30	7.97	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	781.4	187.3	370	1060					
STREAMFLOW (CUBIC FT/SEC)	13	6276.9	4776.1	3000	19400	13	-22.129	23401.070	-0.893	2247.8
PH (STANDARD UNITS)	14	8.26	0.30	7.7	8.7	14	0.0006	7.7933	0.373*	0.29
PHOSPHORUS, TOTAL	12	0.342	0.259	0.05	0.94	12	-0.00047	0.69922	-0.357*	0.254
NITRITE + NITRATE, TOTAL	12	0.436	0.183	0.12	0.66	12	0.00041	0.12378	0.443*	0.172
NITROGEN, KJELDAHL, TOTAL	12	0.931	0.516	0.46	2.10	12	-0.00092	1.63679	-0.355*	0.506
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3643.3	2940.1	520	10000	12	-4.894	7386.949	-0.330*	2910.4
SEDIMENT, SUSPENDED	16	2042.0	2749.0	199	9790					
SEDIMENT, CLAY-SILT (PERCENT)	3	279.0	383.2	41	721					
COLIFORM, FECAL (COL/100 ML)	9	55.2	79.9	0	240					
STREPTOCOCCI, FECAL (COL/100 ML)	11	158.6	218.9	6	740					
SILICA, DISSOLVED	13	6.52	1.50	4.9	10.0	13	-0.0064	11.4911	-0.825	0.89
CALCIUM, DISSOLVED	13	66.62	13.67	36.0	79.0	13	0.0670	14.7326	0.945	4.66
MAGNESIUM, DISSOLVED	13	29.31	8.37	11.0	45.0	13	0.0406	-2.1053	0.934	3.11
SODIUM, DISSOLVED	13	71.38	21.29	25.0	95.0	13	0.1008	-6.5905	0.912	9.11
POTASSIUM, DISSOLVED	13	2.94	0.62	1.7	4.0	13	0.0020	1.3889	0.625	0.50
BICARBONATE, ION	13	188.9	30.3	118	219	13	0.133	86.157	0.844	17.0
CARBONATE, ION	13	1.5	2.4	0	7	13	0.004	-1.972	0.361*	2.3
SULFATE, DISSOLVED	13	242.15	76.31	78.0	350.0	13	0.3735	-46.8676	0.943	26.52
CHLORIDE, DISSOLVED	13	24.54	7.72	8.0	34.0	13	0.0356	-3.0157	0.889	3.70
DISSOLVED SOLIDS, SUM OF CONST	13	538.5	140.2	226	718	13	0.684	8.770	0.941	49.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	555.1	146.6	243	716	12	0.685	30.907	0.927	57.5
HARDNESS, TOTAL	13	286.9	65.8	140	380	13	0.329	32.011	0.965	17.9
HARDNESS, NONCARBONATE	13	130.8	44.3	38	210	13	0.221	-40.536	0.964	12.3
TURBIDITY (JTU)	12	174.2	140.9	30	450	12	-0.195	323.264	-0.274*	142.1
FLOURIDE, DISSOLVED	13	0.28	0.04	0.2	0.3	13	0.0002	0.1551	0.692	0.03

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 290

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1260	1075	1040	1000	980	899	800	440	415	395

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
284	11.43	11.33	2.75	95	1.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09315000 -- GREEN RV AT GREEN RV UT

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	11	4	1	5
CADMIUM (CD), UG/L	4	< 10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	1	1
COPPER (CU), UG/L	4	10	470	4	2	3
IRON (FE), UG/L	4	1200	18000	4	10	30
LEAD (PB), UG/L	4	<100	< 100	4	0	4
MANGANESE (MN), UG/L	4	40	430	4	0	10
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	1	3	4	1	3
ZINC (ZN), UG/L	4	40	110	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.39	4.19			
BIOMASS, ASH WT., G/SQ M	2	.39	3.19			
CHLOROPHYLL A, MG/SQ M	3	.1	1.0			
CHLOROPHYLL B, MG/SQ M	3	.0	.2			
ORGANIC CARBON, MG/L	4	4.2	12.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09368000 NAME: SAN JUAN R AT SHIPROCK,NM

LAT 36D47M32S LONG 108D43M54S
DRAINAGE AREA: 12900 SQ MI (33411 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	10.80	6.34	0.0	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	44	599.6	223.5	280	1030					
STREAMFLOW (CUBIC FT/SEC)	23	3203.8	2634.6	728	10600	12	-7.332	6986.461	-0.830	1195.2
PH (STANDARD UNITS)	24	8.21	0.36	7.5	8.9	24	-0.0006	8.6352	-0.384*	0.34
PHOSPHORUS, TOTAL	12	0.950	1.832	0.08	6.40	12	0.00335	-1.17183	0.423*	1.741
NITRITE + NITRATE, TOTAL	12	0.540	0.241	0.10	0.86	12	0.00072	0.08091	0.696	0.181
NITROGEN, KJELDAHL, TOTAL	12	2.129	3.876	0.20	14.00	12	0.00692	-2.25255	0.413*	3.703
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3318.3	2877.5	490	8500	12	5.584	-217.795	0.449*	2697.4
SEDIMENT, SUSPENDED	22	10355.9	14924.5	314	52600					
SEDIMENT, CLAY-SILT (PERCENT)	8	57.9	28.6	26	92					
COLIFORM, FECAL (COL/100 ML)	12	2643.6	5230.8	63	19000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1250.8	2218.9	110	8200					
SILICA, DISSOLVED	44	9.25	4.74	3.9	37.0	44	0.0114	2.4396	0.536	4.05
CALCIUM, DISSOLVED	44	62.89	18.56	33.0	110.0	44	0.0772	16.5705	0.930	6.90
MAGNESIUM, DISSOLVED	44	11.26	4.01	5.6	18.0	44	0.0105	4.9785	0.584	3.30
SODIUM, DISSOLVED	44	48.45	31.53	12.0	140.0	44	0.1314	-30.3173	0.931	11.62
POTASSIUM, DISSOLVED	44	2.86	0.91	1.5	5.1	44	0.0037	0.6485	0.907	0.39
BICARBONATE, ION	44	143.3	39.6	76	262	44	0.165	44.353	0.931	14.6
CARBONATE, ION	24	1.3	3.2	0	11	24	-0.005	4.406	-0.324*	3.1
SULFATE, DISSOLVED	44	168.50	78.12	58.0	330.0	44	0.3473	-39.7512	0.993	9.00
CHLORIDE, DISSOLVED	44	11.60	5.70	3.6	23.0	44	0.0220	-1.5767	0.861	2.93
DISSOLVED SOLIDS, SUM OF CONST	44	388.3	154.3	169	732	44	0.687	-23.689	0.995	15.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	427.7	164.8	173	650	12	0.706	-19.490	0.991	23.7
HARDNESS, TOTAL	44	203.9	59.1	110	340	44	0.235	63.138	0.888	27.5
HARDNESS, NONCARBONATE	44	85.0	38.9	26	190	44	0.104	22.566	0.599	31.5
TURBIDITY (JTU)	12	910.8	2044.1	20	7200	12	3.564	-1345.878	0.403*	1962.1
FLOURIDE, DISSOLVED	44	0.36	0.17	0.2	1.3	44	0.0004	0.1328	0.515	0.15

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 361

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1200	955	877	805	776	689	471	340	286	272

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	10.48	8.70	2.66	91	1.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09368000 -- SAN JUAN R AT SHIPROCK,NM

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	56	4	0	1
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	0
CHROMIUM (CR), UG/L	4	0	140	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	0	1
COPPER (CU), UG/L	4	20	170	4	2	15
IRON (FE), UG/L	4	3100	130000	16	0	40
LEAD (PB), UG/L	4	< 100	200	4	0	0
MANGANESE (MN), UG/L	4	130	3600	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	3	4	1	3
ZINC (ZN), UG/L	4	30	690	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.59	8.79			
BIOMASS, ASH WT., G/SQ M	4	.19	6.89			
CHLOROPHYLL A, MG/SQ M	3	.0	21.0			
CHLOROPHYLL B, MG/SQ M	3	.0	2.1			
ORGANIC CARBON, MG/L	9	5.6	110.0			

STATION NUMBER: 09379500 NAME: SAN JUAN RIVER NEAR BLUFF, UTAH

LAT 37D08M49S LONG 109D51M51S
DRAINAGE AREA: 23000 SQ MI (59570 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	27	11.35	6.58	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	789.3	301.9	300	1150					
STREAMFLOW (CUBIC FT/SEC)	26	2823.8	2379.2	850	8760	13	-7.876	8877.535	-0.882	1322.2
PH (STANDARD UNITS)	13	8.18	0.20	7.9	8.4	13	-0.0002	8.3549	-0.354*	0.19
PHOSPHORUS, TOTAL	11	0.512	0.586	0.06	2.00	11	0.00069	-0.02049	0.348*	0.579
NITRITE + NITRATE, TOTAL	11	0.855	0.508	0.14	1.40	11	0.00165	-0.42361	0.964	0.143
NITROGEN, KJELDAHL, TOTAL	11	1.104	0.862	0.20	3.10	11	0.00008	1.04120	0.028*	0.908
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3262.7	3318.2	370	11000	11	5.208	-775.759	0.466*	3094.7
SEDIMENT, SUSPENDED	16	6969.7	10948.1	41	40200					
SEDIMENT, CLAY-SILT (PERCENT)	2	56.0	58.0	15	97					
COLIFORM, FECAL (COL/100 ML)	9	657.1	1266.6	42	4000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	485.4	571.1	45	1800					
SILICA, DISSOLVED	11	9.00	1.36	5.8	11.0	11	0.0028	6.8254	0.611	1.14
CALCIUM, DISSOLVED	11	77.82	26.02	34.0	110.0	11	0.0846	12.1986	0.965	7.15
MAGNESIUM, DISSOLVED	11	22.15	10.82	7.6	41.0	11	0.0352	-5.1782	0.967	2.92
SODIUM, DISSOLVED	11	64.09	38.73	14.0	140.0	11	0.1185	-27.8269	0.909	17.04
POTASSIUM, DISSOLVED	11	2.95	0.82	1.6	4.3	11	0.0020	1.3696	0.737	0.58
BICARBONATE, ION	11	156.5	36.2	91	198	11	0.120	63.209	0.987	6.1
CARBONATE, ION	10	0.7	2.2	0	7	10	-0.001	1.118	-0.075*	2.3
SULFATE, DISSOLVED	11	257.36	129.05	67.0	420.0	11	0.4285	-74.8992	0.986	22.90
CHLORIDE, DISSOLVED	11	18.03	9.84	3.9	31.0	11	0.0327	-7.3240	0.986	1.70
DISSOLVED SOLIDS, SUM OF CONST	11	530.1	229.9	179	814	11	0.765	-63.491	0.988	36.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	555.4	243.9	195	839	11	0.815	-76.860	0.993	31.3
HARDNESS, TOTAL	11	287.3	107.4	120	420	11	0.357	10.367	0.987	18.3
HARDNESS, NONCARBONATE	11	157.7	81.0	42	260	11	0.266	-48.160	0.973	19.7
TURBIDITY (JTU)	11	387.6	441.9	20	1300	11	-0.138	494.575	-0.093*	463.8
FLOURIDE, DISSOLVED	11	0.33	0.08	0.2	0.4	11	0.0002	0.1827	0.704	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 285

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1210	1150	1120	1100	1060	680	521	380	340	300

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
296	12.31	10.40	2.77	93	1.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09379500 -- SAN JUAN RIVER NEAR BLUFF, UTAH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	17	3	1	5
CADMIUM (CD), UG/L	3	<10	20	3	0	1
CHROMIUM (CR), UG/L	3	0	0	3	0	0
COBALT (CO), UG/L	3	<50	<50	3	0	1
COPPER (CU), UG/L	3	30	410	3	2	7
IRON (FE), UG/L	3	1300	14000	3	10	20
LEAD (PB), UG/L	3	<100	<100	3	0	5
MANGANESE (MN), UG/L	3	50	1200	3	0	10
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.0
SELENIUM (SE), UG/L	3	2	6	3	1	5
ZINC (ZN), UG/L	3	30	150	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.69	13.00			
BIOMASS, ASH WT., G/SQ M	3	.69	23.00			
CHLOROPHYLL A, MG/SQ M	3	.0	.1			
CHLOROPHYLL B, MG/SQ M	3	.0	.2			
ORGANIC CARBON, MG/L	3	3.0	14.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09380000 NAME: COLORADO R AT LEES FERRY, AZ.

LAT 36D51M53S LONG 111D35M15S
DRAINAGE AREA: 107900 SQ MI (279461 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	8.70	0.95	7.5	10.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	832.5	59.7	750	930					
STREAMFLOW (CUBIC FT/SEC)	11	14959.1	8764.6	1680	25700	10	17.971	-866.141	0.123*	9190.3
PH (STANDARD UNITS)	10	7.92	0.36	7.2	8.4	10	-0.0004	8.2584	-0.067*	0.39
PHOSPHORUS, TOTAL	10	0.011	0.012	0.00	0.03	10	-0.00004	0.04411	-0.198*	0.012
NITRITE + NITRATE, TOTAL	10	0.499	0.089	0.38	0.61	10	0.00120	-0.49993	0.806	0.056
NITROGEN, KJELDAHL, TOTAL	10	0.234	0.040	0.19	0.31	10	-0.00022	0.41961	-0.330*	0.040
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	743.3	563.2	120	1400	6	2.453	-1335.627	0.265*	607.2
SEDIMENT, SUSPENDED	40	84.9	98.1	2	303					
SEDIMENT, CLAY-SILT (PERCENT)	2	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	11	1.5	1.5	1	6					
STREPTOCOCCI, FECAL (COL/100 ML)	11	6.4	16.5	1	56					
SILICA, DISSOLVED	9	7.56	0.77	5.9	8.7	9	0.0015	6.3115	0.120*	0.82
CALCIUM, DISSOLVED	10	69.10	4.28	64.0	76.0	10	0.0600	19.1823	0.836	2.49
MAGNESIUM, DISSOLVED	10	25.10	2.42	22.0	28.0	10	0.0324	-1.8387	0.797	1.55
SODIUM, DISSOLVED	10	72.90	6.03	64.0	81.0	10	0.0830	3.7682	0.822	3.64
POTASSIUM, DISSOLVED	9	3.63	0.23	3.3	4.0	9	0.0016	2.2744	0.416*	0.23
BICARBONATE, ION	10	162.2	7.2	154	173	10	0.115	66.519	0.952	2.3
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	222.00	16.87	200.0	240.0	10	0.2355	25.9540	0.833	9.89
CHLORIDE, DISSOLVED	10	48.30	6.06	40.0	57.0	10	0.0897	-26.4142	0.884	3.00
DISSOLVED SOLIDS, SUM OF CONST	9	535.7	37.2	491	579	9	0.537	87.030	0.897	17.6
DISSOLVED SOLIDS, ROE 180 DEG C	10	552.8	43.7	494	614	10	0.625	32.212	0.855	24.0
HARDNESS, TOTAL	10	275.0	21.2	250	300	10	0.282	40.650	0.792	13.7
HARDNESS, NONCARBONATE	10	141.0	16.0	120	160	10	0.193	-19.334	0.721	11.7
TURBIDITY (JTU)	10	14.0	31.5	0	100	10	-0.131	122.923	-0.248*	32.4
FLOURIDE, DISSOLVED	10	0.25	0.07	0.1	0.3	10	0.0006	-0.2758	0.533*	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 280

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	960	925	910	890	875	840	810	790	780	730

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
279	8.66	1.05	2.63	64	0.56

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09380000 -- COLORADO R AT LEES FERRY, AZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	1	4
CADMIUM (CD), UG/L	4	<10	20	4	0	2
CHROMIUM (CR), UG/L	4	0	16	4	0	10
COBALT (CO), UG/L	4	0	< 50	4	0	1
COPPER (CU), UG/L	4	10	30	4	3	46
IRON (FE), UG/L	4	50	100	4	10	40
LEAD (PB), UG/L	4	<100	100	4	1	11
MANGANESE (MN), UG/L	4	0	10	4	0	10
MERCURY (HG), UG/L	2	0.0	0.6	4	0.0	0.6
SELENIUM (SE), UG/L	4	2	8	4	0	5
ZINC (ZN), UG/L	4	30	70	4	30	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.09	.79			
BIOMASS, ASH WT., G/SQ M	2	.09	.50			
CHLOROPHYLL A, MG/SQ M	2	.0	1.5			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	3	3.7	14.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09401200 NAME: LITTLE COLORADO R AT CAMERON ARIZ.

LAT 35D52M40S LONG 111D24M40S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	6	14.50	8.12	7.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	727.3	429.6	275	1300					
STREAMFLOW (CUBIC FT/SEC)	6	226.7	201.2	1	520	6	-0.315	455.904	-0.673 *	166.4
PH (STANDARD UNITS)	4	8.30	0.90	7.2	9.4	4	-0.0018	9.2773	-0.758 *	0.72
PHOSPHORUS, TOTAL	6	2.780	3.557	0.09	9.80	6	0.00047	2.43959	0.057 *	3.971
NITRITE + NITRATE, TOTAL	6	0.690	0.802	0.04	2.10	6	0.00067	0.20165	0.360 *	0.837
NITROGEN, KJELDAHL, TOTAL	6	5.628	9.115	0.27	24.00	6	0.00168	4.40519	0.079 *	10.159
PHYTOPLANKTON, TOTAL (CELLS/ML)	4	375.0	750.0	0	1500	4	-0.535	664.398	-0.269 *	884.7
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	5	8926.0	11334.9	260	28000					
STREPTOCOCCI, FECAL (COL/100 ML)	6	45794.0	87074.1	4	220000					
SILICA, DISSOLVED	6	9.67	4.05	5.3	16.0	6	0.0025	7.8745	0.262 *	4.37
CALCIUM, DISSOLVED	6	24.30	14.86	5.8	44.0	6	0.0314	1.4973	0.906	7.03
MAGNESIUM, DISSOLVED	6	4.42	3.01	1.2	8.7	6	0.0061	0.0128	0.863	1.70
SODIUM, DISSOLVED	6	126.50	72.74	37.0	210.0	6	0.1639	7.2633	0.968	20.33
POTASSIUM, DISSOLVED	6	3.23	1.59	1.3	5.6	6	0.0024	1.4979	0.644 *	1.36
BICARBONATE, ION	6	155.5	45.6	95	193	6	0.066	107.730	0.619 *	40.0
CARBONATE, ION	4	1.3	2.5	0	5	4	-0.002	2.145	-0.249 *	3.0
SULFATE, DISSOLVED	6	97.33	80.50	16.0	210.0	6	0.1761	-30.7606	0.940	30.71
CHLORIDE, DISSOLVED	6	85.17	63.82	23.0	190.0	6	0.1334	-11.8855	0.898	31.35
DISSOLVED SOLIDS, SUM OF CONST	6	432.5	237.6	149	710	6	0.548	34.220	0.990	37.6
DISSOLVED SOLIDS, ROE 180 DEG C	6	455.3	254.4	144	750	6	0.583	31.552	0.984	50.8
HARDNESS, TOTAL	6	79.8	51.0	19	150	6	0.107	2.162	0.900	24.8
HARDNESS, NONCARBONATE	6	1.7	4.1	0	10	6	0.006	-2.847	0.653 *	3.5
TURBIDITY (JTU)	6	93035.0	144118.4	10	340000	6	137.643	-7077.063	0.410 *	146940.8
FLOURIDE, DISSOLVED	6	0.62	0.26	0.2	0.8	6	0.0004	0.3412	0.635 *	0.22

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09401200 -- LITTLE COLORADO R AT CAMERON ARIZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	1	110		1	0	
CADMIUM (CD), UG/L	1	10		1	1	
CHROMIUM (CR), UG/L	1	50		1	10	
COBALT (CO), UG/L	1	90		1	0	
COPPER (CU), UG/L	1	100		1	35	
IRON (FE), UG/L	1	60000		1	60	
LEAD (PB), UG/L	1	200		1	3	
MANGANESE (MN), UG/L	1	5000		1	10	
MERCURY (HG), UG/L	1	0.3		1	0.1	
SELENIUM (SE), UG/L	1	3		1	1	
ZINC (ZN), UG/L	1	280		1	10	
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.69				
BIOMASS, ASH WT., G/SQ M	1	.39				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	1	50.0				

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09421500 NAME: COLORADO RIVER BLW HOOVER DAM,ARIZ-NEV

.AT 36D00M55S LONG 114D44M16S
)RAINAGE AREA: 167800 SQ MI (434602 SQ KM)
'ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	12.10	1.39	9.0	16.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	1086.4	15.0	1060	1110					
STREAMFLOW (CUBIC FT/SEC)	21	12718.1	5257.3	2320	22820	11	24.175	-12130.625	0.078 *	4903.4
PH (STANDARD UNITS)	5	8.02	0.08	7.9	8.1	5	0.0017	6.2000	0.218 *	0.09
PHOSPHORUS, TOTAL	11	0.023	0.014	0.00	0.05	11	-0.00017	0.21113	-0.183 *	0.015
NITRITE + NITRATE, TOTAL	11	0.385	0.038	0.33	0.46	11	-0.00072	1.16602	-0.282 *	0.039
NITROGEN, KJELDAHL, TOTAL	11	0.229	0.086	0.14	0.40	11	0.00180	-1.73050	0.314 *	0.086
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1146.4	1318.8	64	3800	7	-45.422	50526.621	-0.475 *	1271.0
SEDIMENT, SUSPENDED	5	4.0	3.2	1	8					
SEDIMENT, CLAY-SILT (PERCENT)	5	64.8	25.8	33	100					
COLIFORM, FECAL (COL/100 ML)	10	1.1	0.3	1	2					
STREPTOCOCCI, FECAL (COL/100 ML)	10	4.9	3.9	1	12					
SILICA, DISSOLVED	11	8.89	0.58	7.9	9.8	11	-0.0047	13.9723	-0.121 *	0.61
CALCIUM, DISSOLVED	11	85.27	2.24	81.0	89.0	11	-0.0306	118.5645	-0.205 *	2.31
MAGNESIUM, DISSOLVED	11	29.09	1.14	27.0	31.0	11	0.0415	-16.0282	0.549 *	1.00
SODIUM, DISSOLVED	11	99.36	1.50	95.0	100.0	11	0.0419	53.8065	0.419 *	1.44
POTASSIUM, DISSOLVED	11	5.13	0.57	4.2	6.4	11	-0.0093	15.1860	-0.244 *	0.58
BICARBONATE, ION	11	161.6	1.9	160	165	11	-0.019	182.663	-0.156 *	1.9
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	287.27	12.72	270.0	310.0	11	-0.0045	292.1787	-0.005 *	13.41
CHLORIDE, DISSOLVED	11	84.36	2.34	80.0	88.0	11	0.0863	-9.3790	0.555 *	2.05
DISSOLVED SOLIDS, SUM OF CONST	11	681.4	15.2	655	705	11	0.117	553.803	0.116 *	15.9
DISSOLVED SOLIDS, ROE 180 DEG C	11	713.0	9.1	689	722	11	0.253	438.255	0.416 *	8.8
HARDNESS, TOTAL	11	332.7	6.5	320	340	11	0.181	135.780	0.421 *	6.2
HARDNESS, NONCARBONATE	11	200.9	8.3	180	210	11	0.150	38.305	0.270 *	8.4
TURBIDITY (JTU)	11	1.5	1.3	1	5	11	0.001	0.669	0.009 *	1.4
FLOURIDE, DISSOLVED	11	0.36	0.07	0.3	0.5	11	-0.0002	0.5825	-0.045 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
47	11.59	0.88	0.44	0	19.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09421500 -- COLORADO RIVER BLW HOOVER DAM,ARIZ-NEV

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	0	5
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	50	4	0	3
COPPER (CU), UG/L	4	10	440	4	0	3
IRON (FE), UG/L	4	50	150	10	0	40
LEAD (PB), UG/L	4	<100	<100	4	0	7
MANGANESE (MN), UG/L	4	0	20	4	0	0
MERCURY (HG), UG/L	4	0.0	<0.1	4	0.0	<0.1
SELENIUM (SE), UG/L	4	4	5	4	3	4
ZINC (ZN), UG/L	4	10	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.59	8.00			
BIOMASS, ASH WT., G/SQ M	4	.50	13.00			
CHLOROPHYLL A, MG/SQ M	4	.1	82.0			
CHLOROPHYLL B, MG/SQ M	4	.0	8.2			
ORGANIC CARBON, MG/L	5	3.0	8.5			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09424190 NAME: COLORADO R AQV NR SAN JACINTO CA.

LAT 33D49M18S LONG 116D58M01S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	167	18.75	5.96	10.0	27.8					
SPECIFIC CONDUCTANCE (MICROMHOS)	167	1088.7	64.6	338	1140					
STREAMFLOW (CUBIC FT/SEC)	167	1210.4	185.5	7	1760	167	1.091	22.320	0.380	172.1
PH (STANDARD UNITS)	13	8.34	0.19	7.9	8.5	13	-0.0001	8.4785	-0.151 *	0.20
PHOSPHORUS, TOTAL	12	0.022	0.016	0.00	0.05	12	-0.00003	0.04822	-0.358 *	0.016
NITRITE + NITRATE, TOTAL	12	0.165	0.045	0.11	0.24	12	-0.00003	0.19881	-0.160 *	0.047
NITROGEN, KJELDAHL, TOTAL	12	0.340	0.121	0.16	0.59	12	-0.00001	0.35496	-0.026 *	0.127
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1602.8	880.3	24	2900	12	2.203	-662.392	0.550 *	771.3
SEDIMENT, SUSPENDED	12	9.4	5.0	1	16					
SEDIMENT, CLAY-SILT (PERCENT)	12	55.4	18.5	12	79					
COLIFORM, FECAL (COL/100 ML)	14	628589.4	2351888.0	0	8799983					
STREPTOCOCCI, FECAL (COL/100 ML)	14	26433.6	98884.9	0	369999					
SILICA, DISSOLVED	12	9.45	4.99	6.3	25.0	12	-0.0224	32.5245	-0.988	0.80
CALCIUM, DISSOLVED	12	79.58	15.18	32.0	88.0	12	0.0689	8.7161	0.997	1.20
MAGNESIUM, DISSOLVED	12	28.18	7.69	4.2	33.0	12	0.0336	-6.3981	0.961	2.23
SODIUM, DISSOLVED	12	96.67	21.17	31.0	110.0	12	0.0939	0.0861	0.975	4.97
POTASSIUM, DISSOLVED	12	5.20	0.73	4.1	6.7	12	0.0017	3.4806	0.504 *	0.66
BICARBONATE, ION	12	155.8	6.0	146	164	12	0.016	139.365	0.589	5.1
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	271.50	77.31	28.0	310.0	12	0.3444	-82.5710	0.978	16.80
CHLORIDE, DISSOLVED	12	83.83	21.14	17.0	93.0	12	0.0953	-14.1924	0.990	3.09
DISSOLVED SOLIDS, SUM OF CONST	12	651.7	138.4	214	710	12	0.623	11.270	0.988	22.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	690.6	152.3	211	788	12	0.685	-13.425	0.988	25.0
HARDNESS, TOTAL	12	314.8	69.1	97	350	12	0.310	-4.054	0.985	12.6
HARDNESS, NONCARBONATE	12	188.3	59.7	0	220	12	0.268	-87.726	0.988	9.6
TURBIDITY (JTU)	12	1.6	1.0	0	4	12	0.001	0.938	0.138 *	1.0
FLOURIDE, DISSOLVED	12	0.34	0.07	0.3	0.5	12	0.0001	0.2798	0.198 *	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 162

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1130	1120	1120	1110	1110	1110	1090	1040	1040	1030

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
162	18.88	7.64	2.57	97	1.12

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09424190 -- COLORADO R AQV NR SAN JACINTO CA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	6	4	2	6
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	0	<50	4	0	0
COPPER (CU), UG/L	4	0	130	4	2	5
IRON (FE), UG/L	4	80	710	4	10	60
LEAD (PB), UG/L	4	<100	<100	4	0	4
MANGANESE (MN), UG/L	3	10	40	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	4	4	0	4
ZINC (ZN), UG/L	4	8	90	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.19	10.00			
BIOMASS, ASH WT., G/SQ M	2	3.00	8.79			
CHLOROPHYLL A, MG/SQ M	2	.6	3.3			
CHLOROPHYLL B, MG/SQ M	2	.0	.2			
ORGANIC CARBON, MG/L	4	1.2	5.1			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09426600 NAME: BILL WILLIAMS R NR PLANET, ARIZ.

LAT 34D15M43S LONG 114D01M40S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	22.06	5.59	16.0	33.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	938.9	18.3	910	960					
STREAMFLOW (CUBIC FT/SEC)	12	1.5	1.8	0	4	8	0.052	-46.357	0.540 *	1.6
PH (STANDARD UNITS)	8	8.19	0.17	7.9	8.4	8	-0.0014	9.4591	-0.143 *	0.18
PHOSPHORUS, TOTAL	8	0.036	0.023	0.01	0.08	8	-0.00052	0.52692	-0.422 *	0.022
NITRITE + NITRATE, TOTAL	8	0.551	0.245	0.21	0.87	8	-0.00338	3.72154	-0.252 *	0.256
NITROGEN, KJELDAHL, TOTAL	8	0.182	0.125	0.01	0.37	8	-0.00229	2.33041	-0.334 *	0.127
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	1266.3	594.3	510	2400	8	11.041	-9099.855	0.340 *	603.7
SEDIMENT, SUSPENDED	5	52.0	82.9	9	200					
SEDIMENT, CLAY-SILT (PERCENT)	5	72.8	5.5	66	79					
COLIFORM, FECAL (COL/100 ML)	7	104.3	117.1	11	330					
STREPTOCOCCI, FECAL (COL/100 ML)	7	251.1	239.0	22	700					
SILICA, DISSOLVED	8	29.63	5.40	17.0	33.0	8	-0.1261	148.0367	-0.428 *	5.27
CALCIUM, DISSOLVED	8	56.13	4.82	46.0	61.0	8	0.2285	-158.3991	0.867	2.60
MAGNESIUM, DISSOLVED	8	18.75	1.16	17.0	20.0	8	0.0114	8.0263	0.179 *	1.24
SODIUM, DISSOLVED	8	115.00	5.35	110.0	120.0	8	-0.1089	217.2259	-0.373 *	5.36
POTASSIUM, DISSOLVED	8	7.20	0.65	6.2	8.0	8	-0.0156	21.8668	-0.437 *	0.64
BICARBONATE, ION	8	261.3	22.4	223	282	8	1.187	-852.912	0.969	6.0
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	8	85.50	3.42	78.0	89.0	8	0.0109	75.2774	0.058 *	3.69
CHLORIDE, DISSOLVED	8	113.75	7.44	100.0	120.0	8	-0.0795	188.4150	-0.196 *	7.88
DISSOLVED SOLIDS, SUM OF CONST	8	558.3	14.6	536	586	8	0.504	85.205	0.630 *	12.3
DISSOLVED SOLIDS, ROE 180 DEG C	8	556.1	15.1	537	582	8	0.736	-135.002	0.893	7.3
HARDNESS, TOTAL	8	218.8	12.5	200	230	8	0.636	-378.069	0.933	4.8
HARDNESS, NONCARBONATE	8	5.6	7.4	0	17	8	-0.313	299.625	-0.772	5.1
TURBIDITY (JTU)	8	3.5	3.1	1	10	8	-0.097	94.702	-0.579 *	2.7
FLOURIDE, DISSOLVED	8	1.50	0.25	0.9	1.7	8	-0.0050	6.1947	-0.365 *	0.25

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 154

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	975	971	965	960	956	946	930	888	876	866

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
155	22.27	4.53	2.69	23	2.77

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09426600 -- BILL WILLIAMS R NR PLANET, ARIZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	4	11	3	5	8
CADMIUM (CD), UG/L	3	<10	10	3	0	3
CHROMIUM (CR), UG/L	3	0	0	3	0	20
COBALT (CO), UG/L	3	<50	50	3	0	0
COPPER (CU), UG/L	3	<10	190	3	1	3
IRON (FE), UG/L	3	0	650	6	10	80
LEAD (PB), UG/L	3	<100	<100	3	1	12
MANGANESE (MN), UG/L	3	10	50	3	0	5
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.0
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	20	70	3	6	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	3.39				
BIOMASS, ASH WT., G/SQ M	2	2.50	14.00			
CHLOROPHYLL A, MG/SQ M	3	1.6	10.0			
CHLOROPHYLL B, MG/SQ M	3	.2	2.0			
ORGANIC CARBON, MG/L	3	1.6	5.3			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09429490 NAME: COLORADO R AB IMPERIAL D ARIZ-CALIF

LAT 32D52M59S LONG 114D27M55S
DRAINAGE AREA: 184600 SQ MI (478114 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	19.96	6.89	9.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	65	1321.4	73.2	1220	1530					
STREAMFLOW (CUBIC FT/SEC)	23	8803.8	2586.4	4350	12330	12	-38.319	59580.559	-0.808	1706.7
PH (STANDARD UNITS)	65	8.02	0.11	7.7	8.3	65	-0.0002	8.3231	-0.149 *	0.11
PHOSPHORUS, TOTAL	23	0.023	0.013	0.00	0.05	12	-0.00011	0.16367	-0.440 *	0.013
NITRITE + NITRATE, TOTAL	23	0.150	0.047	0.07	0.22	12	0.00035	-0.30741	0.437 *	0.044
NITROGEN, KJELDAHL, TOTAL	23	0.343	0.156	0.08	0.67	12	-0.00041	0.84291	-0.160 *	0.153
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	3462.2	3473.1	180	9500	9	-29.813	43775.961	-0.506 *	3203.3
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	34.1	42.2	5	130					
STREPTOCOCCI, FECAL (COL/100 ML)	11	56.2	49.8	5	180					
SILICA, DISSOLVED	53	8.30	1.10	6.0	11.0	53	0.0069	-0.8431	0.480	0.98
CALCIUM, DISSOLVED	53	95.30	3.88	89.0	106.0	53	0.0428	38.8859	0.842	2.11
MAGNESIUM, DISSOLVED	53	32.38	1.30	29.0	35.0	53	0.0092	20.3123	0.535	1.11
SODIUM, DISSOLVED	53	139.62	12.78	125.0	175.0	53	0.1661	-79.2132	0.991	1.77
POTASSIUM, DISSOLVED	53	5.92	0.42	5.0	6.8	53	0.0037	1.0955	0.663	0.32
BICARBONATE, ION	53	179.2	8.1	166	206	53	0.091	59.737	0.854	4.2
CARBONATE, ION	53	0.0	0.0	0	0	53	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	53	349.72	16.12	330.0	390.0	53	0.2089	74.4229	0.988	2.56
CHLORIDE, DISSOLVED	53	120.06	12.07	104.0	155.0	53	0.1563	-85.9660	0.988	1.92
DISSOLVED SOLIDS, SUM OF CONST	53	840.4	48.9	780	977	53	0.640	-3.506	0.998	2.7
DISSOLVED SOLIDS, ROE 180 DEG C	53	845.9	49.3	782	982	53	0.639	3.794	0.989	7.4
HARDNESS, TOTAL	53	370.5	11.6	355	405	53	0.145	179.623	0.954	3.5
HARDNESS, NONCARBONATE	54	223.6	5.9	214	238	53	0.071	130.165	0.908	2.5
TURBIDITY (JTU)	19	1.2	0.4	1	2	19	-0.000	1.624	-0.049 *	0.4
FLOURIDE, DISSOLVED	53	0.50	0.06	0.4	0.7	53	0.0002	0.2095	0.308	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1530	1460	1420	1370	1340	1300	1280	1250	1240	1230

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	20.63	9.13	2.63	92	1.87

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09429490 -- COLORADO R AB IMPERIAL D ARIZ-CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	1	4
CADMIUM (CD), UG/L	4	<10	10	4	0	<1
CHROMIUM (CR), UG/L	4	0	6	4	0	5
COBALT (CO), UG/L	4	0	<50	4	0	3
COPPER (CU), UG/L	4	<10	480	4	0	1
IRON (FE), UG/L	23	0	950	4	10	100
LEAD (PB), UG/L	4	<100	<100	4	0	11
MANGANESE (MN), UG/L	4	40	70	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	3	4	4	2	4
ZINC (ZN), UG/L	4	8	90	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.29	26.00			
BIOMASS, ASH WT., G/SQ M	4	.19	23.00			
CHLOROPHYLL A, MG/SQ M	4	.3	22.0			
CHLOROPHYLL B, MG/SQ M	4	.2	3.6			
ORGANIC CARBON, MG/L	23	3.0	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09466500 NAME: GILA RIVER AT CALVA, ARIZ.

LAT 33D11M06S LONG 110D13M12S
DRAINAGE AREA: 11470 SQ MI (29707 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.54	9.72	5.0	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	3727.0	2287.1	860	7040					
STREAMFLOW (CUBIC FT/SEC)	11	382.7	711.4	4	2400	9	-0.079	485.427	-0.720	194.5
PH (STANDARD UNITS)	12	8.01	0.19	7.5	8.2	10	-0.0000	8.1569	-0.562 *	0.08
PHOSPHORUS, TOTAL	12	0.587	0.656	0.02	2.00	10	-0.00014	1.05829	-0.519 *	0.561
NITRITE + NITRATE, TOTAL	12	0.720	0.455	0.03	1.40	10	-0.00002	0.92791	-0.137 *	0.414
NITROGEN, KJELDAHL, TOTAL	12	1.727	2.013	0.25	6.90	10	-0.00026	2.53839	-0.296 *	2.022
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	10237.5	15424.3	560	45000	6	-1.056	18469.266	-0.151 *	18628.2
SEDIMENT, SUSPENDED	4	2474.5	4180.4	65	8730					
SEDIMENT, CLAY-SILT (PERCENT)	4	71.8	21.9	45	97					
COLIFORM, FECAL (COL/100 ML)	3	1663.3	1027.1	490	2400					
STREPTOCOCCI, FECAL (COL/100 ML)	3	6646.7	5518.6	440	11000					
SILICA, DISSOLVED	12	32.51	8.38	8.1	40.0	10	-0.0017	38.8199	-0.418 *	8.92
CALCIUM, DISSOLVED	12	163.42	105.02	37.0	360.0	10	0.0434	3.7673	0.971	25.98
MAGNESIUM, DISSOLVED	12	44.18	30.68	7.2	95.0	10	0.0126	-2.5347	0.983	5.76
SODIUM, DISSOLVED	12	564.42	399.64	53.0	1100.0	10	0.1596	-32.8677	0.996	33.59
POTASSIUM, DISSOLVED	12	11.18	6.12	3.4	22.0	10	0.0024	2.6467	0.900	2.79
BICARBONATE, ION	12	257.3	70.0	132	360	10	0.018	204.960	0.635	52.1
CARBONATE, ION	8	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	378.83	286.92	54.0	800.0	10	0.1139	-55.2129	0.991	37.53
CHLORIDE, DISSOLVED	12	873.83	670.75	56.0	1900.0	10	0.2742	-148.9722	0.992	85.02
DISSOLVED SOLIDS, SUM OF CONST	12	2198.6	1510.0	311	4390	10	0.613	-88.268	0.996	139.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	2244.3	1537.3	333	4500	10	0.627	-92.823	0.996	134.5
HARDNESS, TOTAL	12	594.2	394.4	120	1300	10	0.164	-10.927	0.980	80.5
HARDNESS, NONCARBONATE	12	378.8	358.3	14	1100	10	0.145	-168.674	0.950	115.3
TURBIDITY (JTU)	12	379.7	909.3	2	3200	10	-0.060	608.809	-0.138 *	1041.6
FLOURIDE, DISSOLVED	12	1.36	0.45	0.3	2.1	10	-0.0000	1.5005	-0.144 *	0.49

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	17.80	12.68	3.03	91	3.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09466500 -- GILA RIVER AT CALVA, ARIZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	15	4	4	6
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	20	70	4	4	24
IRON (FE), UG/L	4	320	13000	4	20	50
LEAD (PB), UG/L	4	<100	100	4	0	12
MANGANESE (MN), UG/L	4	60	510	4	0	250
MERCURY (HG), UG/L	3	0.0	0.4	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	70	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.19	33.00			
BIOMASS, ASH WT., G/SQ M	2	.00	18.00			
CHLOROPHYLL A, MG/SQ M	2	.2	1.8			
CHLOROPHYLL B, MG/SQ M	2	.0	.3			
ORGANIC CARBON, MG/L	4	5.3	12.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09473500 NAME: SAN PEDRO R AT WINKELMAN, ARIZ.

LAT 32D58M38S LONG 110D46M11S
DRAINAGE AREA: 4471 SQ MI (11580 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	26.88	6.84	12.5	36.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	1362.1	548.6	181	1760					
STREAMFLOW (CUBIC FT/SEC)	12	7.5	9.8	0	35	8	0.002	1.730	0.461 *	2.6
PH (STANDARD UNITS)	10	7.97	0.15	7.7	8.2	8	0.0000	7.9745	0.123 *	0.13
PHOSPHORUS, TOTAL	10	1.738	4.359	0.02	14.00	8	-0.00017	0.38879	-0.306 *	0.310
NITRITE + NITRATE, TOTAL	10	0.656	0.362	0.18	1.30	8	-0.00018	0.82755	-0.266 *	0.387
NITROGEN, KJELDAHL, TOTAL	10	5.333	11.048	0.13	35.00	8	-0.00058	1.57527	-0.278 *	1.176
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	11571.3	19310.7	970	55000	6	-4.370	11626.246	-0.296 *	10043.7
SEDIMENT, SUSPENDED	6	77149.6	62028.9	878	150000					
SEDIMENT, CLAY-SILT (PERCENT)	1	100.0	0.0	100						
COLIFORM, FECAL (COL/100 ML)	3	42666.7	33246.5	12000	78000					
STREPTOCOCCI, FECAL (COL/100 ML)	3	98666.6	47595.5	56000	150000					
SILICA, DISSOLVED	10	33.00	6.96	18.0	39.0	8	-0.0009	37.3020	-0.219 *	2.28
CALCIUM, DISSOLVED	10	121.10	39.05	33.0	160.0	8	-0.0033	142.0379	-0.109 *	17.92
MAGNESIUM, DISSOLVED	10	26.86	9.89	5.6	38.0	8	-0.0015	32.7939	-0.150 *	5.84
SODIUM, DISSOLVED	10	154.40	57.80	34.0	200.0	8	-0.0068	190.5368	-0.332 *	11.47
POTASSIUM, DISSOLVED	10	8.02	1.42	5.2	9.9	8	-0.0009	9.8167	-0.580 *	0.76
BICARBONATE, ION	10	256.7	53.6	136	332	8	0.011	247.982	0.210 *	29.1
CARBONATE, ION	6	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	10	375.90	150.14	59.0	490.0	8	-0.0089	457.0754	-0.139 *	37.49
CHLORIDE, DISSOLVED	10	104.11	56.25	6.1	170.0	8	-0.0088	139.8937	-0.167 *	30.85
DISSOLVED SOLIDS, SUM OF CONST	10	953.3	326.2	232	1230	8	-0.026	1135.219	-0.152 *	100.2
DISSOLVED SOLIDS, ROE 180 DEG C	10	982.0	339.7	237	1300	8	-0.054	1208.159	-0.301 *	100.8
HARDNESS, TOTAL	10	413.0	137.7	110	560	8	-0.016	491.669	-0.135 *	69.4
HARDNESS, NONCARBONATE	10	204.0	121.2	0	350	8	-0.025	289.314	-0.218 *	66.9
TURBIDITY (JTU)	10	7824.3	18601.8	2	58000	8	-0.256	504.297	-0.333 *	429.9
FLOURIDE, DISSOLVED	10	1.79	0.49	0.9	2.3	8	-0.0000	2.0500	-0.084 *	0.26

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	26.20	7.93	2.94	83	3.10

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09473500 -- SAN PEDRO R AT WINKELMAN, ARIZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	3	53	3	5	13
CADMIUM (CD), UG/L	3	<10	10	3	0	2
CHROMIUM (CR), UG/L	3	0	90	3	0	10
COBALT (CO), UG/L	3	<50	100	3	0	1
COPPER (CU), UG/L	3	<10	280	3	3	8
IRON (FE), UG/L	3	120	88000	3	10	40
LEAD (PB), UG/L	3	<100	300	3	0	1
MANGANESE (MN), UG/L	3	10	4300	3	0	20
MERCURY (HG), UG/L	3	0.0	0.4	3	0.0	0.3
SELENIUM (SE), UG/L	3	1	1	3	0	1
ZINC (ZN), UG/L	3	<10	470	3	7	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	26.00				
BIOMASS, ASH WT., G/SQ M	1	24.00				
CHLOROPHYLL A, MG/SQ M	1	13.0				
CHLOROPHYLL B, MG/SQ M	1	4.5				
ORGANIC CARBON, MG/L	3	3.5	32.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09474000 NAME: GILA R AT KELVIN ARIZ

LAT 33D06M10S LONG 110D58M33S
DRAINAGE AREA: 18011 SQ MI (46648 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	19.23	6.44	10.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	1383.8	216.7	1192	1940					
STREAMFLOW (CUBIC FT/SEC)	12	463.5	223.5	37	765	9	-0.675	1392.905	-0.646*	184.5
PH (STANDARD UNITS)	12	7.98	0.11	7.8	8.2	9	0.0004	7.4965	0.788	0.07
PHOSPHORUS, TOTAL	12	0.806	1.926	0.02	6.80	9	-0.00047	0.95002	-0.236*	0.453
NITRITE + NITRATE, TOTAL	12	0.169	0.172	0.01	0.62	9	-0.00002	0.15630	-0.033*	0.111
NITROGEN, KJELDAHL, TOTAL	12	2.330	4.077	0.37	13.00	9	-0.00221	4.50245	-0.178*	2.825
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	4141.0	6554.3	730	22000	8	-19.481	29541.035	-0.167*	7783.8
SEDIMENT, SUSPENDED	3	50644.3	74292.9	533	136000					
SEDIMENT, CLAY-SILT (PERCENT)	2	95.0	7.1	90	100					
COLIFORM, FECAL (COL/100 ML)	4	7565.8	8738.5	63	17000					
STREPTOCOCCI, FECAL (COL/100 ML)	4	42750.0	42375.8	5300	87000					
SILICA, DISSOLVED	12	25.42	2.71	22.0	32.0	9	0.0095	12.3068	0.685	2.34
CALCIUM, DISSOLVED	12	80.42	29.08	54.0	170.0	9	0.1440	-114.3072	0.973	7.98
MAGNESIUM, DISSOLVED	12	23.49	10.09	5.9	51.0	9	0.0448	-36.4862	0.987	1.69
SODIUM, DISSOLVED	12	162.50	25.98	110.0	210.0	9	0.0552	89.2294	0.792	9.85
POTASSIUM, DISSOLVED	12	6.45	0.83	5.7	8.3	9	0.0033	1.8157	0.816	0.54
BICARBONATE, ION	12	214.0	35.0	164	311	9	0.151	11.898	0.945	12.1
CARBONATE, ION	8	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	161.25	92.74	95.0	450.0	9	0.4714	-482.2974	0.966	29.18
CHLORIDE, DISSOLVED	12	219.17	40.55	120.0	290.0	9	0.0442	163.2328	0.529*	16.42
DISSOLVED SOLIDS, SUM OF CONST	12	786.3	185.5	496	1300	9	0.852	-365.170	0.994	22.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	809.3	182.0	537	1320	9	0.850	-342.299	0.993	23.9
HARDNESS, TOTAL	12	297.5	111.1	160	630	9	0.538	-427.222	0.981	24.7
HARDNESS, NONCARBONATE	12	122.7	85.3	25	380	9	0.421	-446.753	0.988	15.4
TURBIDITY (JTU)	12	1278.9	2975.5	9	9000	9	-2.305	4221.039	-0.167*	3149.8
FLOURIDE, DISSOLVED	12	0.96	0.09	0.8	1.1	9	-0.0001	1.1438	-0.392*	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 357

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1600	1600	1440	1360	1300	1200	1150	1000	1000	882

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
355	17.44	7.98	2.58	93	1.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09474000 -- GILA R AT KELVIN ARIZ

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	10	4	2	7
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	4	0	0
COPPER (CU), UG/L	4	< 10	30	4	1	9
IRON (FE), UG/L	4	1400	4400	4	0	20
LEAD (PB), UG/L	4	<100	< 100	4	0	5
MANGANESE (MN), UG/L	3	160	360	4	0	10
MERCURY (HG), UG/L	4	0.1	0.8	4	< 0.1	0.4
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	< 10	60	4	0	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	4.79				
BIOMASS, ASH WT., G/SQ M	1	1.89				
CHLOROPHYLL A, MG/SQ M	2	3.1	15.0			
CHLOROPHYLL B, MG/SQ M	2	.6	3.1			
ORGANIC CARBON, MG/L	4	3.1	40.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09489000 NAME: SANTA CRUZ RIVER NEAR LAVEEN, ARIZ.

LAT 33D13M56S LONG 112D10M08S
DRAINAGE AREA: 8581 SQ MI (22225 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)				REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE	SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	0								
SPECIFIC CONDUCTANCE (MICROMHOS)	0								
STREAMFLOW (CUBIC FT/SEC)	10	0.0	0.0	0	0				
PH (STANDARD UNITS)	0								
PHOSPHORUS, TOTAL	0								
NITRITE + NITRATE, TOTAL	0								
NITROGEN, KJELDAHL, TOTAL	0								
PHYTOPLANKTON, TOTAL (CELLS/ML)	0								
SEDIMENT, SUSPENDED	0								
SEDIMENT, CLAY-SILT (PERCENT)	0								
COLIFORM, FECAL (COL/100 ML)	0								
STREPTOCOCCI, FECAL (COL/100 ML)	0								
SILICA, DISSOLVED	0								
CALCIUM, DISSOLVED	0								
MAGNESIUM, DISSOLVED	0								
SODIUM, DISSOLVED	0								
POTASSIUM, DISSOLVED	0								
BICARBONATE, ION	0								
CARBONATE, ION	0								
SULFATE, DISSOLVED	0								
CHLORIDE, DISSOLVED	0								
DISSOLVED SOLIDS, SUM OF CONST	0								
DISSOLVED SOLIDS, ROE 180 DEG C	0								
HARDNESS, TOTAL	0								
HARDNESS, NONCARBONATE	0								
TURBIDITY (JTU)	0								
FLOURIDE, DISSOLVED	0								

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09489000 -- SANTA CRUZ RIVER NEAR LAVEEN, ARIZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	0			0		
CADMIUM (CD), UG/L	0			0		
CHROMIUM (CR), UG/L	0			0		
COBALT (CO), UG/L	0			0		
COPPER (CU), UG/L	0			0		
IRON (FE), UG/L	0			0		
LEAD (PB), UG/L	0			0		
MANGANESE (MN), UG/L	0			0		
MERCURY (HG), UG/L	0			0		
SELENIUM (SE), UG/L	0			0		
ZINC (ZN), UG/L	0			0		
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	0					

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09502000 NAME: SALT R BL STEWART MOUNTAIN D ARIZ

LAT 33D33M59S LONG 111D32M08S
DRAINAGE AREA: 6232 SQ MI (16141 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	6	15.67	3.27	11.0	19.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	975.8	161.4	850	1200					
STREAMFLOW (CUBIC FT/SEC)	10	779.6	718.5	0	1630	6	0.502	809.198	0.235 *	374.7
PH (STANDARD UNITS)	6	7.68	0.48	7.1	8.2	6	-0.0027	10.3617	-0.924	0.20
PHOSPHORUS, TOTAL	6	0.023	0.015	0.01	0.04	6	0.00008	-0.05223	0.830	0.009
NITRITE + NITRATE, TOTAL	6	0.040	0.031	0.01	0.09	6	-0.00003	0.06510	-0.134 *	0.034
NITROGEN, KJELDAHL, TOTAL	6	0.217	0.143	0.04	0.47	6	0.00048	-0.25632	0.548 *	0.134
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	978.3	496.4	370	1700	6	-2.570	3486.459	-0.836	305.0
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	6	3.8	3.4	1	8					
STREPTOCOCCI, FECAL (COL/100 ML)	6	10.0	8.2	1	24					
SILICA, DISSOLVED	6	15.83	0.75	15.0	17.0	6	0.0009	15.0028	0.182 *	0.83
CALCIUM, DISSOLVED	6	49.50	1.64	47.0	52.0	6	0.0074	42.2497	0.730 *	1.26
MAGNESIUM, DISSOLVED	6	13.00	1.55	12.0	15.0	6	0.0095	3.7077	0.992	0.22
SODIUM, DISSOLVED	6	123.33	25.82	100.0	160.0	6	0.1489	-21.9216	0.930	10.58
POTASSIUM, DISSOLVED	6	4.75	0.30	4.4	5.1	6	0.0012	3.5565	0.654 *	0.26
BICARBONATE, ION	6	155.0	3.4	149	159	6	0.009	146.345	0.420 *	3.5
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	6	51.17	6.43	43.0	62.0	6	0.0303	21.6098	0.760 *	4.67
CHLORIDE, DISSOLVED	6	185.00	39.37	150.0	240.0	6	0.2352	-44.4978	0.964	11.70
DISSOLVED SOLIDS, SUM OF CONST	6	519.5	73.5	452	616	6	0.437	93.053	0.960	22.9
DISSOLVED SOLIDS, ROE 180 DEG C	6	530.3	79.3	463	649	6	0.462	79.106	0.941	30.1
HARDNESS, TOTAL	6	176.7	10.3	170	190	6	0.063	114.718	0.992	1.5
HARDNESS, NONCARBONATE	6	50.0	8.7	43	65	6	0.049	2.002	0.911	4.0
TURBIDITY (JTU)	6	2.8	1.3	2	5	6	0.008	-4.779	0.947	0.5
FLOURIDE, DISSOLVED	6	0.33	0.08	0.3	0.5	6	-0.0002	0.5069	-0.352 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 179

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1200	1180	1180	1160	1150	1030	940	870	840	825

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
177	16.11	3.60	2.09	86	1.01

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09502000 -- SALT R BL STEWART MOUNTAIN D ARIZ

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	3	4	2	2	4
CADMIUM (CD), UG/L	2	< 10	<10	2	0	1
CHROMIUM (CR), UG/L	2	0	0	2	0	0
COBALT (CO), UG/L	2	< 50	<50	2	0	2
COPPER (CU), UG/L	2	10	10	2	1	2
IRON (FE), UG/L	2	150	230	2	10	10
LEAD (PB), UG/L	2	<100	<100	2	0	1
MANGANESE (MN), UG/L	2	20	30	2	0	10
MERCURY (HG), UG/L	2	0.0	0.1	2	0.0	0.1
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	20	90	2	0	7
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	2	3.1	4.3			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09510000 NAME: VERDE R BL BARTLETT D ARIZ

LAT 33D49M05S LONG 111D37M53S
DRAINAGE AREA: 6188 SQ MI (16027 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	15.17	5.67	9.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	500.9	215.0	6	795					
STREAMFLOW (CUBIC FT/SEC)	12	220.7	225.3	32	751	12	0.426	7.249	0.407 *	215.9
PH (STANDARD UNITS)	12	8.31	0.30	7.7	8.7	12	0.0011	7.7427	0.802	0.19
PHOSPHORUS, TOTAL	9	0.038	0.018	0.01	0.06	9	-0.00008	0.08127	-0.689	0.014
NITRITE + NITRATE, TOTAL	9	0.120	0.080	0.03	0.29	9	0.00017	0.02469	0.336 *	0.081
NITROGEN, KJELDAHL, TOTAL	9	0.274	0.140	0.13	0.60	9	0.00029	0.11210	0.329 *	0.141
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1948.9	1850.3	240	5400	9	3.641	168.263	0.470 *	1745.7
SEDIMENT, SUSPENDED	7	20.1	9.8	7	31					
SEDIMENT, CLAY-SILT (PERCENT)	7	75.7	12.1	60	91					
COLIFORM, FECAL (COL/100 ML)	10	7.5	6.2	1	16					
STREPTOCOCCI, FECAL (COL/100 ML)	11	88.9	249.7	1	840					
SILICA, DISSOLVED	9	17.22	2.73	12.0	21.0	9	0.0001	17.1571	0.007 *	2.92
CALCIUM, DISSOLVED	9	42.22	6.32	30.0	49.0	9	0.0337	23.3878	0.844	3.62
MAGNESIUM, DISSOLVED	9	27.67	10.51	10.0	36.0	9	0.0585	-4.9738	0.879	5.35
SODIUM, DISSOLVED	9	30.56	12.17	14.0	42.0	9	0.0713	-9.2530	0.927	4.89
POTASSIUM, DISSOLVED	9	2.97	0.76	1.9	4.0	9	0.0041	0.6557	0.859	0.42
BICARBONATE, ION	9	247.3	58.3	168	297	9	0.344	55.440	0.932	22.5
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	56.00	23.09	24.0	80.0	9	0.1346	-19.1748	0.922	9.56
CHLORIDE, DISSOLVED	9	19.79	8.34	8.5	30.0	9	0.0473	-6.6117	0.896	3.96
DISSOLVED SOLIDS, SUM OF CONST	9	319.1	88.5	199	387	9	0.520	28.804	0.929	35.0
DISSOLVED SOLIDS, ROE 180 DEG C	9	311.8	82.6	191	378	9	0.492	37.002	0.942	29.7
HARDNESS, TOTAL	9	220.0	55.9	140	270	9	0.322	40.122	0.911	24.6
HARDNESS, NONCARBONATE	9	16.4	8.7	3	27	9	0.044	-7.939	0.795	5.6
TURBIDITY (JTU)	9	9.9	4.0	5	16	9	-0.013	17.038	-0.501 *	3.7
FLOURIDE, DISSOLVED	9	0.29	0.11	0.2	0.5	9	0.0001	0.2238	0.175 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 356

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	690	670	650	615	600	545	390	330	325	320

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
351	13.86	6.63	2.10	89	1.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09510000 -- VERDE R BL BARTLETT D ARIZ

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	9	18	3	12	18
CADMIUM (CD), UG/L	3	< 10	< 10	3	0	1
CHROMIUM (CR), UG/L	3	0	0	3	0	< 10
COBALT (CO), UG/L	3	< 50	< 50	3	0	4
COPPER (CU), UG/L	3	< 10	20	3	2	5
IRON (FE), UG/L	3	360	710	3	10	190
LEAD (PB), UG/L	3	< 100	100	3	1	3
MANGANESE (MN), UG/L	3	50	70	3	0	60
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	3	1	1	3	1	1
ZINC (ZN), UG/L	3	20	50	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	8.50				
BIOMASS, ASH WT., G/SQ M	2	4.50	7.69			
CHLOROPHYLL A, MG/SQ M	2	3.1	9.5			
CHLOROPHYLL B, MG/SQ M	2	.8	2.6			
ORGANIC CARBON, MG/L	3	2.5	4.7			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09518000 NAME: GILA R AB DIVERSIONS AT GILLESPIE DAM AZ.

LAT 33D13M36S LONG 112D46M17S
DRAINAGE AREA: 49650 SQ MI (128594 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	17.55	8.09	9.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	5798.2	1577.7	1390	7000					
STREAMFLOW (CUBIC FT/SEC)	11	48.5	27.0	5	85	11	-0.009	101.331	-0.534*	24.0
PH (STANDARD UNITS)	11	8.12	0.21	7.8	8.4	11	0.0001	7.6686	0.573*	0.18
PHOSPHORUS, TOTAL	10	1.490	0.857	0.50	2.80	10	-0.00017	2.48003	-0.329*	0.858
NITRITE + NITRATE, TOTAL	10	9.530	3.732	2.40	13.00	10	0.00144	1.14242	0.640	3.041
NITROGEN, KJELDAHL, TOTAL	10	3.690	1.784	1.40	6.60	10	-0.00007	4.09694	-0.065*	1.888
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	23255.6	27143.5	1400	71000	9	25.951	-140782.750	0.577*	23707.6
SEDIMENT, SUSPENDED	6	174.0	119.0	47	329					
SEDIMENT, CLAY-SILT (PERCENT)	6	77.7	7.6	67	86					
COLIFORM, FECAL (COL/100 ML)	9	3338.9	5463.8	190	17600					
STREPTOCOCCI, FECAL (COL/100 ML)	10	1473.0	1586.5	450	5800					
SILICA, DISSOLVED	10	18.28	7.30	4.8	29.0	10	-0.0021	30.5918	-0.480*	6.79
CALCIUM, DISSOLVED	10	226.30	63.47	63.0	300.0	10	0.0357	18.2517	0.934	24.12
MAGNESIUM, DISSOLVED	10	102.20	34.84	21.0	150.0	10	0.0178	-1.4012	0.847	19.64
SODIUM, DISSOLVED	10	817.00	248.51	170.0	1000.0	10	0.1435	-19.4490	0.959	75.07
POTASSIUM, DISSOLVED	10	11.61	1.24	9.1	14.0	10	-0.0005	14.4026	-0.640	1.01
BICARBONATE, ION	10	295.6	86.1	136	372	10	0.030	119.151	0.584*	74.1
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	787.00	251.35	170.0	1100.0	10	0.1419	-40.1401	0.937	92.99
CHLORIDE, DISSOLVED	10	1195.00	354.69	250.0	1500.0	10	0.2027	13.6394	0.949	119.10
DISSOLVED SOLIDS, SUM OF CONST	10	3338.4	976.5	784	4310	10	0.562	60.847	0.956	304.3
DISSOLVED SOLIDS, ROE 180 DEG C	10	3499.8	1019.0	848	4450	10	0.587	81.458	0.955	319.4
HARDNESS, TOTAL	10	1006.0	310.2	240	1400	10	0.168	28.967	0.897	145.5
HARDNESS, NONCARBONATE	10	745.0	251.0	130	1100	10	0.139	-64.262	0.918	105.3
TURBIDITY (JTU)	10	119.5	274.9	18	900	10	-0.154	1017.743	-0.931	106.7
FLOURIDE, DISSOLVED	10	1.69	0.80	0.2	2.6	10	0.0003	0.1801	0.537*	0.72

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 300

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	7300	7100	6900	6700	6500	6200	5700	4800	4550	4150

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
301	19.20	9.32	2.73	92	1.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09518000 -- GILA R AB DIVERSIONS AT GILLESPIE DAM AZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	9	11	3	9	11
CADMIUM (CD), UG/L	3	<10	20	3	0	0
CHROMIUM (CR), UG/L	3	0	20	3	<10	10
COBALT (CO), UG/L	3	<50	100	3	0	1
COPPER (CU), UG/L	3	20	40	3	5	6
IRON (FE), UG/L	3	1500	2300	3	20	220
LEAD (PB), UG/L	3	<100	<100	3	0	5
MANGANESE (MN), UG/L	3	130	270	3	40	240
MERCURY (HG), UG/L	3	<0.1	0.3	3	<0.1	0.3
SELENIUM (SE), UG/L	3	9	14	3	8	10
ZINC (ZN), UG/L	3	40	50	3	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	15.00				
BIOMASS, ASH WT., G/SQ M	2	10.00	20.00			
CHLOROPHYLL A, MG/SQ M	2	.6	53.0			
CHLOROPHYLL B, MG/SQ M	2	.2	14.0			
ORGANIC CARBON, MG/L	3	5.5	18.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09520700 NAME: GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.

LAT 32D42M45S LONG 114D33M09S
DRAINAGE AREA: 57950 SQ MI (150091 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	55	23.31	2.47	17.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	60	3316.2	316.7	2120	4000					
STREAMFLOW (CUBIC FT/SEC)	61	86.8	29.1	24	136	60	0.044	-58.359	0.473	26.1
PH (STANDARD UNITS)	18	7.88	0.14	7.7	8.2	18	-0.0000	7.9742	-0.072*	0.14
PHOSPHORUS, TOTAL	12	0.057	0.014	0.04	0.08	12	0.00000	0.04265	0.128*	0.014
NITRITE + NITRATE, TOTAL	12	0.785	0.127	0.60	1.00	12	0.00016	0.23725	0.502*	0.115
NITROGEN, KJELDAHL, TOTAL	12	0.433	0.148	0.23	0.67	12	-0.00011	0.80637	-0.295*	0.148
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1303.3	671.6	500	2200	9	-0.503	2946.750	-0.248*	695.5
SEDIMENT, SUSPENDED	9	17.1	8.1	9	34					
SEDIMENT, CLAY-SILT (PERCENT)	9	61.3	16.6	40	90					
COLIFORM, FECAL (COL/100 ML)	11	45.0	53.5	10	200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1617.1	2937.5	80	10000					
SILICA, DISSOLVED	24	24.58	0.97	23.0	26.0	24	0.0012	20.5556	0.378*	0.92
CALCIUM, DISSOLVED	24	154.17	18.16	130.0	190.0	24	0.0509	-16.0356	0.858	9.54
MAGNESIUM, DISSOLVED	24	61.08	7.59	46.0	78.0	24	0.0218	-11.7990	0.879	3.70
SODIUM, DISSOLVED	24	487.50	46.46	400.0	590.0	24	0.1363	31.2449	0.899	20.83
POTASSIUM, DISSOLVED	24	7.47	1.49	4.9	13.0	24	0.0036	-4.5798	0.741	1.02
BICARBONATE, ION	24	306.5	13.0	284	336	24	0.036	187.596	0.838	7.2
CARBONATE, ION	14	0.0	0.0	0	0	14	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	24	476.25	42.82	410.0	590.0	24	0.0690	245.1940	0.494	38.06
CHLORIDE, DISSOLVED	24	672.08	94.13	560.0	860.0	24	0.2952	-315.6921	0.960	26.81
DISSOLVED SOLIDS, SUM OF CONST	24	2040.4	188.4	1810	2440	24	0.595	48.701	0.967	48.8
DISSOLVED SOLIDS, ROE 180 DEG C	24	2095.8	178.7	1870	2490	24	0.559	226.471	0.957	52.7
HARDNESS, TOTAL	24	636.3	73.5	520	800	24	0.218	-92.838	0.908	31.4
HARDNESS, NONCARBONATE	24	385.0	64.6	270	520	24	0.189	-248.076	0.897	29.2
TURBIDITY (JTU)	12	2.1	1.6	1	7	12	-0.001	4.738	-0.184*	1.7
FLOURIDE, DISSOLVED	24	0.94	0.10	0.8	1.2	24	0.0000	0.8415	0.087*	0.10

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
54	23.37	2.82	2.90	65	1.50

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09520700 -- GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	10	20	4	10	20
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	5	4	0	10
COBALT (CO), UG/L	4	0	< 50	4	0	4
COPPER (CU), UG/L	4	<10	440	4	0	2
IRON (FE), UG/L	4	0	260	23	0	150
LEAD (PB), UG/L	4	<100	100	4	0	7
MANGANESE (MN), UG/L	4	940	1200	4	850	1100
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	10	13	4	9	13
ZINC (ZN), UG/L	4	10	80	4	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	11.00	17.00			
BIOMASS, ASH WT., G/SQ M	4	4.59	12.00			
CHLOROPHYLL A, MG/SQ M	4	12.0	60.0			
CHLOROPHYLL B, MG/SQ M	4	4.3	19.0			
ORGANIC CARBON, MG/L	4	2.5	13.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 09522000 NAME: COLORADO R AT NIB AB MORELOS DAM NR ANDRADE, CAL

LAT 32D43M07S LONG 114D43M05S
DRAINAGE AREA: 243000 SQ MI (629370 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	56	19.54	5.94	10.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	65	1595.1	139.9	1430	1990					
STREAMFLOW (CUBIC FT/SEC)	76	1838.7	772.1	707	3780	65	-4.365	8798.391	-0.793	473.5
PH (STANDARD UNITS)	61	8.00	0.10	7.7	8.2	61	-0.0002	8.3375	-0.313	0.09
PHOSPHORUS, TOTAL	24	0.081	0.035	0.04	0.18	13	0.00015	-0.15057	0.583	0.034
NITRITE + NITRATE, TOTAL	24	0.245	0.077	0.08	0.38	13	0.00022	-0.11895	0.489 *	0.067
NITROGEN, KJELDAHL, TOTAL	24	0.415	0.192	0.09	0.88	13	0.00086	-0.98603	0.650	0.170
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	4460.0	3822.9	500	11000	8	18.516	-26090.828	0.864	2078.4
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	160.1	176.6	16	540					
STREPTOCOCCI, FECAL (COL/100 ML)	11	760.2	1940.6	48	6600					
SILICA, DISSOLVED	52	11.06	1.38	9.0	14.0	52	0.0068	0.2608	0.667	1.04
CALCIUM, DISSOLVED	52	106.21	6.06	98.0	121.0	52	0.0416	40.0580	0.929	2.26
MAGNESIUM, DISSOLVED	52	35.94	2.11	32.0	41.0	52	0.0119	17.0887	0.761	1.38
SODIUM, DISSOLVED	52	183.65	22.39	155.0	240.0	52	0.1649	-78.4001	0.996	2.05
POTASSIUM, DISSOLVED	52	6.27	0.50	5.5	7.5	52	0.0029	1.6616	0.786	0.31
BICARBONATE, ION	52	205.6	14.9	184	242	52	0.107	34.880	0.972	3.5
CARBONATE, ION	50	0.0	0.0	0	0	50	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	52	379.13	21.07	355.0	430.0	52	0.1532	135.7404	0.983	3.93
CHLORIDE, DISSOLVED	52	181.33	26.59	140.0	255.0	52	0.1952	-128.8586	0.992	3.33
DISSOLVED SOLIDS, SUM OF CONST	52	1006.2	85.9	903	1230	52	0.635	-3.071	0.999	3.9
DISSOLVED SOLIDS, ROE 180 DEG C	52	1013.5	87.6	906	1230	52	0.646	-12.724	0.997	7.4
HARDNESS, TOTAL	52	413.2	21.2	390	470	52	0.154	168.327	0.983	3.9
HARDNESS, NONCARBONATE	52	244.6	9.9	230	272	52	0.067	137.883	0.919	3.9
TURBIDITY (JTU)	17	1.5	0.7	1	3	17	-0.002	5.316	-0.375 *	0.7
FLOURIDE, DISSOLVED	52	0.58	0.08	0.5	0.7	52	0.0003	0.1231	0.510	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1940	1870	1830	1760	1610	1550	1500	1440	1430	1420

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
56	19.93	8.17	2.66	93	1.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

09522000 -- COLORADO R AT NIB AB MORELOS DAM NR ANDRADE, CAL

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	6	4	0	6
CADMIUM (CD), UG/L	4	<10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	50	4	0	2
COPPER (CU), UG/L	4	<10	280	4	0	1
IRON (FE), UG/L	24	0	930	4	10	20
LEAD (PB), UG/L	4	<100	<100	4	0	9
MANGANESE (MN), UG/L	4	50	150	4	10	60
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	3	4	4	2	4
ZINC (ZN), UG/L	4	0	40	4	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	9.69	74.00			
BIOMASS, ASH WT., G/SQ M	4	3.09	64.00			
CHLOROPHYLL A, MG/SQ M	4	7.1	83.0			
CHLOROPHYLL B, MG/SQ M	4	1.1	15.0			
ORGANIC CARBON, MG/L	24	2.6	10.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10059500 NAME: BEAR LAKE OUTLET CANAL NEAR PARIS IDAHO

LAT 42D13M00S LONG 111D20M35S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	8.96	7.69	0.5	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	635.0	74.9	530	730					
STREAMFLOW (CUBIC FT/SEC)	13	350.8	440.6	4	1170	13	-0.011	357.691	-0.002 *	460.2
PH (STANDARD UNITS)	13	7.95	0.28	7.5	8.4	13	0.0010	7.2806	0.276 *	0.29
PHOSPHORUS, TOTAL	12	0.040	0.027	0.00	0.09	12	-0.00011	0.10819	-0.300 *	0.027
NITRITE + NITRATE, TOTAL	12	0.041	0.051	0.00	0.17	12	0.00029	-0.14656	0.437 *	0.048
NITROGEN, KJELDAHL, TOTAL	12	0.537	0.224	0.17	0.93	12	-0.00118	1.29334	-0.401 *	0.215
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2566.7	2192.6	350	6800	12	-14.387	11774.031	-0.498 *	1994.3
SEDIMENT, SUSPENDED	5	35.6	22.6	8	70					
SEDIMENT, CLAY-SILT (PERCENT)	8	79.1	25.7	35	97					
COLIFORM, FECAL (COL/100 ML)	6	12.5	11.1	0	28					
STREPTOCOCCI, FECAL (COL/100 ML)	9	28.8	27.1	1	70					
SILICA, DISSOLVED	12	8.52	1.22	5.8	10.0	12	0.0128	0.2932	0.802	0.76
CALCIUM, DISSOLVED	12	51.92	8.39	32.0	64.0	12	-0.0195	64.3935	-0.176 *	8.67
MAGNESIUM, DISSOLVED	12	35.92	11.35	22.0	54.0	12	0.1241	-43.4906	0.830	6.65
SODIUM, DISSOLVED	12	32.17	8.22	14.0	41.0	12	0.0856	-22.6405	0.790	5.28
POTASSIUM, DISSOLVED	12	3.02	0.89	1.4	4.6	12	0.0093	-2.9559	0.794	0.57
BICARBONATE, ION	12	290.3	27.1	257	340	12	0.297	99.875	0.834	15.6
CARBONATE, ION	8	2.5	4.9	0	14	8	0.020	-9.805	0.328 *	5.0
SULFATE, DISSOLVED	12	57.92	18.67	23.0	83.0	12	0.1945	-66.5487	0.790	12.00
CHLORIDE, DISSOLVED	12	35.33	10.97	12.0	48.0	12	0.1125	-36.6485	0.778	7.22
DISSOLVED SOLIDS, SUM OF CONST	12	369.8	57.8	262	436	12	0.677	-63.667	0.889	27.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	375.3	53.2	268	447	12	0.590	-2.454	0.842	30.1
HARDNESS, TOTAL	12	278.3	39.3	220	330	12	0.478	-27.779	0.924	15.7
HARDNESS, NONCARBONATE	12	36.7	18.6	8	65	12	0.198	-90.072	0.808	11.5
TURBIDITY (JTU)	12	10.4	7.2	1	21	12	-0.045	38.957	-0.468 *	6.7
FLOURIDE, DISSOLVED	12	0.20	0.06	0.1	0.3	12	-0.0001	0.2960	-0.189 *	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	9.41	10.29	2.71	93	2.27

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10059500 -- BEAR LAKE OUTLET CANAL NEAR PARIS IDAHO

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	0	3
CADMIUM (CD), UG/L	4	< 10	20	4	0	0
CHROMIUM (CR), UG/L	4	0	0	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	4	0	2
COPPER (CU), UG/L	4	< 10	30	4	0	2
IRON (FE), UG/L	4	250	830	4	10	150
LEAD (PB), UG/L	4	< 100	< 100	4	2	4
MANGANESE (MN), UG/L	4	40	70	4	0	30
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	580	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.00	91.00			
BIOMASS, ASH WT., G/SQ M	2	1.50	84.00			
CHLOROPHYLL A, MG/SQ M	2	.1	14.0			
CHLOROPHYLL B, MG/SQ M	2	.0	1.6			
ORGANIC CARBON, MG/L	4	3.1	8.1			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10126000 NAME: BEAR R NR CORINNE

LAT 41D34M35S LONG 112D06M00S
DRAINAGE AREA: 7029 SQ MI (18205 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	11.13	7.73	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	1121.3	346.4	700	2030					
STREAMFLOW (CUBIC FT/SEC)	14	2386.1	1222.7	1000	4185	14	-2.356	5030.719	-0.716	888.5
PH (STANDARD UNITS)	16	8.34	0.23	7.9	8.7	16	0.0003	7.9794	0.500	0.20
PHOSPHORUS, TOTAL	13	0.201	0.176	0.07	0.76	13	0.00003	0.16861	0.058 *	0.184
NITRITE + NITRATE, TOTAL	13	0.523	0.287	0.17	0.93	13	-0.00022	0.77987	-0.285 *	0.287
NITROGEN, KJELDAHL, TOTAL	13	0.744	0.403	0.12	1.50	13	0.00061	0.03846	0.557	0.349
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	11534.2	12135.0	810	43000	12	20.383	-11728.242	0.640	9779.7
SEDIMENT, SUSPENDED	6	144.2	59.6	68	235					
SEDIMENT, CLAY-SILT (PERCENT)	5	121.4	36.4	91	164					
COLIFORM, FECAL (COL/100 ML)	12	240.6	470.6	2	1600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	271.5	389.6	25	1400					
SILICA, DISSOLVED	13	13.06	2.19	8.3	16.0	13	0.0031	9.5204	0.516 *	1.95
CALCIUM, DISSOLVED	13	61.08	6.37	51.0	69.0	13	0.0092	50.4843	0.530 *	5.64
MAGNESIUM, DISSOLVED	13	32.96	10.79	6.5	44.0	13	-0.0067	40.6431	-0.227 *	10.97
SODIUM, DISSOLVED	13	131.38	71.01	59.0	300.0	13	0.1895	-87.2500	0.981	14.49
POTASSIUM, DISSOLVED	13	12.55	4.56	7.0	22.0	13	0.0116	-0.8174	0.935	1.69
BICARBONATE, ION	13	316.1	51.6	211	372	13	-0.024	343.482	-0.169 *	53.1
CARBONATE, ION	10	1.0	2.5	0	8	10	0.005	-4.622	0.786	1.6
SULFATE, DISSOLVED	13	50.85	12.32	23.0	67.0	13	0.0220	25.4608	0.656	9.71
CHLORIDE, DISSOLVED	13	194.23	111.43	85.0	460.0	13	0.2963	-147.5156	0.977	24.84
DISSOLVED SOLIDS, SUM OF CONST	13	653.0	196.1	384	1040	13	0.519	54.387	0.973	47.7
DISSOLVED SOLIDS, ROE 180 DEG C	13	667.8	206.8	397	1140	13	0.555	27.496	0.986	35.5
HARDNESS, TOTAL	13	288.5	47.1	200	340	13	-0.004	293.076	-0.031 *	49.1
HARDNESS, NONCARBONATE	13	27.7	11.5	11	51	13	0.007	19.042	0.239 *	11.7
TURBIDITY (JTU)	13	39.2	21.9	10	76	13	0.014	22.572	0.242 *	22.1
FLOURIDE, DISSOLVED	13	0.28	0.09	0.1	0.4	13	0.0002	0.0505	0.778	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 120

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	7040	6430	5850	5110	4470	3960	1130	721	639	498

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
345	10.60	10.73	2.68	94	1.87

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10126000 -- BEAR R NR CORINNE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	3	9	5	2	6
CADMIUM (CD), UG/L	5	<10	<10	5	0	<1
CHROMIUM (CR), UG/L	5	0	10	5	0	20
COBALT (CO), UG/L	5	<50	50	5	0	1
COPPER (CU), UG/L	5	<10	20	5	2	11
IRON (FE), UG/L	5	610	2500	5	10	40
LEAD (PB), UG/L	5	<100	<100	5	1	6
MANGANESE (MN), UG/L	5	20	110	5	0	10
MERCURY (HG), UG/L	5	0.0	0.0	5	0.0	0.0
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	5	30	70	5	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	21.00	540.00			
BIOMASS, ASH WT., G/SQ M	3	17.00	170.00			
CHLOROPHYLL A, MG/SQ M	3	20.0	84.0			
CHLOROPHYLL B, MG/SQ M	3	1.5	4.1			
ORGANIC CARBON, MG/L	5	7.7	55.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10141000 NAME: WEBER RIVER NR PLAIN CITY UTAH

LAT 41D16M42S LONG 112D05M28S
DRAINAGE AREA: 2060 SQ MI (5335 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	10.34	5.36	3.0	19.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	548.5	139.0	280	710					
STREAMFLOW (CUBIC FT/SEC)	15	810.7	894.6	112	3060	15	-5.835	3917.640	-0.911	382.8
PH (STANDARD UNITS)	16	7.95	0.26	7.5	8.4	16	-0.0008	8.3588	-0.404*	0.25
PHOSPHORUS, TOTAL	12	0.677	0.407	0.21	1.40	12	0.00252	-0.67989	0.861	0.217
NITRITE + NITRATE, TOTAL	12	1.076	0.511	0.41	1.80	12	0.00312	-0.60069	0.848	0.284
NITROGEN, KJELDAHL, TOTAL	12	0.894	0.258	0.57	1.30	12	0.00136	0.15974	0.737	0.182
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3050.0	2628.3	1000	10000	12	5.954	-153.984	0.315*	2616.0
SEDIMENT, SUSPENDED	4	84.0	71.4	14	148					
SEDIMENT, CLAY-SILT (PERCENT)	5	111.6	76.5	60	247					
COLIFORM, FECAL (COL/100 ML)	9	80.8	76.2	1	220					
STREPTOCOCCI, FECAL (COL/100 ML)	11	31.5	35.0	2	100					
SILICA, DISSOLVED	15	9.41	1.35	7.5	12.0	15	0.0067	5.8344	0.696	1.00
CALCIUM, DISSOLVED	15	57.33	10.67	35.0	71.0	15	0.0676	21.3349	0.885	5.17
MAGNESIUM, DISSOLVED	15	17.71	4.33	8.7	23.0	15	0.0297	1.8835	0.959	1.27
SODIUM, DISSOLVED	15	32.07	13.33	12.0	49.0	15	0.0927	-17.2881	0.971	3.29
POTASSIUM, DISSOLVED	15	4.85	1.82	1.9	7.4	15	0.0123	-1.7132	0.947	0.61
BICARBONATE, ION	15	223.7	74.5	28	303	15	0.228	102.006	0.429*	69.8
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	15	28.33	7.38	15.0	41.0	15	0.0433	5.2665	0.819	4.39
CHLORIDE, DISSOLVED	15	43.60	17.30	16.0	64.0	15	0.1206	-20.6170	0.974	4.09
DISSOLVED SOLIDS, SUM OF CONST	15	307.5	76.4	163	415	15	0.473	55.690	0.864	39.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	330.6	82.6	169	458	12	0.577	19.935	0.973	20.0
HARDNESS, TOTAL	15	215.3	43.6	120	270	15	0.286	62.987	0.917	18.0
HARDNESS, NONCARBONATE	15	32.5	52.1	8	220	15	0.103	-22.293	0.276*	52.0
TURBIDITY (JTU)	12	19.3	13.1	5	40	12	-0.074	58.852	-0.783	8.5
FLOURIDE, DISSOLVED	15	0.19	0.06	0.1	0.3	15	0.0003	0.0291	0.726	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 144

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	2580	2310	2160	969	688	546	491	258	155	61

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
15	9.56	7.18	2.51	83	2.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10141000 -- WEBER RIVER NR PLAIN CITY UTAH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	4	4	0	3
CADMIUM (CD), UG/L	4	< 10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	0	< 50	4	0	3
COPPER (CU), UG/L	4	< 10	270	4	2	5
IRON (FE), UG/L	4	10	1900	7	10	590
LEAD (PB), UG/L	4	< 100	< 100	4	1	5
MANGANESE (MN), UG/L	4	60	110	7	0	90
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	1
ZINC (ZN), UG/L	4	20	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	4.59	54.00			
BIOMASS, ASH WT., G/SQ M	4	3.09	39.00			
CHLOROPHYLL A, MG/SQ M	3	.1	160.0			
CHLOROPHYLL B, MG/SQ M	3	.0	28.0			
ORGANIC CARBON, MG/L	4	3.8	8.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10171000 NAME: JORDAN R @ 2100 SO SALT LAKE CITY UTAH

LAT 40D43M39S LONG 111D55M26S
DRAINAGE AREA: 3420 SQ MI (8858 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	10.38	3.89	5.0	18.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	1515.3	309.5	874	1800					
STREAMFLOW (CUBIC FT/SEC)	12	112.6	40.6	36	160	12	0.039	54.451	0.312 *	40.4
PH (STANDARD UNITS)	14	7.66	0.21	7.4	8.1	14	-0.0004	8.2089	-0.530 *	0.19
PHOSPHORUS, TOTAL	12	1.308	0.464	0.63	2.20	12	0.00098	-0.14232	0.681	0.356
NITRITE + NITRATE, TOTAL	12	2.100	0.562	1.30	2.80	12	0.00131	0.16348	0.750	0.390
NITROGEN, KJELDAHL, TOTAL	12	2.283	0.513	1.40	3.30	12	0.00097	0.84960	0.609	0.427
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	11155.0	15672.9	960	38000	12	20.486	-19188.547	0.422 *	14902.5
SEDIMENT, SUSPENDED	5	115.6	32.2	79	156					
SEDIMENT, CLAY-SILT (PERCENT)	5	96.6	19.8	83	131					
COLIFORM, FECAL (COL/100 ML)	9	596.3	1372.7	0	4200					
STREPTOCOCCI, FECAL (COL/100 ML)	10	219.8	499.8	1	1600					
SILICA, DISSOLVED	12	20.83	4.00	12.0	26.0	12	0.0114	3.8789	0.925	1.60
CALCIUM, DISSOLVED	11	103.09	26.35	66.0	140.0	11	0.0648	8.3884	0.813	16.16
MAGNESIUM, DISSOLVED	12	51.25	10.63	29.0	64.0	12	0.0288	8.5220	0.876	5.37
SODIUM, DISSOLVED	12	140.08	32.90	69.0	170.0	12	0.0978	-4.8012	0.960	9.67
POTASSIUM, DISSOLVED	12	13.31	3.23	6.7	17.0	12	0.0084	0.8627	0.841	1.83
BICARBONATE, ION	12	278.3	50.3	176	328	12	0.147	61.340	0.941	17.8
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	274.17	63.17	150.0	350.0	12	0.1846	0.7703	0.943	21.98
CHLORIDE, DISSOLVED	12	194.00	48.91	88.0	240.0	12	0.1477	-24.7453	0.975	11.44
DISSOLVED SOLIDS, SUM OF CONST	11	918.5	205.6	517	1130	11	0.604	35.800	0.972	51.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	987.0	218.0	558	1190	12	0.657	13.960	0.973	52.9
HARDNESS, TOTAL	11	464.5	97.0	290	590	11	0.274	64.161	0.934	36.4
HARDNESS, NONCARBONATE	11	238.2	57.4	130	320	11	0.159	5.848	0.916	24.3
TURBIDITY (JTU)	12	28.8	21.6	1	66	12	-0.024	64.172	-0.357 *	21.1
FLOURIDE, DISSOLVED	12	0.47	0.12	0.3	0.7	12	0.0002	0.1506	0.560 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 317

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1920	1870	1820	1710	1660	1530	1320	932	800	707

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
138	11.08	7.39	2.32	76	1.67

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10171000 -- JORDAN R @ 2100 SO SALT LAKE CITY UTAH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	9	29	4	8	13
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	10	60	4	4	10
IRON (FE), UG/L	4	460	2300	4	10	60
LEAD (PB), UG/L	4	<100	300	4	2	4
MANGANESE (MN), UG/L	4	50	100	4	30	60
MERCURY (HG), UG/L	3	0.1	0.1	4	0.0	0.2
SELENIUM (SE), UG/L	4	2	4	4	2	4
ZINC (ZN), UG/L	4	40	300	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	5.50	25.00			
BIOMASS, ASH WT., G/SQ M	3	4.29	20.00			
CHLOROPHYLL A, MG/SQ M	3	.1	45.0			
CHLOROPHYLL B, MG/SQ M	3	.0	4.0			
ORGANIC CARBON, MG/L	4	6.6	18.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10224000 NAME: SEVIER RIVER NEAR LYNNDYL, UTAH

LAT 39D28M55S LONG 112D23M35S
DRAINAGE AREA: 6270 SQ MI (16239 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	10.73	7.88	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	2342.9	1010.9	1580	5120					
STREAMFLOW (CUBIC FT/SEC)	14	233.0	265.8	7	820	14	-0.066	388.851	-0.269*	266.4
PH (STANDARD UNITS)	16	8.31	0.17	8.0	8.8	16	-0.0000	8.4245	-0.291*	0.17
PHOSPHORUS, TOTAL	12	0.072	0.063	0.01	0.20	12	-0.00001	0.10302	-0.242*	0.064
NITRITE + NITRATE, TOTAL	12	0.462	0.200	0.18	0.93	12	-0.00000	0.47090	-0.021*	0.209
NITROGEN, KJELDAHL, TOTAL	12	0.520	0.213	0.21	0.87	12	0.00004	0.41556	0.238*	0.217
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5495.8	7024.9	670	25000	11	-0.921	7474.543	-0.151*	7598.1
SEDIMENT, SUSPENDED	4	256.5	139.5	83	422					
SEDIMENT, CLAY-SILT (PERCENT)	5	113.4	93.3	42	276					
COLIFORM, FECAL (COL/100 ML)	11	117.6	197.6	0	680					
STREPTOCOCCI, FECAL (COL/100 ML)	12	192.1	153.5	14	560					
SILICA, DISSOLVED	13	17.92	2.33	14.0	22.0	13	0.0013	14.7188	0.639	1.87
CALCIUM, DISSOLVED	13	85.54	27.69	58.0	140.0	13	0.0218	31.9980	0.897	12.77
MAGNESIUM, DISSOLVED	13	92.62	37.97	62.0	170.0	13	0.0324	13.0161	0.973	9.18
SODIUM, DISSOLVED	15	328.00	183.97	190.0	760.0	13	0.1631	-76.6382	0.989	29.66
POTASSIUM, DISSOLVED	13	7.55	2.86	5.0	15.0	13	0.0023	1.8600	0.922	1.16
BICARBONATE, ION	13	336.0	50.4	275	445	13	0.040	238.494	0.899	23.1
CARBONATE, ION	13	0.8	2.0	0	7	13	-0.000	1.498	-0.149*	2.1
SULFATE, DISSOLVED	15	401.33	216.72	240.0	900.0	13	0.1953	-79.0095	0.993	27.47
CHLORIDE, DISSOLVED	15	444.00	239.40	290.0	1000.0	13	0.2130	-86.2170	0.993	30.62
DISSOLVED SOLIDS, SUM OF CONST	13	1534.6	744.5	1070	3230	13	0.650	-60.870	0.994	81.6
DISSOLVED SOLIDS, ROE 180 DEG C	14	1575.7	767.2	1060	3300	12	0.673	-52.235	0.995	79.0
HARDNESS, TOTAL	13	603.8	239.2	440	1100	13	0.203	105.551	0.967	63.9
HARDNESS, NONCARBONATE	13	319.2	186.8	170	690	13	0.154	-59.772	0.942	65.7
TURBIDITY (JTU)	12	35.8	44.5	3	150	12	-0.006	50.323	-0.160*	46.1
FLOURIDE, DISSOLVED	13	0.38	0.12	0.2	0.6	13	0.0001	0.2129	0.653	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 364

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	4920	4780	4500	2350	2170	2060	1990	1830	1760	1700

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	11.27	9.80	2.80	86	2.85

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10224000 -- SEVIER RIVER NEAR LYNNDYL, UTAH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	8	4	4	7
CADMIUM (CD), UG/L	4	<10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	0
COPPER (CU), UG/L	4	<10	50	4	0	2
IRON (FE), UG/L	4	210	2800	4	10	40
LEAD (PB), UG/L	4	<100	100	4	0	3
MANGANESE (MN), UG/L	4	30	150	4	0	130
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	70	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	41.00	57.00			
BIOMASS, ASH WT., G/SQ M	3	29.00	120.00			
CHLOROPHYLL A, MG/SQ M	3	11.0	12.0			
CHLOROPHYLL B, MG/SQ M	3	1.1	2.6			
ORGANIC CARBON, MG/L	4	2.0	7.7			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10237000 NAME: BEAVER RIV AT ADAMSVILLE UTAH

LAT 38D15M13S LONG 112D46M03S
DRAINAGE AREA: 267 SQ MI (692 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	10.75	8.29	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	560.0	205.4	310	975					
STREAMFLOW (CUBIC FT/SEC)	17	26.9	16.0	1	64	16	-0.040	50.468	-0.547	13.2
PH (STANDARD UNITS)	10	8.09	0.50	7.4	8.7	9	0.0021	6.9059	0.905	0.24
PHOSPHORUS, TOTAL	10	0.311	0.230	0.13	0.74	9	-0.00062	0.67296	-0.598*	0.201
NITRITE + NITRATE, TOTAL	10	0.136	0.169	0.00	0.44	9	-0.00039	0.36059	-0.499*	0.162
NITROGEN, KJELDAHL, TOTAL	10	1.142	0.518	0.57	2.10	9	-0.00184	2.18108	-0.767	0.373
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	5123.0	4297.5	760	15000	9	-10.829	11581.980	-0.577*	3719.3
SEDIMENT, SUSPENDED	6	89.0	68.4	4	197					
SEDIMENT, CLAY-SILT (PERCENT)	5	96.0	17.9	78	121					
COLIFORM, FECAL (COL/100 ML)	10	2488.3	3181.6	43	9900					
STREPTOCOCCI, FECAL (COL/100 ML)	10	1070.7	1520.6	20	5000					
SILICA, DISSOLVED	10	38.40	5.21	29.0	45.0	9	0.0140	29.9543	0.640*	4.06
CALCIUM, DISSOLVED	10	58.00	17.03	37.0	80.0	9	0.0698	17.0654	0.983	3.16
MAGNESIUM, DISSOLVED	10	16.03	6.00	8.8	23.0	9	0.0266	0.7817	0.992	0.82
SODIUM, DISSOLVED	10	49.00	26.99	20.0	93.0	9	0.1026	-12.5154	0.992	3.24
POTASSIUM, DISSOLVED	10	7.85	2.21	4.4	11.0	9	0.0075	3.3535	0.841	1.17
BICARBONATE, ION	10	276.5	97.0	167	398	9	0.399	43.069	0.974	22.6
CARBONATE, ION	8	2.9	5.9	0	17	7	0.010	-3.054	0.322*	6.6
SULFATE, DISSOLVED	10	43.50	19.96	24.0	83.0	9	0.0621	4.8437	0.925	6.16
CHLORIDE, DISSOLVED	10	32.80	15.65	16.0	58.0	9	0.0589	-2.4924	0.975	3.23
DISSOLVED SOLIDS, SUM OF CONST	10	385.3	138.6	236	591	9	0.549	59.567	0.993	16.0
DISSOLVED SOLIDS, ROE 180 DEG C	10	389.5	141.3	234	596	9	0.563	55.787	0.994	15.5
HARDNESS, TOTAL	10	211.0	67.1	130	290	9	0.281	47.349	0.983	12.8
HARDNESS, NONCARBONATE	10	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	10	9.8	9.2	1	22	9	-0.038	31.583	-0.931	3.6
FLOURIDE, DISSOLVED	10	0.98	0.44	0.4	1.7	9	0.0016	0.0248	0.945	0.13

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 128

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1410	1320	1260	975	497	409	409	382	378	349

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
18	10.83	10.32	2.62	87	3.19

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10237000 -- BEAVER RIV AT ADAMSVILLE UTAH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	7	4	2	4
CADMIUM (CD), UG/L	4	<10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	0	<50	4	0	0
COPPER (CU), UG/L	4	<10	60	4	0	2
IRON (FE), UG/L	4	250	2600	4	20	80
LEAD (PB), UG/L	4	<100	100	4	1	2
MANGANESE (MN), UG/L	4	130	390	4	100	290
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	40	170	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.69	9.89			
BIOMASS, ASH WT., G/SQ M	3	1.09	8.00			
CHLOROPHYLL A, MG/SQ M	3	.5	3.6			
CHLOROPHYLL B, MG/SQ M	3	.0	.5			
ORGANIC CARBON, MG/L	4	8.1	29.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10249900 NAME: CHIATOVICH C NR DYER, NV

LAT 37D50M00S LONG 118D12M10S
DRAINAGE AREA: 37 SQ MI (97 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	6.97	4.97	1.5	15.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	56.4	3.0	51	62					
STREAMFLOW (CUBIC FT/SEC)	17	7.2	0.9	6	9	11	-0.024	8.604	-0.078 *	1.0
PH (STANDARD UNITS)	6	7.80	0.23	7.6	8.2	6	-0.0524	10.7089	-0.738 *	0.17
PHOSPHORUS, TOTAL	9	0.047	0.059	0.01	0.20	9	-0.01102	0.66762	-0.618 *	0.050
NITRITE + NITRATE, TOTAL	9	0.067	0.039	0.02	0.13	9	-0.00068	0.10511	-0.058 *	0.042
NITROGEN, KJELDAHL, TOTAL	9	0.236	0.111	0.03	0.39	9	-0.01053	0.82870	-0.313 *	0.113
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	377.5	192.9	140	590	5	-55.833	3541.666	-0.346 *	191.4
SEDIMENT, SUSPENDED	7	44.9	59.6	13	177					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	33.0	67.6	0	210					
STREPTOCOCCI, FECAL (COL/100 ML)	8	114.4	205.2	4	600					
SILICA, DISSOLVED	9	16.00	0.00	16.0	16.0	9	0.0000	16.0000	0.000 *	0.00
CALCIUM, DISSOLVED	8	7.54	0.87	6.8	9.6	8	0.0056	7.2227	0.023 *	0.93
MAGNESIUM, DISSOLVED	9	0.61	0.18	0.4	0.9	9	-0.0095	1.1446	-0.171 *	0.19
SODIUM, DISSOLVED	10	3.40	0.30	2.9	3.8	10	0.0464	0.7834	0.488 *	0.28
POTASSIUM, DISSOLVED	9	0.90	0.20	0.7	1.3	9	0.0023	0.7722	0.038 *	0.21
BICARBONATE, ION	8	31.1	1.7	29	34	8	-0.061	34.573	-0.125 *	1.9
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	9	2.03	0.57	1.5	3.4	9	0.0523	-0.9118	0.302 *	0.59
CHLORIDE, DISSOLVED	10	0.66	0.30	0.3	1.3	10	0.0120	-0.0162	0.124 *	0.32
DISSOLVED SOLIDS, SUM OF CONST	8	46.8	0.9	46	48	8	0.031	44.986	0.125 *	0.9
DISSOLVED SOLIDS, ROE 180 DEG C	8	46.9	2.0	44	50	8	0.152	38.294	0.266 *	2.1
HARDNESS, TOTAL	8	21.4	2.0	20	26	8	-0.036	23.380	-0.063 *	2.2
HARDNESS, NONCARBONATE	8	0.1	0.4	0	1	8	-0.004	0.366	-0.043 *	0.4
TURBIDITY (JTU)	9	12.6	30.9	1	95	9	-4.587	270.963	-0.492 *	28.8
FLOURIDE, DISSOLVED	9	0.20	0.05	0.1	0.3	9	-0.0000	0.2000	-0.000 *	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 178

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	64	63	63	60	59	57	56	54	54	53

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
179	6.88	11.07	2.98	78	2.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10249900 -- CHIATOVICH C NR DYER, NV

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	0	3	0	1
CADMIUM (CD), UG/L	3	0	20	3	0	0
CHROMIUM (CR), UG/L	3	0	< 10	3	0	0
COBALT (CO), UG/L	3	0	50	3	0	2
COPPER (CU), UG/L	3	0	20	3	0	1
IRON (FE), UG/L	3	310	560	3	40	90
LEAD (PB), UG/L	3	< 100	< 100	3	2	4
MANGANESE (MN), UG/L	3	10	30	3	0	0
MERCURY (HG), UG/L	3	0.0	1.6	3	0.0	0.7
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	0	10	3	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.50	3.89			
BIOMASS, ASH WT., G/SQ M	2	.79	1.19			
CHLOROPHYLL A, MG/SQ M	2	.7	20.0			
CHLOROPHYLL B, MG/SQ M	2	.0	2.0			
ORGANIC CARBON, MG/L	3	1.8	5.3			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10254970 NAME: NEW R AT INTERNAT BDY CALEXICO CA

LAT 32D39M57S LONG 115D30M08S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.87	6.79	14.0	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	6684.2	563.9	5830	7800					
STREAMFLOW (CUBIC FT/SEC)	12	146.8	19.8	123	178	12	0.002	136.767	0.043 *	20.8
PH (STANDARD UNITS)	12	7.67	0.31	7.2	8.3	12	0.0002	6.4865	0.326 *	0.30
PHOSPHORUS, TOTAL	12	1.396	0.280	0.97	1.70	12	-0.00001	1.46542	-0.021 *	0.293
NITRITE + NITRATE, TOTAL	12	1.058	1.837	0.03	5.20	12	0.00058	-2.79846	0.177 *	1.896
NITROGEN, KJELDAHL, TOTAL	12	5.858	2.166	0.30	8.50	12	-0.00127	14.36930	-0.332 *	2.143
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	38933.3	42865.0	1700	160000	12	-4.158	66727.875	-0.055 *	44889.3
SEDIMENT, SUSPENDED	11	97.4	37.4	64	202					
SEDIMENT, CLAY-SILT (PERCENT)	8	50.9	14.5	32	79					
COLIFORM, FECAL (COL/100 ML)	12	4020821.0	3203883.0	970000	9999977					
STREPTOCOCCI, FECAL (COL/100 ML)	12	265166.4	140666.9	100000	600000					
SILICA, DISSOLVED	12	18.83	2.69	14.0	23.0	12	-0.0002	20.2703	-0.045 *	2.82
CALCIUM, DISSOLVED	12	247.50	19.60	230.0	280.0	12	0.0105	177.3459	0.302 *	19.59
MAGNESIUM, DISSOLVED	12	123.00	17.24	96.0	150.0	12	0.0138	30.7997	0.451 *	16.13
SODIUM, DISSOLVED	12	993.33	81.39	860.0	1100.0	12	0.0921	377.8220	0.638	65.73
POTASSIUM, DISSOLVED	12	50.33	18.14	12.0	81.0	12	-0.0050	83.6715	-0.155 *	18.80
BICARBONATE, ION	12	289.6	16.5	258	312	12	0.007	243.560	0.235 *	16.8
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	773.33	75.60	650.0	890.0	12	0.0818	226.7964	0.610	62.83
CHLORIDE, DISSOLVED	12	1683.33	119.34	1500.0	1900.0	12	0.1395	751.2000	0.659	94.14
DISSOLVED SOLIDS, SUM OF CONST	12	4035.0	245.8	3610	4410	12	0.334	1801.116	0.767	165.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	4275.0	335.1	3600	4730	12	0.508	879.271	0.855	182.4
HARDNESS, TOTAL	12	1122.5	109.1	970	1300	12	0.089	525.618	0.462 *	101.5
HARDNESS, NONCARBONATE	12	880.8	90.2	730	1000	12	0.066	439.307	0.413 *	86.2
TURBIDITY (JTU)	11	16.3	7.7	4	30	11	0.001	6.899	0.099 *	8.1
FLOURIDE, DISSOLVED	12	0.67	0.10	0.5	0.9	12	0.0001	0.0654	0.515 *	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 283

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	7860	7660	7540	7250	7070	6770	6400	5740	5250	4860

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
218	22.11	8.61	2.71	93	1.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10254970 -- NEW R AT INTERNAT BDY CALEXICO CA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	7	29	4	4	32
CADMIUM (CD), UG/L	4	<10	10	4	0	3
CHROMIUM (CR), UG/L	4	0	30	4	0	20
COBALT (CO), UG/L	4	<50	70	4	0	1
COPPER (CU), UG/L	4	20	40	4	4	8
IRON (FE), UG/L	4	700	1800	5	10	250
LEAD (PB), UG/L	4	<100	200	4	3	8
MANGANESE (MN), UG/L	4	120	230	4	130	140
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	2	3	4	1	3
ZINC (ZN), UG/L	4	30	490	4	40	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	14.00	300.00			
BIOMASS, ASH WT., G/SQ M	4	12.00	280.00			
CHLOROPHYLL A, MG/SQ M	4	1.1	34.0			
CHLOROPHYLL B, MG/SQ M	4	.0	15.0			
ORGANIC CARBON, MG/L	4	13.0	45.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10261500 NAME: MOJAVE R AT LOWER NARROWS NR VICTORVILLE CALIF

LAT 34D34M23S LONG 117D19M11S
DRAINAGE AREA: 514 SQ MI (.1331 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	20.25	6.14	8.2	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	553.9	34.7	475	607					
STREAMFLOW (CUBIC FT/SEC)	15	24.7	5.8	15	34	14	-0.010	31.017	-0.064 *	5.7
PH (STANDARD UNITS)	14	7.97	0.18	7.7	8.2	14	0.0013	7.2670	0.243 *	0.18
PHOSPHORUS, TOTAL	9	0.500	0.176	0.33	0.85	9	0.00619	-3.02915	0.672	0.139
NITRITE + NITRATE, TOTAL	9	1.230	0.367	0.77	1.70	9	-0.00876	6.22110	-0.456 *	0.349
NITROGEN, KJELDAHL, TOTAL	9	1.258	0.808	0.28	3.20	9	-0.00544	4.36130	-0.129 *	0.857
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2913.0	2146.6	630	6100	10	-44.821	28416.242	-0.382 *	2104.5
SEDIMENT, SUSPENDED	9	35.9	26.6	9	92					
SEDIMENT, CLAY-SILT (PERCENT)	9	44.2	17.6	25	79					
COLIFORM, FECAL (COL/100 ML)	10	22.6	28.3	0	92					
STREPTOCOCCI, FECAL (COL/100 ML)	10	150.6	204.9	18	700					
SILICA, DISSOLVED	9	24.44	1.01	23.0	26.0	9	0.0343	4.8941	0.646 *	0.83
CALCIUM, DISSOLVED	13	49.46	2.30	46.0	54.0	13	-0.0123	56.2716	-0.193 *	2.35
MAGNESIUM, DISSOLVED	13	9.85	1.27	6.3	11.0	13	0.0003	9.6529	0.010 *	1.32
SODIUM, DISSOLVED	13	55.23	4.68	50.0	63.0	13	0.0700	16.5009	0.539 *	4.11
POTASSIUM, DISSOLVED	13	8.08	1.94	5.9	12.0	13	0.0334	-10.4227	0.622	1.59
BICARBONATE, ION	13	216.2	7.7	201	230	13	0.061	182.664	0.286 *	7.7
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	13	55.92	2.18	53.0	60.0	13	0.0014	55.1609	0.023 *	2.27
CHLORIDE, DISSOLVED	13	35.92	2.36	32.0	40.0	13	0.0276	20.6366	0.421 *	2.24
DISSOLVED SOLIDS, SUM OF CONST	9	347.0	10.7	333	364	9	0.395	121.585	0.709	8.0
DISSOLVED SOLIDS, ROE 180 DEG C	13	351.5	15.6	332	375	13	0.072	311.590	0.166 *	16.1
HARDNESS, TOTAL	13	163.4	6.4	150	172	13	-0.076	205.371	-0.424 *	6.1
HARDNESS, NONCARBONATE	13	0.1	0.3	0	1	13	-0.000	0.200	-0.029 *	0.3
TURBIDITY (JTU)	13	3.5	2.5	1	11	13	-0.015	11.799	-0.214 *	2.6
FLOURIDE, DISSOLVED	13	0.57	0.11	0.4	0.7	13	0.0009	0.0656	0.296 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 110

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	616	605	600	589	585	574	567	550	543	490

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
84	17.75	4.97	2.77	61	1.73

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10261500 -- MOJAVE R AT LOWER NARROWS NR VICTORVILLE CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	4	5	4	0	7
CADMIUM (CD), UG/L	3	<10	10	4	0	1
CHROMIUM (CR), UG/L	3	0	20	3	0	20
COBALT (CO), UG/L	3	<50	<50	3	0	1
COPPER (CU), UG/L	3	<10	4500	4	0	3
IRON (FE), UG/L	3	260	710	4	30	190
LEAD (PB), UG/L	3	<100	100	4	0	5
MANGANESE (MN), UG/L	3	40	110	3	4	70
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.0
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	110	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.89	4.89			
BIOMASS, ASH WT., G/SQ M	2	1.09	3.69			
CHLOROPHYLL A, MG/SQ M	2	.2	7.7			
CHLOROPHYLL B, MG/SQ M	2	.1	1.5			
ORGANIC CARBON, MG/L	2	3.5	4.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10277400 NAME: OWENS R BL TINEMAHA RE NR BIG PINE CA.

LAT 37D03M15S LONG 118D13M33S
DRAINAGE AREA: 1964 SQ MI (5087 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	199	12.53	6.91	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	198	276.7	23.7	220	323					
STREAMFLOW (CUBIC FT/SEC)	199	513.3	188.2	5	775	198	-3.581	1505.371	-0.451	168.3
PH (STANDARD UNITS)	12	8.38	0.39	7.7	8.8	12	-0.0025	9.0482	-0.139*	0.41
PHOSPHORUS, TOTAL	12	0.101	0.041	0.04	0.16	12	-0.00001	0.10431	-0.007*	0.043
NITRITE + NITRATE, TOTAL	12	0.064	0.057	0.01	0.18	12	-0.00074	0.26405	-0.288*	0.057
NITROGEN, KJELDAHL, TOTAL	12	0.501	0.248	0.14	0.95	12	-0.00194	1.02217	-0.172*	0.257
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	12608.3	10474.7	1800	39000	12	138.587	-24660.012	0.292*	10507.9
SEDIMENT, SUSPENDED	12	58.3	72.6	6	260					
SEDIMENT, CLAY-SILT (PERCENT)	9	77.1	24.7	30	95					
COLIFORM, FECAL (COL/100 ML)	12	9.7	14.8	0	54					
STREPTOCOCCI, FECAL (COL/100 ML)	12	22.8	24.4	1	77					
SILICA, DISSOLVED	12	26.08	2.87	21.0	31.0	12	0.0613	9.5890	0.470*	2.66
CALCIUM, DISSOLVED	12	23.17	3.21	16.0	28.0	12	0.1077	-5.8001	0.739	2.27
MAGNESIUM, DISSOLVED	12	3.87	0.69	3.0	5.2	12	0.0221	-2.0808	0.707	0.51
SODIUM, DISSOLVED	12	28.25	2.45	25.0	33.0	12	0.0941	2.9491	0.845	1.37
POTASSIUM, DISSOLVED	12	3.67	0.94	1.8	5.9	12	0.0283	-3.9379	0.665	0.74
BICARBONATE, ION	12	119.7	10.6	102	139	12	0.388	15.262	0.810	6.5
CARBONATE, ION	11	0.1	0.3	0	1	11	-0.004	1.165	-0.276*	0.3
SULFATE, DISSOLVED	12	22.67	5.84	14.0	32.0	12	0.1575	-19.6983	0.595	4.92
CHLORIDE, DISSOLVED	12	11.39	1.20	9.7	14.0	12	0.0436	-0.3268	0.801	0.75
DISSOLVED SOLIDS, SUM OF CONST	12	178.8	16.8	151	201	12	0.700	-9.618	0.921	6.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	179.3	14.9	157	200	12	0.587	21.554	0.868	7.8
HARDNESS, TOTAL	12	73.8	9.6	52	87	12	0.358	-22.385	0.822	5.7
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	16.9	17.4	2	64	12	0.354	-78.300	0.448*	16.3
FLOURIDE, DISSOLVED	12	0.51	0.07	0.4	0.6	12	0.0011	0.2013	0.377*	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 239

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	322	315	308	295	288	269	257	243	238	229

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
267	12.61	9.04	2.74	93	1.78

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10277400 -- OWENS R BL TINEMAHA RE NR BIG PINE CA.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	16	46	4	18	29
CADMIUM (CD), UG/L	4	< 10	10	4	0	3
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	0	50	4	0	1
COPPER (CU), UG/L	4	< 10	20	4	4	10
IRON (FE), UG/L	4	290	1700	4	30	70
LEAD (PB), UG/L	4	<100	100	4	2	11
MANGANESE (MN), UG/L	4	10	110	4	0	20
MERCURY (HG), UG/L	3	0.0	0.0	4	0.0	1.6
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	40	830	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	4.2	6.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10301500 NAME: WALKER R NR WABUSKA, NV

LAT 39D09M10S LONG 119D05M50S
DRAINAGE AREA: 2600 SQ MI (6734 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	11.30	7.72	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	467.2	158.0	236	644					
STREAMFLOW (CUBIC FT/SEC)	22	272.6	302.1	63	950	9	-1.827	1159.164	-0.860	183.4
PH (STANDARD UNITS)	7	8.11	0.17	7.9	8.3	5	-0.0001	8.2026	-0.088 *	0.19
PHOSPHORUS, TOTAL	10	0.344	0.448	0.13	1.60	9	-0.00094	0.80200	-0.316 *	0.478
NITRITE + NITRATE, TOTAL	8	0.329	0.282	0.05	0.75	7	0.00156	-0.34965	0.834	0.184
NITROGEN, KJELDAHL, TOTAL	10	0.881	1.117	0.37	4.00	9	-0.00245	2.07980	-0.330 *	1.181
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	15910.0	36645.1	1000	120000					
SEDIMENT, SUSPENDED	11	331.8	519.6	25	1720					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	117.7	145.2	0	470					
STREPTOCOCCI, FECAL (COL/100 ML)	11	225.9	179.4	20	540					
SILICA, DISSOLVED	6	21.83	3.82	17.0	25.0	6	0.0079	18.0102	0.322 *	4.04
CALCIUM, DISSOLVED	6	37.83	9.81	21.0	47.0	6	0.0622	7.8603	0.982	2.08
MAGNESIUM, DISSOLVED	7	8.04	2.12	4.7	11.0	6	0.0142	1.3507	0.958	0.73
SODIUM, DISSOLVED	6	52.50	20.56	21.0	73.0	6	0.1322	-11.2451	0.996	2.05
POTASSIUM, DISSOLVED	6	4.87	1.09	3.0	6.4	6	0.0054	2.2519	0.767 *	0.79
BICARBONATE, ION	6	200.0	56.0	109	251	6	0.359	26.669	0.994	6.8
CARBONATE, ION	6	1.2	2.9	0	7	6	0.006	-1.783	0.332 *	3.0
SULFATE, DISSOLVED	6	56.00	22.57	18.0	79.0	6	0.1446	-13.7239	0.992	3.14
CHLORIDE, DISSOLVED	6	15.88	6.67	5.3	23.0	6	0.0426	-4.6730	0.990	1.05
DISSOLVED SOLIDS, SUM OF CONST	6	297.8	92.6	144	379	6	0.596	10.561	0.997	8.5
DISSOLVED SOLIDS, ROE 180 DEG C	6	306.8	94.4	151	401	6	0.608	13.568	0.998	6.1
HARDNESS, TOTAL	6	128.7	33.0	72	160	6	0.211	26.859	0.990	5.1
HARDNESS, NONCARBONATE	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
TURBIDITY (JTU)	8	56.0	91.7	5	280	8	-0.164	128.969	-0.274 *	95.3
FLOURIDE, DISSOLVED	6	0.73	0.22	0.4	1.0	6	0.0013	0.1048	0.935	0.09

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 363

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	675	628	607	593	586	490	407	284	240	202

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.63	8.44	2.48	74	3.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10301500 -- WALKER R NR WABUSKA, NV

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	11	50	4	4	24
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	20
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	10	90	4	2	10
IRON (FE), UG/L	4	1600	44000	4	40	70
LEAD (PB), UG/L	4	<100	<100	4	1	4
MANGANESE (MN), UG/L	4	70	2000	4	10	60
MERCURY (HG), UG/L	4	0.0	1.6	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	110	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	2.5	27.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10312000 NAME: CARSON R NR FORT CHURCHILL, NV

LAT 39D17M30S LONG 119D18M40S
DRAINAGE AREA: 1450 SQ MI (3756 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	11.19	6.94	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	370.9	139.8	166	616					
STREAMFLOW (CUBIC FT/SEC)	18	376.9	717.3	7	3160	9	-1.378	750.039	-0.915	90.7
PH (STANDARD UNITS)	6	7.97	0.29	7.6	8.4	4	0.0025	7.0275	0.949*	0.11
PHOSPHORUS, TOTAL	9	0.293	0.081	0.18	0.40	6	-0.00008	0.32594	-0.149*	0.081
NITRITE + NITRATE, TOTAL	9	0.283	0.241	0.05	0.66	6	0.00026	0.22420	0.151*	0.250
NITROGEN, KJELDAHL, TOTAL	9	0.533	0.130	0.30	0.71	6	-0.00025	0.62975	-0.215*	0.167
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	3048.9	2621.8	810	7900	3	-5.637	4496.316	-0.377*	3701.8
SEDIMENT, SUSPENDED	9	122.1	212.2	4	676					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	81.8	189.5	1	550					
STREPTOCOCCI, FECAL (COL/100 ML)	8	104.8	170.4	4	520					
SILICA, DISSOLVED	5	25.80	4.92	20.0	30.0	5	0.0406	6.9880	0.881*	2.69
CALCIUM, DISSOLVED	5	42.40	10.60	32.0	56.0	5	0.0982	-3.1430	0.990*	1.76
MAGNESIUM, DISSOLVED	5	9.76	3.06	7.2	14.0	5	0.0283	-3.3474	0.985*	0.61
SODIUM, DISSOLVED	5	39.40	9.91	31.0	55.0	5	0.0918	-3.1427	0.988*	1.77
POTASSIUM, DISSOLVED	5	4.42	0.97	2.9	5.4	5	0.0072	1.0674	0.798*	0.67
BICARBONATE, ION	5	152.2	25.3	129	189	5	0.237	42.513	0.997*	2.3
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	5	88.20	34.55	55.0	130.0	5	0.3161	-58.3356	0.977*	8.58
CHLORIDE, DISSOLVED	5	11.40	1.52	10.0	14.0	5	0.0119	5.8996	0.835*	0.96
DISSOLVED SOLIDS, SUM OF CONST	5	297.4	75.9	225	398	5	0.707	-30.384	0.994*	9.3
DISSOLVED SOLIDS, ROE 180 DEG C	2	314.5	54.4	276	353					
HARDNESS, TOTAL	5	148.0	39.6	110	200	5	0.366	-21.507	0.985*	7.9
HARDNESS, NONCARBONATE	5	21.2	18.7	4	42	5	0.164	-54.994	0.940*	7.4
TURBIDITY (JTU)	6	20.8	21.2	3	60	4	-0.067	36.044	-0.970*	3.4
FLOURIDE, DISSOLVED	2	0.45	0.07	0.4	0.5					

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 361

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	619	600	558	491	399	362	301	135	102	93

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	10.15	8.93	2.73	90	2.10

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10312000 -- CARSON R NR FORT CHURCHILL, NV

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	6	8	2	4	8
CADMIUM (CD), UG/L	2	<10	<10	2	0	0
CHROMIUM (CR), UG/L	2	0	10	2	0	0
COBALT (CO), UG/L	2	0	0	2	0	0
COPPER (CU), UG/L	2	<10	<10	2	1	2
IRON (FE), UG/L	2	350	360	2	10	40
LEAD (PB), UG/L	2	<100	<100	2	2	3
MANGANESE (MN), UG/L	2	30	40	2	30	50
MERCURY (HG), UG/L	2	0.3	2.6	2	0.0	1.3
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	10	10	2	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	10.00				
BIOMASS, ASH WT., G/SQ M	1	7.09				
CHLOROPHYLL A, MG/SQ M	1	7.5				
CHLOROPHYLL B, MG/SQ M	1	1.3				
ORGANIC CARBON, MG/L	3	3.7	6.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10335000 NAME: HUMBOLDT R NR RYE PATCH, NV

LAT 40D28M00S LONG 118D18M20S
DRAINAGE AREA: 16100 SQ MI (41699 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	12.04	6.83	4.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	1007.9	167.7	783	1180					
STREAMFLOW (CUBIC FT/SEC)	27	476.1	521.3	15	1460	11	-1.625	2093.642	-0.557 *	428.6
PH (STANDARD UNITS)	8	8.45	0.59	7.7	9.6	7	-0.0017	10.0368	-0.477 *	0.62
PHOSPHORUS, TOTAL	12	0.104	0.028	0.06	0.15	11	-0.00008	0.18894	-0.517 *	0.023
NITRITE + NITRATE, TOTAL	10	0.051	0.032	0.00	0.10	9	0.00015	-0.09492	0.808	0.020
NITROGEN, KJELDAHL, TOTAL	12	0.584	0.196	0.33	0.92	11	-0.00051	1.10748	-0.421 *	0.194
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1460.0	1000.4	360	2900	4	-29.224	25281.398	-0.550 *	1347.7
SEDIMENT, SUSPENDED	13	26.5	10.4	9	46					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	1.4	1.3	0	4					
STREPTOCOCCI, FECAL (COL/100 ML)	12	29.0	29.0	0	82					
SILICA, DISSOLVED	6	32.00	3.79	27.0	37.0	6	-0.0167	50.2219	-0.606 *	3.37
CALCIUM, DISSOLVED	6	37.33	3.98	34.0	45.0	6	-0.0272	66.9981	-0.940	1.52
MAGNESIUM, DISSOLVED	6	16.00	0.89	15.0	17.0	6	0.0037	12.0107	0.563 *	0.83
SODIUM, DISSOLVED	6	165.00	27.39	110.0	180.0	6	0.1956	-48.6622	0.985	5.34
POTASSIUM, DISSOLVED	6	17.50	1.76	15.0	20.0	6	0.0054	11.6310	0.421 *	1.79
BICARBONATE, ION	6	281.8	14.5	259	297	6	-0.037	322.552	-0.354 *	15.2
CARBONATE, ION	6	7.2	6.5	0	14	6	-0.025	35.002	-0.544 *	6.1
SULFATE, DISSOLVED	6	78.17	5.74	68.0	84.0	6	0.0370	37.7239	0.889	2.94
CHLORIDE, DISSOLVED	6	152.17	44.14	63.0	180.0	6	0.3186	-195.8414	0.995	4.88
DISSOLVED SOLIDS, SUM OF CONST	6	645.2	65.5	514	693	6	0.472	129.725	0.993	8.6
DISSOLVED SOLIDS, ROE 180 DEG C	6	649.8	63.4	521	684	6	0.459	148.648	0.997	5.6
HARDNESS, TOTAL	6	156.7	8.2	150	170	6	-0.046	206.408	-0.769	5.8
HARDNESS, NONCARBONATE	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
TURBIDITY (JTU)	10	15.7	4.1	9	20	10	-0.006	21.981	-0.259 *	4.2
FLOURIDE, DISSOLVED	6	0.82	0.04	0.8	0.9	6	0.0001	0.7502	0.205*	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 363

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1170	1160	1150	1150	1143	1120	849	805	798	725

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	11.38	9.01	2.50	95	1.42

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10335000 -- HUMBOLDT R NR RYE PATCH, NV

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	26	44	3	26	48
CADMIUM (CD), UG/L	3	<10	10	3	0	1
CHROMIUM (CR), UG/L	3	0	10	3	0	0
COBALT (CO), UG/L	3	<50	50	3	0	0
COPPER (CU), UG/L	3	<10	40	3	4	5
IRON (FE), UG/L	3	660	820	3	20	70
LEAD (PB), UG/L	3	<100	<100	3	0	3
MANGANESE (MN), UG/L	3	10	20	3	0	10
MERCURY (HG), UG/L	3	0.0	2.6	3	0.0	1.8
SELENIUM (SE), UG/L	3	1	1	3	0	1
ZINC (ZN), UG/L	3	20	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	54.00				
BIOMASS, ASH WT., G/SQ M	1	47.00				
CHLOROPHYLL A, MG/SQ M	2	24.0	24.0			
CHLOROPHYLL B, MG/SQ M	1	3.2				
ORGANIC CARBON, MG/L	3	5.3	18.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10346000 NAME: TRUCKEE R AT FARAD, CA

LAT 39D25M41S LONG 120D01M59S
DRAINAGE AREA: 932 SQ MI (2414 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	31	8.05	4.61	1.0	16.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	90.7	13.3	67	111					
STREAMFLOW (CUBIC FT/SEC)	32	927.2	670.1	424	3100	23	-26.151	3257.830	-0.565	519.1
PH (STANDARD UNITS)	8	7.89	0.36	7.2	8.3	8	-0.0015	8.0297	-0.063 *	0.39
PHOSPHORUS, TOTAL	22	0.013	0.012	0.00	0.03	22	0.00001	0.01268	0.006 *	0.012
NITRITE + NITRATE, TOTAL	22	0.056	0.031	0.00	0.11	22	0.00067	-0.00507	0.295 *	0.030
NITROGEN, KJELDAHL, TOTAL	22	0.200	0.083	0.08	0.40	22	-0.00263	0.43884	-0.432	0.076
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	871.1	370.1	360	1500	4	-25.166	2682.582	-0.647 *	364.1
SEDIMENT, SUSPENDED	9	14.9	12.9	4	42					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	16	2.3	3.5	0	10					
STREPTOCOCCI, FECAL (COL/100 ML)	16	9.8	20.5	0	65					
SILICA, DISSOLVED	6	14.20	2.64	9.2	17.0	6	-0.1184	25.0103	-0.371 *	2.74
CALCIUM, DISSOLVED	6	8.83	0.84	7.8	9.9	6	0.0906	0.5567	0.896	0.42
MAGNESIUM, DISSOLVED	6	2.67	0.27	2.3	3.0	6	0.0119	1.5786	0.360 *	0.28
SODIUM, DISSOLVED	6	4.88	0.83	3.5	5.5	6	0.0947	-3.7685	0.940	0.32
POTASSIUM, DISSOLVED	6	1.52	0.20	1.3	1.9	6	0.0195	-0.2670	0.790 *	0.14
BICARBONATE, ION	6	49.5	3.5	45	54	6	0.352	17.391	0.828	2.2
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	6	2.22	0.37	1.9	2.9	6	0.0324	-0.7443	0.733 *	0.28
CHLORIDE, DISSOLVED	6	2.62	1.70	1.3	5.7	6	0.1461	-10.7265	0.709 *	1.34
DISSOLVED SOLIDS, SUM OF CONST	6	61.3	4.6	55	68	6	0.432	21.910	0.777 *	3.2
DISSOLVED SOLIDS, ROE 180 DEG C	4	63.0	3.2	60	67	4	0.278	37.167	0.680 *	2.8
HARDNESS, TOTAL	6	33.0	3.0	29	36	6	0.275	7.848	0.750 *	2.2
HARDNESS, NONCARBONATE	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
TURBIDITY (JTU)	15	2.2	1.0	1	4	15	-0.020	4.053	-0.243 *	1.0
FLOURIDE, DISSOLVED	3	0.03	0.06	0.0	0.1	3	0.0041	-0.3470	0.672 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 334

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	114	110	108	100	96	92	82	71	69	65

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
337	7.74	5.98	2.26	88	1.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10346000 -- TRUCKEE R AT FARAD, CA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	2	0	3
CADMIUM (CD), UG/L	4	<10	10	2	0	0
CHROMIUM (CR), UG/L	4	0	10	2	0	0
COBALT (CO), UG/L	2	<50	< 50	2	0	4
COPPER (CU), UG/L	3	10	20	2	0	0
IRON (FE), UG/L	21	90	870	2	10	30
LEAD (PB), UG/L	4	<100	< 100	2	0	0
MANGANESE (MN), UG/L	4	10	30	2	0	10
MERCURY (HG), UG/L	4	0.0	1.0	2	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	2	0	0
ZINC (ZN), UG/L	4	0	40	2	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	9.29				
BIOMASS, ASH WT., G/SQ M	1	2.79				
CHLOROPHYLL A, MG/SQ M	1	7.7				
CHLOROPHYLL B, MG/SQ M	1	.5				
ORGANIC CARBON, MG/L	23	1.0	5.5			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10351700 NAME: TRUCKEE R NR NIXON, NV

LAT 39D46M40S LONG 119D20M10S
DRAINAGE AREA: 1815 SQ MI (4701 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	25	10.92	5.46	4.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	255.3	108.9	111	424					
STREAMFLOW (CUBIC FT/SEC)	25	1024.8	1029.9	109	3270	12	-6.851	2606.448	-0.800	587.1
PH (STANDARD UNITS)	9	7.82	0.22	7.4	8.1	9	0.0002	7.7621	0.117 *	0.24
PHOSPHORUS, TOTAL	12	0.307	0.253	0.16	1.10	12	0.00036	0.21424	0.156 *	0.262
NITRITE + NITRATE, TOTAL	10	0.396	0.208	0.19	0.89	10	0.00079	0.19618	0.456 *	0.197
NITROGEN, KJELDAHL, TOTAL	12	0.699	0.479	0.31	1.80	12	-0.00151	1.08451	-0.343 *	0.472
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	4943.6	3686.8	980	14000	3	-8.121	7518.055	-0.372 *	2093.2
SEDIMENT, SUSPENDED	14	134.2	184.1	4	688					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	93.3	144.6	0	480					
STREPTOCOCCI, FECAL (COL/100 ML)	12	139.9	213.7	2	720					
SILICA, DISSOLVED	12	19.17	1.99	16.0	22.0	12	0.0106	16.4644	0.579	1.70
CALCIUM, DISSOLVED	12	17.60	5.60	9.2	27.0	12	0.0503	4.7582	0.977	1.24
MAGNESIUM, DISSOLVED	12	6.72	2.51	3.0	10.0	12	0.0224	0.9916	0.973	0.60
SODIUM, DISSOLVED	11	21.99	12.07	6.8	41.0	11	0.1062	-4.6872	0.996	1.10
POTASSIUM, DISSOLVED	12	3.37	0.99	1.8	4.9	12	0.0079	1.3376	0.878	0.49
BICARBONATE, ION	12	83.2	20.1	50	107	12	0.172	39.263	0.931	7.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	21.43	13.35	4.5	44.0	12	0.1212	-9.4987	0.988	2.15
CHLORIDE, DISSOLVED	12	21.85	16.34	3.9	51.0	12	0.1447	-15.0798	0.964	4.55
DISSOLVED SOLIDS, SUM OF CONST	11	152.2	62.4	71	244	11	0.550	13.971	0.999	3.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	157.1	60.3	72	256	12	0.553	15.982	0.998	3.9
HARDNESS, TOTAL	12	71.4	24.0	35	110	12	0.216	16.389	0.978	5.3
HARDNESS, NONCARBONATE	12	5.4	8.5	0	21	12	0.067	-11.612	0.854	4.6
TURBIDITY (JTU)	12	29.5	63.7	1	230	12	0.007	27.665	0.012 *	66.8
FLOURIDE, DISSOLVED	12	0.12	0.05	0.1	0.2	12	0.0002	0.0797	0.427 *	0.04

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	10.10	7.08	2.58	87	2.08

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10351700 -- TRUCKEE R NR NIXON, NV

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	7	24	4	8	20
CADMIUM (CD), UG/L	3	<10	< 10	3	0	1
CHROMIUM (CR), UG/L	3	0	< 10	4	0	< 10
COBALT (CO), UG/L	3	<50	<50	3	0	3
COPPER (CU), UG/L	3	<10	30	3	1	4
IRON (FE), UG/L	3	80	3400	4	30	60
LEAD (PB), UG/L	3	<100	<100	3	1	3
MANGANESE (MN), UG/L	3	70	90	3	20	70
MERCURY (HG), UG/L	3	0.1	2.0	4	0.0	1.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	3	30	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	15.00				
BIOMASS, ASH WT., G/SQ M	1	10.00				
CHLOROPHYLL A, MG/SQ M	1	49.0				
CHLOROPHYLL B, MG/SQ M	1	8.5				
ORGANIC CARBON, MG/L	3	2.6	6.5			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10352500 NAME: MC DERMITT C NR MC DERMITT, NV

LAT 41D58M00S LONG 117D50M01S
DRAINAGE AREA: 225 SQ MI (583 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	9.79	8.52	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	251.1	32.1	209	297					
STREAMFLOW (CUBIC FT/SEC)	19	73.2	87.0	4	232	12	-1.920	541.703	-0.740	58.8
PH (STANDARD UNITS)	8	8.49	0.67	7.7	9.4	8	0.0136	5.1889	0.529 *	0.62
PHOSPHORUS, TOTAL	9	0.122	0.068	0.04	0.25	9	-0.00096	0.35263	-0.385 *	0.067
NITRITE + NITRATE, TOTAL	9	0.136	0.145	0.00	0.40	9	0.00090	-0.07839	0.167 *	0.153
NITROGEN, KJELDAHL, TOTAL	9	0.431	0.106	0.30	0.62	9	-0.00068	0.59443	-0.175 *	0.111
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	3033.3	1932.0	1500	8000	4	1.565	1815.806	0.442 *	126.8
SEDIMENT, SUSPENDED	9	95.1	110.8	5	325					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	26.0	54.9	0	170					
STREPTOCOCCI, FECAL (COL/100 ML)	9	75.9	99.0	4	300					
SILICA, DISSOLVED	9	29.78	2.11	26.0	33.0	9	0.0111	27.1257	0.142 *	2.23
CALCIUM, DISSOLVED	9	19.67	2.65	16.0	25.0	9	0.0779	1.0520	0.795	1.71
MAGNESIUM, DISSOLVED	9	6.51	0.56	5.8	7.5	9	0.0182	2.1628	0.881	0.28
SODIUM, DISSOLVED	12	21.50	3.87	16.0	27.0	12	0.1176	-8.0192	0.975	0.90
POTASSIUM, DISSOLVED	9	3.28	0.53	2.4	4.1	9	0.0027	2.6278	0.139 *	0.56
BICARBONATE, ION	9	100.6	8.7	90	113	9	0.014	97.217	0.043 *	9.3
CARBONATE, ION	9	3.2	7.4	0	22	9	0.206	-46.039	0.751	5.2
SULFATE, DISSOLVED	9	17.89	3.33	12.0	23.0	9	0.0934	-4.4196	0.757	2.33
CHLORIDE, DISSOLVED	12	10.27	1.81	7.2	13.0	12	0.0234	4.4018	0.415 *	1.72
DISSOLVED SOLIDS, SUM OF CONST	9	160.7	15.9	143	196	9	0.571	24.304	0.970	4.1
DISSOLVED SOLIDS, ROE 180 DEG C	9	162.7	16.6	143	196	9	0.561	28.679	0.915	7.1
HARDNESS, TOTAL	9	76.0	8.5	64	93	9	0.266	12.541	0.844	4.9
HARDNESS, NONCARBONATE	9	0.0	0.0	0	0	9	0.000	0.000	0.000 *	0.0
TURBIDITY (JTU)	9	12.3	11.9	1	38	9	-0.228	66.731	-0.516 *	10.9
FLOURIDE, DISSOLVED	9	0.66	0.17	0.4	0.9	9	0.0050	-0.5504	0.818	0.10

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
39	10.93	13.55	2.39	88	2.91

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10352500 -- MC DERMITT C NR MC DERMITT, NV

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	11	19	3	9	14
CADMIUM (CD), UG/L	3	<10	10	3	0	0
CHROMIUM (CR), UG/L	3	0	10	3	0	0
COBALT (CO), UG/L	3	<50	<50	3	0	1
COPPER (CU), UG/L	3	<10	20	3	1	4
IRON (FE), UG/L	3	240	8300	3	40	130
LEAD (PB), UG/L	3	<100	<100	3	1	4
MANGANESE (MN), UG/L	3	0	210	3	0	10
MERCURY (HG), UG/L	3	0.0	1.4	3	0.0	0.8
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	50	3	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	23.00				
BIOMASS, ASH WT., G/SQ M	1	11.00				
CHLOROPHYLL A, MG/SQ M	1	87.0				
CHLOROPHYLL B, MG/SQ M	1	8.3				
ORGANIC CARBON, MG/L	3	3.0	6.3			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 10396000 NAME: DONNER UND BLITZEN RIVER NR FRENCHGLEN,OREG.

LAT 42D47M28S LONG 118D52M00S
DRAINAGE AREA: 200 SQ MI (518 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	6	11.35	5.51	2.6	19.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	66.3	16.7	50	90					
STREAMFLOW (CUBIC FT/SEC)	6	288.5	281.7	58	764	6	-9.951	948.585	-0.590 *	254.3
PH (STANDARD UNITS)	6	8.12	0.53	7.3	8.8	6	0.0208	6.7348	0.651 *	0.45
PHOSPHORUS, TOTAL	6	0.077	0.047	0.00	0.13	6	-0.00126	0.16002	-0.445 *	0.047
NITRITE + NITRATE, TOTAL	6	0.088	0.105	0.00	0.28	6	-0.00205	0.22461	-0.328 *	0.111
NITROGEN, KJELDAHL, TOTAL	6	0.385	0.123	0.21	0.57	6	-0.00421	0.66453	-0.572 *	0.113
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	1238.3	871.7	300	2500	6	14.078	304.501	0.270 *	938.5
SEDIMENT, SUSPENDED	5	79.4	149.5	1	346					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	6	9.5	6.6	1	20					
STREPTOCOCCI, FECAL (COL/100 ML)	6	18.3	19.7	2	55					
SILICA, DISSOLVED	6	21.50	3.15	18.0	26.0	6	0.1598	10.8987	0.849	1.86
CALCIUM, DISSOLVED	6	7.27	2.45	4.4	11.0	6	0.0843	1.6728	0.575 *	2.24
MAGNESIUM, DISSOLVED	6	2.55	0.47	2.0	3.4	6	0.0241	0.9527	0.852	0.28
SODIUM, DISSOLVED	6	4.00	0.88	3.0	5.3	6	0.0427	1.1666	0.812	0.57
POTASSIUM, DISSOLVED	6	1.13	0.35	0.7	1.5	6	0.0151	0.1287	0.722 *	0.27
BICARBONATE, ION	6	38.3	6.2	29	46	6	0.299	18.494	0.812	4.0
CARBONATE, ION	6	0.5	1.2	0	3	6	0.036	-1.877	0.489 *	1.2
SULFATE, DISSOLVED	6	1.97	0.80	1.1	3.2	6	0.0061	1.5595	0.129 *	0.88
CHLORIDE, DISSOLVED	6	1.20	0.57	0.7	2.0	6	0.0151	0.1969	0.447 *	0.57
DISSOLVED SOLIDS, SUM OF CONST	6	59.2	10.6	44	75	6	0.540	23.338	0.847	6.3
DISSOLVED SOLIDS, ROE 180 DEG C	6	63.5	12.8	48	80	6	0.612	22.901	0.796 *	8.7
HARDNESS, TOTAL	6	28.5	7.1	19	38	6	0.305	8.296	0.720 *	5.5
HARDNESS, NONCARBONATE	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
TURBIDITY (JTU)	6	13.7	10.6	2	26	6	-0.213	27.802	-0.335 *	11.2
FLOURIDE, DISSOLVED	6	0.13	0.08	0.1	0.3	6	0.0034	-0.0917	0.694 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

10396000 -- DONNER UND BLITZEN RIVER NR FRENCHGLEN,OREG.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	0	2	0	1
CADMIUM (CD), UG/L	2	<10	<10	2	0	1
CHROMIUM (CR), UG/L	2	0	10	2	0	0
COBALT (CO), UG/L	2	<50	<50	2	0	1
COPPER (CU), UG/L	2	20	40	2	1	7
IRON (FE), UG/L	2	1400	2000	2	120	380
LEAD (PB), UG/L	2	<100	<100	2	2	2
MANGANESE (MN), UG/L	2	50	70	2	0	20
MERCURY (HG), UG/L	2	0.0	0.0	2	0.0	0.0
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	30	70	2	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	46.00				
BIOMASS, ASH WT., G/SQ M	1	44.00				
CHLOROPHYLL A, MG/SQ M	1	9.5				
CHLOROPHYLL B, MG/SQ M	1	1.5				
ORGANIC CARBON, MG/L	2	.8	6.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11074000 NAME: SANTA ANA RIVER BELOW PRADO DAM, CALIF.

LAT 33D53M00S LONG 117D38M40S
DRAINAGE AREA: 1490 SQ MI (3859 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	118	14.22	3.80	6.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	106	947.8	202.1	400	1240					
STREAMFLOW (CUBIC FT/SEC)	117	149.4	93.6	40	822	105	-0.167	300.672	-0.370	85.1
PH (STANDARD UNITS)	59	7.74	0.22	7.0	8.2	59	-0.0001	7.8430	-0.099 *	0.22
PHOSPHORUS, TOTAL	46	2.116	0.813	0.87	4.70	46	0.00289	-0.67530	0.723	0.568
NITRITE + NITRATE, TOTAL	43	4.730	2.353	1.40	11.00	43	0.00722	-2.21377	0.626	1.857
NITROGEN, KJELDAHL, TOTAL	43	3.832	1.806	0.78	8.30	43	0.00641	-2.35273	0.714	1.279
PHYTOPLANKTON, TOTAL (CELLS/ML)	14	3055.7	1717.0	690	6400	14	1.862	1375.817	0.222 *	1742.4
SEDIMENT, SUSPENDED	14	214.1	298.6	38	1040					
SEDIMENT, CLAY-SILT (PERCENT)	13	96.7	3.7	88	100					
COLIFORM, FECAL (COL/100 ML)	11	507.0	872.9	47	3100					
STREPTOCOCCI, FECAL (COL/100 ML)	11	500.2	367.4	190	1500					
SILICA, DISSOLVED	43	20.98	5.18	12.0	29.0	43	0.0230	-1.2017	0.907	2.20
CALCIUM, DISSOLVED	57	77.35	19.84	43.0	110.0	57	0.0963	-14.0595	0.976	4.40
MAGNESIUM, DISSOLVED	57	20.35	4.08	12.0	28.0	57	0.0189	2.3669	0.934	1.47
SODIUM, DISSOLVED	57	88.93	18.45	54.0	120.0	57	0.0887	4.7072	0.967	4.76
POTASSIUM, DISSOLVED	57	7.61	1.99	3.9	12.0	57	0.0072	0.7728	0.728	1.38
BICARBONATE, ION	57	247.6	60.8	153	344	57	0.283	-21.310	0.937	21.5
CARBONATE, ION	35	0.8	4.6	0	27	35	0.004	-2.692	0.158 *	4.6
SULFATE, DISSOLVED	57	106.46	24.45	58.0	154.0	57	0.1098	2.1942	0.903	10.59
CHLORIDE, DISSOLVED	57	104.28	22.16	67.0	140.0	57	0.1059	3.7882	0.960	6.23
DISSOLVED SOLIDS, SUM OF CONST	43	575.6	131.4	354	728	43	0.639	-39.423	0.993	15.6
DISSOLVED SOLIDS, ROE 180 DEG C	72	577.3	131.5	245	755	72	0.629	-10.909	0.977	28.3
HARDNESS, TOTAL	57	277.2	66.0	170	370	57	0.320	-26.211	0.974	15.1
HARDNESS, NONCARBONATE	57	73.4	22.8	26	120	57	0.083	-5.538	0.733	15.7
TURBIDITY (JTU)	22	55.1	57.4	13	300	22	0.097	-31.530	0.328 *	55.5
FLOURIDE, DISSOLVED	57	0.53	0.17	0.1	0.9	57	0.0004	0.1239	0.495	0.15

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1260	1200	1180	1150	1120	902	761	678	644	622

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
302	16.29	5.65	2.70	87	1.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11074000 -- SANTA ANA RIVER BELOW PRADO DAM, CALIF.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	12	3	10	9	0	7
CADMIUM (CD), UG/L	12	< 10	20	9	0	3
CHROMIUM (CR), UG/L	12	0	50	4	0	10
COBALT (CO), UG/L	12	0	50	8	0	0
COPPER (CU), UG/L	12	< 10	60	9	0	10
IRON (FE), UG/L	4	2300	6500	45	10	1100
LEAD (PB), UG/L	12	< 100	100	9	0	10
MANGANESE (MN), UG/L	8	110	1100	4	50	200
MERCURY (HG), UG/L	11	0.0	0.1	8	0.0	0.1
SELENIUM (SE), UG/L	8	0	1	4	0	1
ZINC (ZN), UG/L	12	40	210	9	20	110
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	19.00				
BIOMASS, ASH WT., G/SQ M	1	17.00				
CHLOROPHYLL A, MG/SQ M	1	.6				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	41	5.7	26.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11103010 NAME: LOS ANGELES R. A. WILLO ST BR A LB

LAT 33D48M16S LONG 118D12M15S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.79	4.85	9.2	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1302.1	486.1	635	2700					
STREAMFLOW (CUBIC FT/SEC)	12	44.9	50.4	19	200	12	-0.037	93.020	-0.357*	49.3
PH (STANDARD UNITS)	15	8.65	0.56	7.3	9.2	15	0.0001	8.4606	0.113*	0.57
PHOSPHORUS, TOTAL	12	1.160	0.532	0.54	2.20	12	-0.00012	1.31674	-0.110*	0.555
NITRITE + NITRATE, TOTAL	12	2.302	2.480	0.01	8.80	12	-0.00024	2.61883	-0.048*	2.598
NITROGEN, KJELDAHL, TOTAL	12	3.637	3.715	0.72	12.00	12	-0.00132	5.35496	-0.173*	3.837
PHYTOPLANKTON, TOTAL (CELLS/ML)	14	28016.4	23934.4	260	71000	14	-9.079	39718.082	-0.170*	24548.0
SEDIMENT, SUSPENDED	11	19.5	17.7	5	67					
SEDIMENT, CLAY-SILT (PERCENT)	10	72.8	21.7	38	95					
COLIFORM, FECAL (COL/100 ML)	12	19071.7	54000.0	80	190000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	11454.7	33189.7	20	116000					
SILICA, DISSOLVED	12	18.77	6.01	6.3	25.0	12	-0.0051	25.3691	-0.410*	5.74
CALCIUM, DISSOLVED	12	90.58	12.57	58.0	110.0	12	0.0075	80.8778	0.288*	12.63
MAGNESIUM, DISSOLVED	12	32.25	8.30	12.0	45.0	12	0.0087	20.9677	0.507*	7.50
SODIUM, DISSOLVED	12	128.25	52.65	43.0	250.0	12	0.1002	-2.2151	0.925	20.95
POTASSIUM, DISSOLVED	12	9.48	3.15	6.8	19.0	12	-0.0011	10.8595	-0.163*	3.26
BICARBONATE, ION	12	226.6	44.8	123	282	12	0.035	181.136	0.379*	43.4
CARBONATE, ION	9	14.6	13.8	0	30	9	-0.010	27.960	-0.357*	13.8
SULFATE, DISSOLVED	12	228.00	47.30	96.0	300.0	12	0.0353	182.0870	0.362*	46.23
CHLORIDE, DISSOLVED	12	138.75	72.92	42.0	340.0	12	0.1473	-53.0873	0.982	14.38
DISSOLVED SOLIDS, SUM OF CONST	12	769.4	177.7	335	1080	12	0.305	371.938	0.835	102.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	822.9	162.9	448	1160	12	0.302	430.163	0.900	74.5
HARDNESS, TOTAL	12	357.5	57.4	190	410	12	0.053	288.569	0.448*	53.8
HARDNESS, NONCARBONATE	12	154.4	26.1	93	190	12	0.033	110.941	0.621	21.5
TURBIDITY (JTU)	12	6.3	5.2	1	20	12	-0.002	9.473	-0.226*	5.3
FLOURIDE, DISSOLVED	12	0.62	0.18	0.4	1.1	12	-0.0000	0.6296	-0.010*	0.19

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 207

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1930	1620	1500	1380	1300	1200	1150	893	594	312

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
311	18.51	7.35	2.72	89	1.90

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11103010 -- LOS ANGELES R. A. WILLO ST BR A LB

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	26	4	5	16
CADMIUM (CD), UG/L	4	< 10	30	3	1	2
CHROMIUM (CR), UG/L	4	0	50	4	0	40
COBALT (CO), UG/L	4	< 50	< 50	4	0	1
COPPER (CU), UG/L	4	20	50	4	5	35
IRON (FE), UG/L	4	180	2300	4	30	390
LEAD (PB), UG/L	4	< 100	200	4	5	48
MANGANESE (MN), UG/L	4	30	320	4	0	280
MERCURY (HG), UG/L	4	0.0	0.2	4	0.1	0.4
SELENIUM (SE), UG/L	4	1	3	4	2	3
ZINC (ZN), UG/L	4	50	240	4	30	150
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	2.5	21.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11152500 NAME: SALINAS RIVER NR SPRECKELS CALIF

LAT 36D37M52S LONG 121D40M17S
DRAINAGE AREA: 4156 SQ MI (10764 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	36	13.47	3.93	7.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	612.6	356.6	181	1270					
STREAMFLOW (CUBIC FT/SEC)	36	891.9	1550.3	2	6290	14	-1.590	1613.623	-0.448*	1178.2
PH (STANDARD UNITS)	12	8.09	0.28	7.4	8.5	12	0.0000	8.0826	0.019*	0.29
PHOSPHORUS, TOTAL	11	2.299	4.126	0.20	14.00	11	0.00632	-1.63733	0.568*	3.578
NITRITE + NITRATE, TOTAL	11	2.928	5.428	0.20	19.00	11	0.01034	-4.28319	0.677	4.211
NITROGEN, KJELDAHL, TOTAL	12	2.742	4.002	0.21	12.00	12	0.00246	1.13423	0.227*	4.087
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	7181.8	7229.1	1500	25000	10	-8.618	13583.480	-0.415*	7327.5
SEDIMENT, SUSPENDED	13	1089.2	1055.5	107	3520					
SEDIMENT, CLAY-SILT (PERCENT)	9	62.4	26.4	26	99					
COLIFORM, FECAL (COL/100 ML)	10	172.8	203.1	8	550					
STREPTOCOCCI, FECAL (COL/100 ML)	10	83.2	120.9	0	400					
SILICA, DISSOLVED	6	20.17	10.91	12.0	41.0	6	0.0199	6.8399	0.837	6.68
CALCIUM, DISSOLVED	7	53.00	20.67	34.0	80.0	7	0.0432	26.0867	0.908	9.49
MAGNESIUM, DISSOLVED	6	27.33	12.27	15.0	44.0	6	0.0253	10.3914	0.945	4.48
SODIUM, DISSOLVED	7	54.00	42.15	18.0	130.0	7	0.0882	-1.0080	0.910	19.11
POTASSIUM, DISSOLVED	6	6.00	5.07	2.1	13.0	6	0.0100	-0.7041	0.906	2.39
BICARBONATE, ION	7	197.7	83.7	95	337	7	0.177	87.463	0.919	36.1
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	7	111.29	52.56	46.0	170.0	7	0.0692	68.1485	0.572*	47.21
CHLORIDE, DISSOLVED	7	51.29	55.65	12.0	160.0	7	0.1189	-22.8754	0.929	22.49
DISSOLVED SOLIDS, SUM OF CONST	6	449.8	211.0	215	719	6	0.443	153.439	0.962	64.6
DISSOLVED SOLIDS, ROE 180 DEG C	7	438.6	231.1	229	802	7	0.508	122.012	0.955	74.9
HARDNESS, TOTAL	7	236.7	99.2	150	380	7	0.212	104.598	0.929	40.2
HARDNESS, NONCARBONATE	7	75.3	38.2	37	130	7	0.068	33.059	0.771	26.6
TURBIDITY (JTU)	6	12.3	11.5	0	30	6	0.006	8.452	0.230*	12.6
FLOURIDE, DISSOLVED	6	0.27	0.12	0.1	0.4	6	0.0001	0.2323	0.195*	0.13

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 157

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1280	1130	1100	970	825	515	372	320	283	215

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
166	15.72	6.17	2.84	70	2.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11152500 -- SALINAS RIVER NR SPRECKELS CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	220	4	2	3
CADMIUM (CD), UG/L	3	< 10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	1100	3	0	0
COBALT (CO), UG/L	4	< 50	450	4	0	0
COPPER (CU), UG/L	4	< 10	820	4	2	80
IRON (FE), UG/L	3	440	2600	3	20	40
LEAD (PB), UG/L	4	< 100	300	4	0	2
MANGANESE (MN), UG/L	3	30	240	3	0	170
MERCURY (HG), UG/L	4	0.0	1.0	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	2	3	0	2
ZINC (ZN), UG/L	4	30	1600	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	5.39	10.00			
BIOMASS, ASH WT., G/SQ M	2	4.59	5.50			
CHLOROPHYLL A, MG/SQ M	2	25.0	79.0			
CHLOROPHYLL B, MG/SQ M	2	3.1	31.0			
ORGANIC CARBON, MG/L	3	6.5	320.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11250000 NAME: FRIANT-KERN CANAL AT FRIANT CALIF

LAT 36D59M53S LONG 119D42M11S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	15.27	4.47	10.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	29.6	8.0	22	45					
STREAMFLOW (CUBIC FT/SEC)	12	2601.7	1462.4	260	4450	11	34.631	1414.565	0.195*	1466.2
PH (STANDARD UNITS)	11	7.02	0.56	5.6	7.6	11	0.0039	6.9034	0.055*	0.59
PHOSPHORUS, TOTAL	11	0.020	0.017	0.00	0.06	11	0.00067	0.00004	0.322*	0.017
NITRITE + NITRATE, TOTAL	11	0.022	0.021	0.00	0.06	11	0.00153	-0.02354	0.585*	0.018
NITROGEN, KJELDAHL, TOTAL	11	0.216	0.122	0.11	0.44	11	0.00283	0.13257	0.185*	0.127
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	9058.1	27185.9	29	91000	11	-815.121	33215.289	-0.240*	27821.4
SEDIMENT, SUSPENDED	8	2.9	1.1	2	5					
SEDIMENT, CLAY-SILT (PERCENT)	8	79.5	9.9	63	94					
COLIFORM, FECAL (COL/100 ML)	9	4.3	4.2	1	15					
STREPTOCOCCI, FECAL (COL/100 ML)	10	2.6	2.7	1	9					
SILICA, DISSOLVED	4	8.62	2.30	7.0	12.0	4	0.2169	2.1188	0.985*	0.49
CALCIUM, DISSOLVED	4	3.45	1.22	2.3	4.6	4	0.0945	0.6157	0.809*	0.88
MAGNESIUM, DISSOLVED	4	0.62	0.43	0.1	1.1	4	0.0064	0.4318	0.157*	0.52
SODIUM, DISSOLVED	4	2.75	0.89	2.0	3.9	4	0.0819	0.2930	0.961*	0.30
POTASSIUM, DISSOLVED	4	0.62	0.34	0.2	0.9	4	0.0227	-0.0560	0.695*	0.30
BICARBONATE, ION	4	15.3	4.7	11	22	4	0.442	1.998	0.976*	1.3
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	1.37	0.62	1.0	2.3	4	-0.0340	2.3965	-0.574*	0.62
CHLORIDE, DISSOLVED	4	2.52	0.86	1.3	3.3	4	0.0285	1.6692	0.347*	0.99
DISSOLVED SOLIDS, SUM OF CONST	4	27.5	7.0	21	37	4	0.641	8.267	0.961*	2.3
DISSOLVED SOLIDS, ROE 180 DEG C	4	27.0	10.7	21	43	4	0.975	-2.264	0.950*	4.1
HARDNESS, TOTAL	4	11.3	3.9	6	15	4	0.270	3.152	0.729*	3.2
HARDNESS, NONCARBONATE	4	1.0	1.2	0	2	4	-0.055	2.656	-0.498*	1.2
TURBIDITY (JTU)	4	2.0	0.8	1	3	4	0.049	0.528	0.627*	0.8
FLOURIDE, DISSOLVED	4	0.07	0.05	0.0	0.1	4	0.0003	0.0658	0.064*	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11250000 -- FRIANT-KERN CANAL AT FRIANT CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	7	4	1	4
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	2
COPPER (CU), UG/L	4	< 10	1600	4	2	4
IRON (FE), UG/L	4	80	250	4	10	80
LEAD (PB), UG/L	4	< 100	< 100	4	1	7
MANGANESE (MN), UG/L	4	0	10	4	0	5
MERCURY (HG), UG/L	4	0.0	1.1	4	0.0	0.2
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	4	30	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	19.00				
BIOMASS, ASH WT., G/SQ M	1	6.19				
CHLOROPHYLL A, MG/SQ M	1	9.0				
CHLOROPHYLL B, MG/SQ M	1	.2				
ORGANIC CARBON, MG/L	3	1.7	6.3			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11303500 NAME: SAN JOAQUIN RIVER NEAR VERNALIS CALIF

LAT 37D40M34S LONG 121D15M51S
DRAINAGE AREA: 13536 SQ MI (35058 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	381	15.47	4.97	7.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	517.4	221.6	187	824					
STREAMFLOW (CUBIC FT/SEC)	381	3884.9	1709.6	1340	9020	13	-7.036	7173.523	-0.831	1089.9
PH (STANDARD UNITS)	13	7.87	0.27	7.4	8.3	13	-0.0004	8.0890	-0.354 *	0.26
PHOSPHORUS, TOTAL	12	0.224	0.087	0.12	0.42	12	0.00028	0.08563	0.680	0.067
NITRITE + NITRATE, TOTAL	12	0.812	0.277	0.14	1.10	12	0.00088	0.37792	0.671	0.216
NITROGEN, KJELDAHL, TOTAL	12	0.793	0.379	0.42	1.80	12	0.00098	0.31294	0.542 *	0.334
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	22484.6	33723.6	2300	130000	13	22.177	11010.695	0.146 *	34846.9
SEDIMENT, SUSPENDED	377	102.4	43.0	28	222					
SEDIMENT, CLAY-SILT (PERCENT)	26	74.5	15.3	51	98					
COLIFORM, FECAL (COL/100 ML)	12	1691.5	3898.0	48	14000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1542.6	3933.4	21	14000					
SILICA, DISSOLVED	4	15.75	2.63	12.0	18.0	4	0.0034	13.6690	0.242 *	3.13
CALCIUM, DISSOLVED	4	33.50	6.61	26.0	42.0	4	0.0344	12.3433	0.979 *	1.63
MAGNESIUM, DISSOLVED	4	15.00	4.69	10.0	21.0	4	0.0240	0.2265	0.964 *	1.54
SODIUM, DISSOLVED	4	70.25	19.65	45.0	93.0	4	0.1035	6.4979	0.992 *	2.97
POTASSIUM, DISSOLVED	4	3.10	1.11	1.8	4.5	4	0.0058	-0.4783	0.986 *	0.23
BICARBONATE, ION	4	124.0	31.9	95	166	4	0.155	28.672	0.914 *	15.9
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	64.75	18.01	39.0	81.0	4	0.0698	21.7844	0.730 *	15.07
CHLORIDE, DISSOLVED	4	94.75	34.79	56.0	140.0	4	0.1801	-16.1427	0.975 *	9.44
DISSOLVED SOLIDS, SUM OF CONST	4	358.3	93.7	241	469	4	0.496	52.904	0.997 *	9.2
DISSOLVED SOLIDS, ROE 180 DEG C	4	367.0	95.9	245	476	4	0.509	53.753	0.999 *	5.5
HARDNESS, TOTAL	4	145.0	34.2	110	190	4	0.173	38.479	0.954 *	12.5
HARDNESS, NONCARBONATE	4	43.8	9.4	32	55	4	0.049	13.805	0.971 *	2.7
TURBIDITY (JTU)	374	21.7	13.3	7	60	10	0.058	-6.886	0.755	10.4
FLOURIDE, DISSOLVED	4	0.10	0.00	0.1	0.1	4	0.0000	0.1000	0.000 *	0.00

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 285

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	834	791	751	653	571	474	382	288	248	215

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	15.46	6.82	2.67	94	1.19

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11303500 -- SAN JOAQUIN RIVER NEAR VERNALIS CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	8	4	1	4
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	<10	2300	4	5	<10
IRON (FE), UG/L	4	1800	6100	4	10	50
LEAD (PB), UG/L	4	<100	100	4	1	6
MANGANESE (MN), UG/L	4	110	390	4	10	40
MERCURY (HG), UG/L	4	0.1	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	40	70	4	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	15.00	110.00			
BIOMASS, ASH WT., G/SQ M	3	12.00	95.00			
CHLOROPHYLL A, MG/SQ M	2	13.0	30.0			
CHLOROPHYLL B, MG/SQ M	2	.5	1.0			
ORGANIC CARBON, MG/L	3	4.0	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11325500 NAME: MOKELUMNE RIVER AT WOODBRIDGE CALIF

LAT 38D09M31S LONG 121D18M09S
DRAINAGE AREA: 661 SQ MI (1712 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	14.13	3.38	8.5	19.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	45.3	4.6	38	58					
STREAMFLOW (CUBIC FT/SEC)	24	477.2	301.3	40	1230	22	-7.445	823.592	-0.115 *	305.5
PH (STANDARD UNITS)	24	7.08	0.20	6.7	7.6	22	0.0003	7.0831	0.006 *	0.21
PHOSPHORUS, TOTAL	12	0.022	0.017	0.00	0.05	10	0.00099	-0.02355	0.342 *	0.019
NITRITE + NITRATE, TOTAL	12	0.051	0.105	0.00	0.38	10	0.01101	-0.44740	0.620 *	0.095
NITROGEN, KJELDAHL, TOTAL	12	0.259	0.246	0.04	0.79	10	0.02403	-0.82312	0.586 *	0.227
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	982.5	1060.9	250	4200	10	17.901	-120.645	0.334 *	345.3
SEDIMENT, SUSPENDED	11	8.4	8.6	3	26					
SEDIMENT, CLAY-SILT (PERCENT)	8	43.5	46.7	0	94					
COLIFORM, FECAL (COL/100 ML)	12	237.7	435.5	12	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	725.1	1718.1	16	5700					
SILICA, DISSOLVED	4	10.30	1.16	9.4	12.0	4	-0.2545	21.8178	-0.630 *	1.10
CALCIUM, DISSOLVED	6	4.57	0.27	4.1	4.8	6	0.0617	1.7997	0.695 *	0.21
MAGNESIUM, DISSOLVED	4	1.25	0.24	0.9	1.4	4	0.0545	-1.2182	0.658 *	0.22
SODIUM, DISSOLVED	6	2.42	0.12	2.3	2.6	6	0.0115	1.9002	0.295 *	0.12
POTASSIUM, DISSOLVED	4	0.77	0.10	0.7	0.9	4	0.0212	-0.1848	0.636 *	0.09
BICARBONATE, ION	6	22.8	3.0	19	28	6	0.331	8.000	0.331 *	3.2
CARBONATE, ION	4	0.0	0.0	0	0	4	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	4	2.57	0.40	2.1	3.0	4	-0.0636	5.4548	-0.453 *	0.44
CHLORIDE, DISSOLVED	6	2.05	0.36	1.7	2.7	6	0.0346	0.5004	0.290 *	0.38
DISSOLVED SOLIDS, SUM OF CONST	4	36.0	1.8	34	38	4	-0.242	46.970	-0.381 *	2.1
DISSOLVED SOLIDS, ROE 180 DEG C	6	31.8	4.0	25	35	6	0.487	10.000	0.367 *	4.1
HARDNESS, TOTAL	6	16.7	1.4	15	18	6	0.372	0.000	0.815	0.9
HARDNESS, NONCARBONATE	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
TURBIDITY (JTU)	6	1.8	1.7	0	5	6	-0.093	6.000	-0.162 *	1.9
FLOURIDE, DISSOLVED	4	0.02	0.05	0.0	0.1	4	0.0030	-0.1121	0.174 *	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 349

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	71	49	48	47	46	46	44	42	41	41

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE

FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C) +

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
24	14.13	4.48	2.56	87	1.28

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11325500 -- MOKELUMNE RIVER AT WOODBRIDGE CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	<10	30	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	0	40	4	1	6
IRON (FE), UG/L	4	190	320	4	10	50
LEAD (PB), UG/L	4	<100	100	4	3	23
MANGANESE (MN), UG/L	4	10	280	4	0	0
MERCURY (HG), UG/L	3	0.0	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	100	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	5.79	27.00			
BIOMASS, ASH WT., G/SQ M	3	3.39	10.00			
CHLOROPHYLL A, MG/SQ M	3	1.7	6.0			
CHLOROPHYLL B, MG/SQ M	3	.2	1.0			
ORGANIC CARBON, MG/L	4	1.6	3.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11447650 NAME: SACRAMENTO RIVER AT FREEPORT CALIF

LAT 38D27M20S LONG 121D30M07S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	15.63	4.52	8.0	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	118.9	31.0	43	169					
STREAMFLOW (CUBIC FT/SEC)	14	28842.9	11591.0	18900	54200	14	-62.654	36070.410	-0.155*	11917.6
PH (STANDARD UNITS)	15	7.01	0.42	6.5	7.8	15	-0.0014	7.1833	-0.106*	0.43
PHOSPHORUS, TOTAL	12	0.120	0.068	0.06	0.32	12	-0.00022	0.14460	-0.085*	0.071
NITRITE + NITRATE, TOTAL	12	0.082	0.053	0.00	0.21	12	-0.00001	0.08413	-0.007*	0.056
NITROGEN, KJELDAHL, TOTAL	11	0.335	0.180	0.16	0.81	11	-0.00008	0.34483	-0.013*	0.190
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1845.0	993.2	500	3300	12	-1.646	2046.598	-0.034*	1041.1
SEDIMENT, SUSPENDED	12	100.8	129.4	20	381					
SEDIMENT, CLAY-SILT (PERCENT)	11	83.5	3.8	78	90					
COLIFORM, FECAL (COL/100 ML)	11	193.4	353.0	20	1250					
STREPTOCOCCI, FECAL (COL/100 ML)	11	94.3	126.0	9	450					
SILICA, DISSOLVED	4	16.75	1.50	15.0	18.0	4	0.0473	10.9982	0.607*	1.46
CALCIUM, DISSOLVED	4	10.42	0.68	9.7	11.0	4	0.0198	8.0205	0.564*	0.68
MAGNESIUM, DISSOLVED	4	5.17	1.03	4.1	6.5	4	0.0444	-0.2207	0.828*	0.71
SODIUM, DISSOLVED	4	7.72	2.24	6.0	11.0	4	0.1098	-5.6138	0.943*	0.91
POTASSIUM, DISSOLVED	4	1.22	0.29	1.0	1.6	4	-0.0083	2.2275	-0.552*	0.29
BICARBONATE, ION	4	59.5	8.0	54	71	4	0.408	9.980	0.977*	2.1
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	6.72	1.38	5.4	8.4	4	0.0577	-0.2815	0.801*	1.01
CHLORIDE, DISSOLVED	4	4.42	1.33	3.5	6.4	4	0.0691	-3.9727	0.999*	0.07
DISSOLVED SOLIDS, SUM OF CONST	4	81.8	10.2	75	97	4	0.532	17.056	0.999*	0.4
DISSOLVED SOLIDS, ROE 180 DEG C	4	82.0	12.8	74	101	4	0.663	1.475	0.997*	1.2
HARDNESS, TOTAL	4	47.3	5.9	41	54	4	0.229	19.477	0.751*	4.7
HARDNESS, NONCARBONATE	4	1.3	2.5	0	5	4	-0.038	5.906	-0.295*	2.9
TURBIDITY (JTU)	4	12.0	7.1	3	19	4	0.098	0.058	0.267*	8.3
FLOURIDE, DISSOLVED	4	0.10	0.00	0.1	0.1	4	-0.0000	0.1000	0.000*	0.00

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 291

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	199	192	186	166	145	135	124	108	104	100

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	14.80	6.18	2.64	97	0.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11447650 -- SACRAMENTO RIVER AT FREEPORT CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	1	3
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	<10	160	4	3	20
IRON (FE), UG/L	4	1200	20000	4	10	50
LEAD (PB), UG/L	4	<100	<100	4	3	5
MANGANESE (MN), UG/L	4	50	390	4	0	20
MERCURY (HG), UG/L	3	0.0	0.3	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	80	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	5.09	69.00			
BIOMASS, ASH WT., G/SQ M	3	3.79	56.00			
CHLOROPHYLL A, MG/SQ M	3	16.0	86.0			
CHLOROPHYLL B, MG/SQ M	3	1.1	4.0			
ORGANIC CARBON, MG/L	4	2.5	7.8			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11467000 NAME: RUSSIAN RIVER NR GUERNEVILLE CALIF

LAT 38D30M31S LONG 122D55M36S
DRAINAGE AREA: 1338 SQ MI (3465 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	49	15.22	5.31	8.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	222.5	58.3	103	280					
STREAMFLOW (CUBIC FT/SEC)	56	8934.9	13865.2	152	66800	16	-109.640	28485.352	-0.732	6146.3
PH (STANDARD UNITS)	25	7.69	0.30	7.2	8.2	16	0.0032	6.9891	0.608	0.25
PHOSPHORUS, TOTAL	12	0.236	0.132	0.10	0.52	12	-0.00067	0.25059	-0.028*	0.138
NITRITE + NITRATE, TOTAL	12	0.266	0.184	0.00	0.64	12	-0.00079	0.44486	-0.239*	0.188
NITROGEN, KJELDAHL, TOTAL	12	0.559	0.333	0.23	1.40	12	-0.00284	1.19945	-0.473*	0.308
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4165.0	3214.9	490	9400	12	-3.419	4936.891	-0.059*	3365.9
SEDIMENT, SUSPENDED	232	211.8	365.2	5	1920					
SEDIMENT, CLAY-SILT (PERCENT)	21	86.1	8.1	65	98					
COLIFORM, FECAL (COL/100 ML)	12	121.3	240.3	3	840					
STREPTOCOCCI, FECAL (COL/100 ML)	12	224.8	565.1	6	2000					
SILICA, DISSOLVED	4	14.00	0.82	13.0	15.0	4	-0.0138	17.1623	-0.835*	0.55
CALCIUM, DISSOLVED	8	21.00	6.07	10.0	28.0	5	0.0987	-0.7819	0.985*	1.40
MAGNESIUM, DISSOLVED	6	10.88	3.38	5.8	14.0	5	0.0527	-0.1065	0.983*	0.78
SODIUM, DISSOLVED	9	9.36	2.68	4.6	13.0	5	0.0425	-0.2113	0.975*	0.77
POTASSIUM, DISSOLVED	6	1.67	0.39	1.3	2.2	5	-0.0045	2.6514	-0.808*	0.26
BICARBONATE, ION	9	120.4	32.6	56	152	5	0.535	-2.299	0.988*	6.8
CARBONATE, ION	7	0.0	0.0	0	0	3	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	6	10.67	2.67	6.9	14.0	5	0.0387	2.6849	0.907*	1.45
CHLORIDE, DISSOLVED	8	6.24	2.51	2.4	9.8	5	0.0336	-0.9399	0.874*	1.50
DISSOLVED SOLIDS, SUM OF CONST	4	136.3	27.1	96	155	4	0.537	13.171	0.979*	6.8
DISSOLVED SOLIDS, ROE 180 DEG C	9	142.6	31.7	83	192	5	0.459	34.767	0.992*	4.8
HARDNESS, TOTAL	9	103.7	28.5	49	136	5	0.475	-4.057	0.996*	3.4
HARDNESS, NONCARBONATE	9	4.6	3.2	2	11	5	0.025	-0.373	0.813*	1.5
TURBIDITY (JTU)	237	69.2	121.9	2	600	13	-1.385	359.222	-0.914	40.2
FLUORIDE, DISSOLVED	4	0.10	0.00	0.1	0.1	4	0.0000	0.1000	0.000*	0.00

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 280

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	320	305	290	280	275	260	240	160	140	115

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
64	16.42	7.46	2.64	92	1.68

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11467000 -- RUSSIAN RIVER NR GUERNEVILLE CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	5	4	0	1
CADMIUM (CD), UG/L	4	< 10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	40	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	3
COPPER (CU), UG/L	4	< 10	280	4	1	5
IRON (FE), UG/L	4	590	13000	4	0	40
LEAD (PB), UG/L	4	<100	100	4	1	11
MANGANESE (MN), UG/L	4	30	270	4	10	110
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	50	4	6	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	11.00	42.00			
BIOMASS, ASH WT., G/SQ M	3	4.00	33.00			
CHLOROPHYLL A, MG/SQ M	3	21.0	42.0			
CHLOROPHYLL B, MG/SQ M	3	4.0	10.0			
ORGANIC CARBON, MG/L	4	2.2	7.3			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 11530500 NAME: KLAMATH RIVER NEAR KLAMATH CALIF

LAT 41D30M45S LONG 123D58M30S
DRAINAGE AREA: 12100 SQ MI (31339 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	27	12.17	5.46	4.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	168.2	36.0	110	224					
STREAMFLOW (CUBIC FT/SEC)	25	16475.6	14785.9	2850	43900	19	-290.927	65187.984	-0.745	10144.5
PH (STANDARD UNITS)	18	7.79	0.33	7.1	8.3	18	0.0052	6.9363	0.552	0.29
PHOSPHORUS, TOTAL	11	0.081	0.032	0.02	0.12	11	0.00036	0.02294	0.346 *	0.032
NITRITE + NITRATE, TOTAL	12	0.137	0.176	0.00	0.48	12	0.00110	-0.03693	0.192 *	0.181
NITROGEN, KJELDAHL, TOTAL	12	0.411	0.217	0.19	0.83	12	0.00413	-0.24594	0.585	0.184
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1993.6	1855.3	490	7000	11	3.334	1463.769	0.058 *	1952.3
SEDIMENT, SUSPENDED	9	86.3	125.0	8	375					
SEDIMENT, CLAY-SILT (PERCENT)	1	43.0	0.0	43						
COLIFORM, FECAL (COL/100 ML)	10	4.7	5.9	1	20					
STREPTOCOCCI, FECAL (COL/100 ML)	10	7.4	4.2	1	14					
SILICA, DISSOLVED	5	18.00	4.06	14.0	24.0	5	0.1139	-1.1046	0.884 *	2.19
CALCIUM, DISSOLVED	5	18.00	2.00	15.0	20.0	5	0.0503	9.5653	0.793 *	1.41
MAGNESIUM, DISSOLVED	5	7.46	1.31	6.3	9.2	5	0.0364	1.3464	0.875 *	0.73
SODIUM, DISSOLVED	5	7.66	4.00	3.9	12.0	5	0.1026	-9.5577	0.809 *	2.71
POTASSIUM, DISSOLVED	5	1.26	0.43	0.9	1.9	5	0.0071	0.0682	0.524 *	0.42
BICARBONATE, ION	5	91.8	19.2	72	114	5	0.522	4.172	0.859 *	11.3
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	5	8.82	2.28	5.7	11.0	5	0.0579	-0.8976	0.802 *	1.57
CHLORIDE, DISSOLVED	5	4.16	1.99	1.8	6.9	5	0.0234	0.2268	0.371 *	2.14
DISSOLVED SOLIDS, SUM OF CONST	5	110.8	23.3	84	139	5	0.652	1.410	0.884 *	12.5
DISSOLVED SOLIDS, ROE 180 DEG C	5	107.2	24.9	83	137	5	0.677	-6.382	0.858 *	14.8
HARDNESS, TOTAL	5	75.6	10.0	63	88	5	0.280	28.593	0.887 *	5.3
HARDNESS, NONCARBONATE	5	3.6	6.1	0	14	5	-0.079	16.859	-0.411 *	6.4
TURBIDITY (JTU)	11	24.1	30.3	1	75	11	-0.635	134.410	-0.771	20.3
FLOURIDE, DISSOLVED	5	0.08	0.04	0.0	0.1	5	0.0003	0.0260	0.227 *	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 258

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	219	215	202	161	149	136	121	85	80	60

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
21	12.83	7.29	2.54	93	1.47

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

11530500 -- KLAMATH RIVER NEAR KLAMATH CALIF

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	4	5	0	4
CADMIUM (CD), UG/L	5	< 10	10	4	0	1
CHROMIUM (CR), UG/L	5	0	220	5	0	10
COBALT (CO), UG/L	5	0	< 50	4	0	2
COPPER (CU), UG/L	5	< 10	70	4	1	7
IRON (FE), UG/L	5	110	6900	4	10	90
LEAD (PB), UG/L	5	< 100	100	4	0	7
MANGANESE (MN), UG/L	5	30	120	4	0	20
MERCURY (HG), UG/L	5	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	20	100	4	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.89	8.50			
BIOMASS, ASH WT., G/SQ M	3	1.39	6.19			
CHLOROPHYLL A, MG/SQ M	3	.0	15.0			
CHLOROPHYLL B, MG/SQ M	3	.0	2.8			
ORGANIC CARBON, MG/L	4	2.7	4.8			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12031000 NAME: CHEHALIS RIVER AT PORTER, WASH.

LAT 46D56M17S LONG 123D18M45S
DRAINAGE AREA: 1294 SQ MI (3351 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	36	11.50	4.65	4.5	20.6					
SPECIFIC CONDUCTANCE (MICROMHOS)	36	83.3	16.7	59	111					
STREAMFLOW (CUBIC FT/SEC)	36	3121.9	3526.4	314	13500	36	-152.965	15868.930	-0.723	2470.8
PH (STANDARD UNITS)	35	7.13	0.27	6.5	7.6	35	0.0054	6.6888	0.337 *	0.25
PHOSPHORUS, TOTAL	36	0.062	0.082	0.03	0.52	36	-0.00055	0.10797	-0.111 *	0.083
NITRITE + NITRATE, TOTAL	12	0.411	0.193	0.06	0.68	12	-0.00296	0.64915	-0.233 *	0.196
NITROGEN, KJELDAHL, TOTAL	35	0.253	0.065	0.16	0.48	35	0.00037	0.22242	0.093 *	0.066
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1254.8	1814.7	58	6400	12	79.358	-5140.082	0.664	1423.3
SEDIMENT, SUSPENDED	12	13.8	14.8	2	45					
SEDIMENT, CLAY-SILT (PERCENT)	12	85.8	9.0	70	99					
COLIFORM, FECAL (COL/100 ML)	36	37.6	44.8	4	260					
STREPTOCOCCI, FECAL (COL/100 ML)	12	44.3	42.7	1	126					
SILICA, DISSOLVED	12	15.92	1.16	14.0	18.0	12	0.0626	10.8754	0.816	0.71
CALCIUM, DISSOLVED	36	7.75	1.88	4.3	11.0	36	0.0749	1.5048	0.665	1.42
MAGNESIUM, DISSOLVED	36	2.24	0.58	1.3	3.5	36	0.0199	0.5802	0.573	0.48
SODIUM, DISSOLVED	36	5.34	1.28	3.4	7.9	36	0.0585	0.4718	0.761	0.84
POTASSIUM, DISSOLVED	36	0.75	0.23	0.3	1.5	36	0.0059	0.2558	0.428	0.21
BICARBONATE, ION	36	32.8	10.3	18	52	36	0.444	-4.148	0.722	7.2
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	36	3.94	1.04	2.4	7.6	36	0.0207	2.2202	0.333 *	0.99
CHLORIDE, DISSOLVED	36	4.97	1.14	3.2	8.2	36	0.0411	1.5451	0.604	0.92
DISSOLVED SOLIDS, SUM OF CONST	12	58.3	10.1	44	73	12	0.413	25.092	0.618	8.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	63.5	9.8	48	83	11	0.362	34.365	0.588 *	8.3
HARDNESS, TOTAL	36	28.6	6.7	17	38	36	0.277	5.471	0.690	4.9
HARDNESS, NONCARBONATE	36	2.5	2.7	0	12	36	-0.058	7.291	-0.353	2.6
TURBIDITY (JTU)	36	5.1	4.5	1	20	36	-0.139	16.646	-0.516	3.9
FLOURIDE, DISSOLVED	12	0.04	0.05	0.0	0.1	12	-0.0000	0.0446	-0.011 *	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
35	11.57	6.26	2.63	93	1.28

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12031000 -- CHEHALIS RIVER AT PORTER, WASH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	28	0	40
COBALT (CO), UG/L	4	< 50	< 50	4	0	1
COPPER (CU), UG/L	4	< 10	10	28	1	17
IRON (FE), UG/L	4	190	1100	4	80	140
LEAD (PB), UG/L	4	<100	< 100	28	2	43
MANGANESE (MN), UG/L	4	0	20	4	0	10
MERCURY (HG), UG/L	28	0.0	1.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	40	28	0	100
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.79	4.59			
BIOMASS, ASH WT., G/SQ M	3	1.09	3.89			
CHLOROPHYLL A, MG/SQ M	3	.1	9.5			
CHLOROPHYLL B, MG/SQ M	3	.0	1.8			
ORGANIC CARBON, MG/L	4	2.2	16.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12045500 NAME: ELWHA RIVER AT MCDONALD BR., NR PORT ANGELES,WA

LAT 48D03M18S LONG 123D34M55S
DRAINAGE AREA: 269 SQ MI (697 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	7.26	3.31	3.5	14.4					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	86.6	16.1	60	112					
STREAMFLOW (CUBIC FT/SEC)	12	1505.3	729.8	444	2710	12	-12.488	2586.489	-0.276 *	735.7
PH (STANDARD UNITS)	12	7.20	0.30	6.8	7.8	12	0.0002	7.1819	0.011 *	0.31
PHOSPHORUS, TOTAL	12	0.022	0.021	0.00	0.08	12	0.00012	0.01113	0.092 *	0.022
NITRITE + NITRATE, TOTAL	12	0.017	0.015	0.00	0.05	12	0.00030	-0.00875	0.329 *	0.015
NITROGEN, KJELDAHL, TOTAL	12	0.107	0.041	0.05	0.20	12	0.00091	0.02859	0.361 *	0.040
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	163.1	229.2	12	850	12	-1.505	293.358	-0.106 *	239.0
SEDIMENT, SUSPENDED	12	6.4	7.0	1	27					
SEDIMENT, CLAY-SILT (PERCENT)	12	87.6	7.2	72	96					
COLIFORM, FECAL (COL/100 ML)	12	2.3	2.8	0	10					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3.1	5.1	1	19					
SILICA, DISSOLVED	12	5.48	0.72	4.2	6.4	12	0.0343	2.5170	0.766	0.49
CALCIUM, DISSOLVED	12	13.83	2.08	11.0	17.0	12	0.0976	5.3846	0.756	1.43
MAGNESIUM, DISSOLVED	12	1.07	0.48	0.3	1.7	12	0.0197	-0.6311	0.666	0.37
SODIUM, DISSOLVED	12	2.25	0.36	1.7	3.0	12	0.0112	1.2770	0.503 *	0.33
POTASSIUM, DISSOLVED	12	0.27	0.22	0.1	0.8	12	0.0079	-0.4213	0.586	0.19
BICARBONATE, ION	12	40.3	7.4	29	52	12	0.341	10.806	0.744	5.2
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	7.49	1.48	5.6	10.0	12	0.0649	1.8731	0.707	1.10
CHLORIDE, DISSOLVED	12	1.02	0.51	0.2	1.7	12	0.0043	0.6419	0.138 *	0.53
DISSOLVED SOLIDS, SUM OF CONST	12	51.3	8.0	39	64	12	0.405	16.197	0.816	4.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	52.2	8.9	35	66	12	0.481	10.528	0.876	4.5
HARDNESS, TOTAL	12	39.0	6.5	30	49	12	0.321	11.248	0.796	4.1
HARDNESS, NONCARBONATE	12	6.0	2.2	2	9	12	0.049	1.763	0.356 *	2.2
TURBIDITY (JTU)	12	4.7	5.6	1	20	12	0.075	-1.820	0.217 *	5.7
FLOURIDE, DISSOLVED	12	0.05	0.05	0.0	0.1	12	0.0006	0.0001	0.178 *	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12.	7.40	4.15	2.23	86	1.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12045500 -- ELWHA RIVER AT MCDONALD BR., NR PORT ANGELES,WA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	0	4	0	0
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	<10	30	4	1	7
IRON (FE), UG/L	4	50	840	4	10	30
LEAD (PB), UG/L	4	<100	100	4	3	9
MANGANESE (MN), UG/L	4	10	210	4	0	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	3	0	0
ZINC (ZN), UG/L	4	30	50	4	6	120
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.29	3.09			
BIOMASS, ASH WT., G/SQ M	3	.19	1.50			
CHLOROPHYLL A, MG/SQ M	3	.0	.6			
CHLOROPHYLL B, MG/SQ M	3	.0	.1			
ORGANIC CARBON, MG/L	4	.3	2.6			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12200500 NAME: SKAGIT RIVER NEAR MOUNT VERNON, WASH.

LAT 48D30M45S LONG 122D20M25S
DRAINAGE AREA: 3093 SQ MI (8011 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	7.95	3.38	3.5	13.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	49.3	10.9	34	66					
STREAMFLOW (CUBIC FT/SEC)	12	16240.8	6824.6	5870	29500	12	-220.356	27093.383	-0.353*	6697.7
PH (STANDARD UNITS)	12	7.11	0.31	6.6	7.8	12	-0.0056	7.3833	-0.197*	0.32
PHOSPHORUS, TOTAL	12	0.020	0.013	0.01	0.05	12	0.00024	0.00799	0.198*	0.014
NITRITE + NITRATE, TOTAL	12	0.113	0.065	0.04	0.22	12	0.00332	-0.05030	0.561*	0.056
NITROGEN, KJELDAHL, TOTAL	12	0.132	0.059	0.05	0.22	12	0.00238	0.01438	0.438*	0.056
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	229.6	162.7	36	540	12	-0.047	231.901	-0.003*	170.6
SEDIMENT, SUSPENDED	12	36.5	13.2	13	56					
SEDIMENT, CLAY-SILT (PERCENT)	12	30.3	9.5	19	55					
COLIFORM, FECAL (COL/100 ML)	11	31.1	36.5	4	110					
STREPTOCOCCI, FECAL (COL/100 ML)	11	31.2	40.3	1	130					
SILICA, DISSOLVED	12	6.19	0.70	5.0	7.1	12	0.0576	3.3570	0.903	0.31
CALCIUM, DISSOLVED	12	6.85	1.69	4.4	9.9	12	0.1138	1.2448	0.735	1.20
MAGNESIUM, DISSOLVED	12	1.07	0.59	0.3	1.8	12	0.0295	-0.3802	0.543*	0.52
SODIUM, DISSOLVED	12	1.43	0.21	1.2	1.9	12	0.0051	1.1819	0.260*	0.22
POTASSIUM, DISSOLVED	12	0.56	0.19	0.3	0.9	12	0.0074	0.1934	0.430*	0.18
BICARBONATE, ION	12	23.6	5.8	17	34	12	0.449	1.468	0.845	3.3
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	4.15	0.83	3.1	5.9	12	0.0385	2.2528	0.509	0.75
CHLORIDE, DISSOLVED	12	0.99	0.35	0.1	1.4	12	0.0085	0.5741	0.262*	0.36
DISSOLVED SOLIDS, SUM OF CONST	12	32.8	6.0	25	42	12	0.490	8.682	0.893	2.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	34.4	10.8	12	49	12	0.565	6.578	0.570*	9.3
HARDNESS, TOTAL	12	21.4	5.5	15	30	12	0.408	1.347	0.814	3.3
HARDNESS, NONCARBONATE	12	2.4	2.0	0	6	12	0.032	0.850	0.172*	2.1
TURBIDITY (JTU)	12	3.8	1.7	1	7	12	-0.088	8.075	-0.578	1.4
FLOURIDE, DISSOLVED	12	0.04	0.07	0.0	0.2	12	-0.0008	0.0801	-0.128*	0.07

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	70	67	66	63	61	54	45	35	33	30

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.39	4.71	2.44	90	1.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12200500 -- SKAGIT RIVER NEAR MOUNT VERNON, WASH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	<10	10	4	0	<10
CHROMIUM (CR), UG/L	4	0	0	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	<10	20	4	0	6
IRON (FE), UG/L	4	190	630	4	40	100
LEAD (PB), UG/L	4	<100	100	4	3	8
MANGANESE (MN), UG/L	4	10	30	4	0	20
MERCURY (HG), UG/L	3	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	60	4	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.29	22.00			
BIOMASS, ASH WT., G/SQ M	3	.79	22.00			
CHLOROPHYLL A, MG/SQ M	3	.3	4.0			
CHLOROPHYLL B, MG/SQ M	3	.0	.6			
ORGANIC CARBON, MG/L	4	.5	4.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12318500 NAME: KOOTENAI RIVER NR COPELAND, ID

LAT 48D59M45S LONG 116D25M00S
DRAINAGE AREA: 13400 SQ MI (34706 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	9.89	6.34	2.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	156.9	50.2	90	271					
STREAMFLOW (CUBIC FT/SEC)	15	14242.7	7063.5	4150	25100	14	-30.129	18514.496	-0.213 *	7219.3
PH (STANDARD UNITS)	11	7.60	0.29	7.1	8.1	11	0.0057	6.7188	0.771	0.19
PHOSPHORUS, TOTAL	12	0.026	0.025	0.01	0.10	12	0.00021	-0.00622	0.320 *	0.025
NITRITE + NITRATE, TOTAL	12	0.061	0.052	0.01	0.19	12	0.00109	-0.10427	0.804	0.033
NITROGEN, KJELDAHL, TOTAL	12	0.183	0.128	0.01	0.44	12	-0.00082	0.30746	-0.247 *	0.130
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1166.7	1833.5	120	5900	8	-1.785	1545.589	-0.038 *	2085.2
SEDIMENT, SUSPENDED	12	8.9	5.4	2	21					
SEDIMENT, CLAY-SILT (PERCENT)	12	89.6	8.9	70	96					
COLIFORM, FECAL (COL/100 ML)	12	9.3	8.7	1	27					
STREPTOCOCCI, FECAL (COL/100 ML)	12	19.8	28.1	1	105					
SILICA, DISSOLVED	12	5.69	1.24	4.7	8.4	12	-0.0126	7.6001	-0.389 *	1.20
CALCIUM, DISSOLVED	12	27.08	7.69	11.0	38.0	12	0.1876	-1.4306	0.940	2.74
MAGNESIUM, DISSOLVED	12	6.99	2.25	3.2	11.0	12	0.0558	-1.4909	0.956	0.69
SODIUM, DISSOLVED	12	2.11	0.44	1.4	2.7	12	0.0048	1.3715	0.429 *	0.41
POTASSIUM, DISSOLVED	12	0.75	0.17	0.5	1.1	12	0.0037	0.1935	0.841	0.10
BICARBONATE, ION	12	97.6	28.2	42	129	12	0.673	-4.766	0.922	11.5
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	13.08	5.32	5.8	23.0	12	0.1308	-6.7992	0.949	1.76
CHLORIDE, DISSOLVED	12	1.82	0.78	0.7	3.8	12	0.0109	0.1702	0.539 *	0.69
DISSOLVED SOLIDS, SUM OF CONST	12	105.9	28.6	50	147	12	0.715	-2.815	0.964	8.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	110.3	28.6	58	160	12	0.700	3.794	0.945	9.8
HARDNESS, TOTAL	12	97.0	28.4	41	140	12	0.702	-9.716	0.952	9.1
HARDNESS, NONCARBONATE	12	17.2	9.1	6	35	12	0.146	-5.039	0.618	7.5
TURBIDITY (JTU)	12	2.5	1.8	1	6	12	-0.021	5.705	-0.456 *	1.7
FLOURIDE, DISSOLVED	12	0.24	0.12	0.1	0.5	12	0.0014	0.0354	0.422 *	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 109

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	270	263	261	234	222	214	200	157	154	98

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	9.70	6.22	2.37	75	2.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12318500 -- KOOTENAI RIVER NR COPELAND, ID

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	1	2
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	2
CHROMIUM (CR), UG/L	4	0	35	4	0	20
COBALT (CO), UG/L	4	< 50	< 50	4	0	2
COPPER (CU), UG/L	4	< 10	10	4	1	13
IRON (FE), UG/L	4	170	920	4	30	40
LEAD (PB), UG/L	4	< 100	< 100	4	1	4
MANGANESE (MN), UG/L	4	10	30	4	0	50
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	70	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	14.00	23.00			
BIOMASS, ASH WT., G/SQ M	2	9.19	17.00			
CHLOROPHYLL A, MG/SQ M	3	3.5	38.0			
CHLOROPHYLL B, MG/SQ M	3	.8	26.0			
ORGANIC CARBON, MG/L	4	2.9	5.6			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12355000 NAME: FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA

LAT 49D00M05S LONG 114D28M30S
DRAINAGE AREA: 450 SQ MI (1166 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	4.53	4.42	0.0	12.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	228.5	48.9	133	274					
STREAMFLOW (CUBIC FT/SEC)	11	2202.1	3566.9	117	11100	10	-37.188	9809.785	-0.861	1140.7
PH (STANDARD UNITS)	9	8.07	0.28	7.4	8.3	9	0.0022	7.5713	0.395*	0.28
PHOSPHORUS, TOTAL	10	0.042	0.078	0.00	0.25	10	-0.00107	0.28629	-0.672	0.061
NITRITE + NITRATE, TOTAL	10	0.028	0.019	0.01	0.07	10	-0.00009	0.04756	-0.217*	0.020
NITROGEN, KJELDAHL, TOTAL	10	0.125	0.098	0.02	0.35	10	-0.00123	0.40591	-0.614*	0.082
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	190.7	136.6	29	470	9	-1.477	520.645	-0.530*	123.9
SEDIMENT, SUSPENDED	7	111.4	148.8	1	363					
SEDIMENT, CLAY-SILT (PERCENT)	4	62.5	13.6	48	80					
COLIFORM, FECAL (COL/100 ML)	10	5.2	8.2	0	24					
STREPTOCOCCI, FECAL (COL/100 ML)	10	6.7	8.1	0	25					
SILICA, DISSOLVED	10	4.18	0.52	3.3	4.8	10	0.0038	3.3126	0.358*	0.51
CALCIUM, DISSOLVED	10	38.90	7.36	25.0	46.0	10	0.1379	7.3855	0.916	3.12
MAGNESIUM, DISSOLVED	10	8.17	1.28	5.7	9.0	10	0.0217	3.2072	0.828	0.76
SODIUM, DISSOLVED	10	0.78	0.24	0.4	1.1	10	0.0006	0.6386	0.126*	0.25
POTASSIUM, DISSOLVED	10	0.40	0.17	0.1	0.6	10	-0.0013	0.7040	-0.383*	0.17
BICARBONATE, ION	10	153.6	26.9	98	173	10	0.518	35.324	0.941	9.7
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	5.23	1.67	2.9	8.5	10	0.0283	-1.2434	0.828	0.99
CHLORIDE, DISSOLVED	10	0.56	0.33	0.1	1.1	10	0.0020	0.0965	0.303*	0.33
DISSOLVED SOLIDS, SUM OF CONST	10	133.9	22.9	88	151	10	0.444	32.393	0.947	7.8
DISSOLVED SOLIDS, ROE 180 DEG C	10	133.4	23.4	90	157	10	0.438	33.334	0.913	10.1
HARDNESS, TOTAL	10	130.8	22.8	86	150	10	0.418	35.337	0.896	10.7
HARDNESS, NONCARBONATE	10	5.1	5.6	0	16	10	0.013	2.129	0.114*	5.9
TURBIDITY (JTU)	10	12.5	25.2	0	75	10	-0.384	100.144	-0.745	17.8
FLOURIDE, DISSOLVED	10	0.10	0.05	0.0	0.2	10	0.0002	0.0639	0.164*	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 332

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	290	274	269	264	262	256	239	178	173	165

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
332	3.80	4.92	2.47	89	1.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12355000 -- FLATHEAD RIVER AT FLATHEAD, BRITISH COLUMBIA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	3	3	0	2
CADMIUM (CD), UG/L	3	< 10	< 10	3	0	1
CHROMIUM (CR), UG/L	3	0	< 10	3	0	< 10
COBALT (CO), UG/L	3	< 50	< 50	3	0	1
COPPER (CU), UG/L	3	< 10	45	3	0	1
IRON (FE), UG/L	3	0	2800	3	10	170
LEAD (PB), UG/L	3	< 100	< 100	3	0	2
MANGANESE (MN), UG/L	2	0	30	3	0	20
MERCURY (HG), UG/L	3	0.0	< 0.1	3	0.0	< 0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	< 10	50	3	0	< 10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	4.79				
BIOMASS, ASH WT., G/SQ M	3	.50	4.19			
CHLOROPHYLL A, MG/SQ M	2	.5	1.7			
CHLOROPHYLL B, MG/SQ M	2	.0	1.0			
ORGANIC CARBON, MG/L	3	5.5	8.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12398600 NAME: PEND OREILLE RIVER AT INT BOUNDARY

LAT 48D59M56S LONG 117D21M09S
DRAINAGE AREA: 25200 SQ MI (65268 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.47	7.21	0.4	21.4					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	162.0	21.1	131	204					
STREAMFLOW (CUBIC FT/SEC)	12	34575.0	19238.3	13600	73800	12	-411.194	101188.375	-0.451 *	18009.3
PH (STANDARD UNITS)	12	7.88	0.67	6.4	8.6	12	0.0062	6.8778	0.195 *	0.69
PHOSPHORUS, TOTAL	12	0.014	0.007	0.01	0.03	12	-0.00019	0.04527	-0.606	0.006
NITRITE + NITRATE, TOTAL	12	0.017	0.013	0.00	0.04	12	0.00035	-0.03842	0.565 *	0.011
NITROGEN, KJELDAHL, TOTAL	12	0.256	0.105	0.14	0.55	12	0.00171	-0.02178	0.343 *	0.104
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5475.0	3702.6	2100	14000	12	-19.833	8687.863	-0.113 *	3858.4
SEDIMENT, SUSPENDED	12	5.3	4.2	2	16					
SEDIMENT, CLAY-SILT (PERCENT)	12	91.3	9.7	63	100					
COLIFORM, FECAL (COL/100 ML)	11	2.2	2.6	1	9					
STREPTOCOCCI, FECAL (COL/100 ML)	11	15.4	25.8	1	81					
SILICA, DISSOLVED	12	6.42	0.99	5.4	8.6	12	-0.0258	10.6010	-0.550 *	0.87
CALCIUM, DISSOLVED	12	21.75	1.42	19.0	23.0	12	0.0500	13.6434	0.742	1.00
MAGNESIUM, DISSOLVED	12	5.58	0.73	4.3	6.7	12	0.0202	2.3176	0.583	0.62
SODIUM, DISSOLVED	12	2.59	0.27	2.2	2.9	12	0.0088	1.1622	0.686	0.21
POTASSIUM, DISSOLVED	12	0.87	0.20	0.6	1.4	12	-0.0009	1.0090	-0.092 *	0.21
BICARBONATE, ION	12	89.5	6.3	78	96	12	0.205	56.313	0.686	4.8
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	8.72	1.19	7.0	11.0	12	0.0139	6.4781	0.246 *	1.21
CHLORIDE, DISSOLVED	12	1.68	1.08	0.7	4.8	12	0.0377	-4.4182	0.736	0.77
DISSOLVED SOLIDS, SUM OF CONST	12	91.9	5.3	84	101	12	0.204	58.795	0.817	3.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	92.3	8.5	80	109	12	0.164	65.647	0.406 *	8.2
HARDNESS, TOTAL	12	77.4	6.2	67	83	12	0.209	43.567	0.714	4.5
HARDNESS, NONCARBONATE	12	3.8	2.0	1	7	12	0.045	-3.446	0.476 *	1.8
TURBIDITY (JTU)	12	3.1	3.8	1	14	12	-0.080	16.120	-0.452 *	3.5
FLOURIDE, DISSOLVED	12	0.12	0.09	0.0	0.4	12	-0.0004	0.1861	-0.097 *	0.10

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 336

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	204	193	181	174	168	161	152	135	129	109

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
344	9.29	9.03	2.46	97	1.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12398600 -- PEND OREILLE RIVER AT INT BOUNDARY

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	0	<50	4	0	1
COPPER (CU), UG/L	4	0	20	4	2	8
IRON (FE), UG/L	4	100	190	4	10	70
LEAD (PB), UG/L	4	<100	<100	4	2	9
MANGANESE (MN), UG/L	4	0	20	4	0	0
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.39				
BIOMASS, ASH WT., G/SQ M	1	.29				
CHLOROPHYLL A, MG/SQ M	2	.0	.1			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	4	1.3	3.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12400520 NAME: COLUMBIA RIVER AT NORTHPORT, WASH.

LAT 48D55M21S LONG 117D46M32S
DRAINAGE AREA: 60200 SQ MI (155918 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.16	6.05	2.0	18.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	146.9	36.6	88	220					
STREAMFLOW (CUBIC FT/SEC)	12	100916.6	30892.3	70600	177000	12	-74.542	111868.000	-0.088*	32273.4
PH (STANDARD UNITS)	12	7.72	0.40	7.1	8.3	12	-0.0066	8.6887	-0.596*	0.34
PHOSPHORUS, TOTAL	12	0.034	0.017	0.01	0.07	12	-0.00004	0.03942	-0.076*	0.018
NITRITE + NITRATE, TOTAL	12	0.091	0.044	0.02	0.15	12	0.00042	0.02970	0.346*	0.043
NITROGEN, KJELDAHL, TOTAL	12	0.265	0.227	0.14	0.97	12	-0.00052	0.34196	-0.085*	0.237
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3500.8	2842.8	210	8700	12	-45.090	10125.238	-0.580	2428.8
SEDIMENT, SUSPENDED	12	7.4	7.5	2	26					
SEDIMENT, CLAY-SILT (PERCENT)	11	86.3	6.9	71	97					
COLIFORM, FECAL (COL/100 ML)	12	15.9	20.0	1	58					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6.2	8.2	1	30					
SILICA, DISSOLVED	12	4.64	0.93	3.5	7.1	12	-0.0020	4.9289	-0.077*	0.98
CALCIUM, DISSOLVED	12	21.25	2.38	18.0	25.0	12	0.0126	19.3997	0.194*	2.45
MAGNESIUM, DISSOLVED	12	4.40	0.56	3.6	5.2	12	0.0074	3.3113	0.487*	0.51
SODIUM, DISSOLVED	12	1.64	0.23	1.2	2.1	12	-0.0007	1.7481	-0.116*	0.24
POTASSIUM, DISSOLVED	12	0.72	0.13	0.5	1.0	12	-0.0001	0.7417	-0.032*	0.14
BICARBONATE, ION	12	73.0	5.7	63	81	12	0.073	62.243	0.467*	5.3
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	11.60	2.86	7.7	16.0	12	0.0162	9.2158	0.207*	2.94
CHLORIDE, DISSOLVED	12	1.10	0.41	0.5	1.9	12	-0.0014	1.3118	-0.130*	0.42
DISSOLVED SOLIDS, SUM OF CONST	12	81.8	7.9	71	92	12	0.068	71.734	0.314*	7.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	82.7	13.5	61	103	12	0.140	62.084	0.380*	13.1
HARDNESS, TOTAL	12	71.3	7.7	61	81	12	0.059	62.548	0.280*	7.8
HARDNESS, NONCARBONATE	12	11.3	5.5	4	23	12	0.003	10.821	0.023*	5.7
TURBIDITY (JTU)	12	1.8	1.0	1	4	12	-0.001	2.015	-0.044*	1.1
FLOURIDE, DISSOLVED	12	0.18	0.14	0.1	0.6	12	-0.0021	0.4911	-0.546*	0.12

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 358

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	170	164	161	157	155	144	135	118	112	108

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	9.43	8.33	2.42	97	0.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12400520 -- COLUMBIA RIVER AT NORTHPORT, WASH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	0	20	4	1	7
IRON (FE), UG/L	4	60	170	4	10	30
LEAD (PB), UG/L	4	<100	<100	4	2	7
MANGANESE (MN), UG/L	4	0	30	4	0	10
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	90	4	10	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.50	4.59			
BIOMASS, ASH WT., G/SQ M	3	.79	2.29			
CHLOROPHYLL A, MG/SQ M	3	.0	4.0			
CHLOROPHYLL B, MG/SQ M	3	.1	.6			
ORGANIC CARBON, MG/L	4	1.3	4.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12433000 NAME: SPOKANE RIVER AT LONG LAKE, WASH

LAT 47D50M18S LONG 117D51M05S
DRAINAGE AREA: 6020 SQ MI (15592 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.47	5.55	3.3	19.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	136.3	40.5	66	198					
STREAMFLOW (CUBIC FT/SEC)	12	8851.7	7516.0	2590	29500	12	-136.535	27465.988	-0.737	5331.5
PH (STANDARD UNITS)	12	7.56	0.38	7.2	8.2	12	0.0044	6.9541	0.467 *	0.36
PHOSPHORUS, TOTAL	12	0.064	0.025	0.03	0.11	12	0.00037	0.01393	0.597	0.021
NITRITE + NITRATE, TOTAL	12	0.517	0.303	0.04	1.10	12	0.00229	0.20510	0.307 *	0.302
NITROGEN, KJELDAHL, TOTAL	12	0.544	0.373	0.18	1.60	12	0.00378	0.02881	0.411 *	0.356
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	7169.1	7677.6	560	26000	11	-56.530	14918.879	-0.312 *	7687.5
SEDIMENT, SUSPENDED	12	7.6	7.4	1	27					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.6	5.9	78	100					
COLIFORM, FECAL (COL/100 ML)	12	6.6	13.0	1	47					
STREPTOCOCCI, FECAL (COL/100 ML)	12	7.7	11.4	1	36					
SILICA, DISSOLVED	12	9.13	1.64	7.1	12.0	12	-0.0068	10.0639	-0.169 *	1.69
CALCIUM, DISSOLVED	12	16.86	5.17	7.9	23.0	12	0.1055	2.4697	0.827	3.05
MAGNESIUM, DISSOLVED	12	7.65	7.31	2.0	30.0	12	0.0771	-2.8610	0.427 *	6.93
SODIUM, DISSOLVED	12	3.37	0.78	1.9	4.2	12	0.0155	1.2481	0.812	0.48
POTASSIUM, DISSOLVED	12	1.45	0.31	0.7	1.8	12	0.0041	0.8906	0.544 *	0.27
BICARBONATE, ION	12	67.7	25.3	21	93	12	0.539	-5.860	0.865	13.3
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	9.92	1.33	6.8	12.0	12	0.0098	8.5929	0.298 *	1.33
CHLORIDE, DISSOLVED	12	3.02	1.83	1.4	7.8	12	0.0064	2.1581	0.141 *	1.90
DISSOLVED SOLIDS, SUM OF CONST	12	83.1	20.5	44	101	12	0.445	22.475	0.880	10.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	87.0	20.2	46	109	12	0.442	26.699	0.889	9.7
HARDNESS, TOTAL	12	65.8	21.0	29	91	12	0.435	6.451	0.840	12.0
HARDNESS, NONCARBONATE	12	10.2	5.4	2	19	12	-0.009	11.431	-0.069 *	5.7
TURBIDITY (JTU)	12	5.0	4.9	1	16	12	-0.061	13.360	-0.506 *	4.4
FLOURIDE, DISSOLVED	12	0.09	0.03	0.0	0.1	12	0.0001	0.0824	0.096 *	0.03

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 321

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	203	196	191	173	166	132	118	69	65	62

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
320	10.36	7.91	2.43	98	0.86

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12433000 -- SPOKANE RIVER AT LONG LAKE, WASH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	2	2
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	<10	170	4	3	9
IRON (FE), UG/L	4	40	420	4	10	50
LEAD (PB), UG/L	4	<100	100	4	1	3
MANGANESE (MN), UG/L	4	30	150	4	30	60
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	60	160	4	20	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.09	11.00			
BIOMASS, ASH WT., G/SQ M	4	.79	6.69			
CHLOROPHYLL A, MG/SQ M	3	.0	43.0			
CHLOROPHYLL B, MG/SQ M	3	.0	5.1			
ORGANIC CARBON, MG/L	4	2.0	17.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 12510500 NAME: YAKIMA RIVER AT KIONA, WASH

LAT 46D15M13S LONG 119D28M37S
DRAINAGE AREA: 5615 SQ MI (14543 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	36	11.56	6.53	1.7	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	36	241.8	93.2	107	490					
STREAMFLOW (CUBIC FT/SEC)	36	4621.4	2963.2	1700	11600	36	-25.027	10671.695	-0.787	1855.2
PH (STANDARD UNITS)	35	7.84	0.39	6.8	8.5	35	0.0022	7.3080	0.525	0.34
PHOSPHORUS, TOTAL	36	0.146	0.070	0.09	0.40	36	-0.00030	0.21866	-0.401	0.065
NITRITE + NITRATE, TOTAL	12	0.730	0.357	0.37	1.40	12	0.00425	-0.16321	0.953	0.113
NITROGEN, KJELDAHL, TOTAL	36	0.402	0.172	0.12	0.97	36	-0.00007	0.41981	-0.040 *	0.174
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4641.7	3638.8	1600	14000	12	-18.407	8511.637	-0.405 *	3489.4
SEDIMENT, SUSPENDED	12	88.8	131.9	7	490					
SEDIMENT, CLAY-SILT (PERCENT)	12	83.9	10.7	64	95					
COLIFORM, FECAL (COL/100 ML)	34	212.2	261.8	25	1500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	11789.9	25250.6	99	85000					
SILICA, DISSOLVED	12	21.58	4.54	15.0	29.0	12	0.0524	10.5623	0.924	1.82
CALCIUM, DISSOLVED	36	22.36	7.63	11.0	36.0	36	0.0666	6.2697	0.813	4.51
MAGNESIUM, DISSOLVED	36	7.64	2.69	3.8	12.0	36	0.0226	2.1782	0.782	1.70
SODIUM, DISSOLVED	36	13.20	5.37	5.6	21.0	36	0.0471	1.8131	0.817	3.14
POTASSIUM, DISSOLVED	36	2.48	0.80	1.2	3.9	36	0.0071	0.7762	0.823	0.46
BICARBONATE, ION	36	114.0	39.2	57	173	36	0.347	30.068	0.826	22.4
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	36	12.14	5.39	4.3	21.0	36	0.0462	0.9750	0.798	3.29
CHLORIDE, DISSOLVED	36	5.06	1.94	1.5	8.4	36	0.0161	1.1767	0.773	1.25
DISSOLVED SOLIDS, SUM OF CONST	12	136.3	49.1	76	209	12	0.611	7.781	0.997	4.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	139.0	47.9	78	211	12	0.595	13.886	0.996	4.7
HARDNESS, TOTAL	36	87.2	29.4	44	140	36	0.257	24.976	0.817	17.2
HARDNESS, NONCARBONATE	36	0.3	1.1	0	6	36	-0.002	0.777	-0.156 *	1.1
TURBIDITY (JTU)	36	12.7	13.2	0	60	36	-0.083	32.828	-0.591	10.8
FLOURIDE, DISSOLVED	12	0.17	0.05	0.1	0.2	12	0.0003	0.1214	0.451 *	0.04

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 247

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	355	340	333	315	290	205	175	125	112	100

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
248	11.02	8.12	2.64	94	1.45

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

12510500 -- YAKIMA RIVER AT KIONA, WASH

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	3	4	0	2
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	28	0	< 10
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	<10	70	28	0	30
IRON (FE), UG/L	4	190	11000	4	10	170
LEAD (PB), UG/L	4	<100	<100	28	0	38
MANGANESE (MN), UG/L	4	10	330	4	0	50
MERCURY (HG), UG/L	27	0.0	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	160	28	0	300
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.50	3.09			
BIOMASS, ASH WT., G/SQ M	3	.59	1.50			
CHLOROPHYLL A, MG/SQ M	3	.0	3.3			
CHLOROPHYLL B, MG/SQ M	3	.0	.1			
ORGANIC CARBON, MG/L	3	2.6	15.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 13022500 NAME: SNAKE R AB RESERVOIR NR ALPINE, WYO

LAT 43D18M06S LONG 110D46M33S
DRAINAGE AREA: 3465 SQ MI (8974 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	5.68	5.02	0.0	15.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	330.2	66.4	245	480					
STREAMFLOW (CUBIC FT/SEC)	17	5077.1	4741.3	1450	16000	17	-39.498	18118.270	-0.553	4080.7
PH (STANDARD UNITS)	12	8.15	0.22	7.8	8.6	12	-0.0012	8.5452	-0.376 *	0.21
PHOSPHORUS, TOTAL	12	0.012	0.013	0.00	0.05	12	-0.00007	0.03696	-0.395 *	0.013
NITRITE + NITRATE, TOTAL	9	0.014	0.024	0.00	0.07	9	0.00011	-0.02271	0.348 *	0.024
NITROGEN, KJELDAHL, TOTAL	10	0.198	0.149	0.01	0.47	10	0.00058	-0.00527	0.263 *	0.152
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1921.4	2006.3	320	6100	7	3.480	803.493	0.155 *	2171.2
SEDIMENT, SUSPENDED	12	56.0	112.9	2	380					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	30.3	47.0	1	160					
STREPTOCOCCI, FECAL (COL/100 ML)	12	38.1	68.7	2	240					
SILICA, DISSOLVED	12	11.59	1.42	8.1	13.0	12	0.0088	8.6134	0.438 *	1.34
CALCIUM, DISSOLVED	12	40.50	8.93	29.0	56.0	12	0.0641	18.8108	0.507 *	8.07
MAGNESIUM, DISSOLVED	12	9.27	2.62	6.3	13.0	12	0.0185	3.0170	0.499 *	2.38
SODIUM, DISSOLVED	12	9.03	2.89	3.7	15.0	12	0.0189	2.6378	0.463 *	2.68
POTASSIUM, DISSOLVED	12	2.22	0.67	1.2	3.7	12	0.0043	0.7477	0.459 *	0.62
BICARBONATE, ION	12	133.3	23.1	100	160	12	0.201	65.256	0.616	19.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	39.75	11.11	21.0	54.0	12	0.0918	8.7071	0.583	9.46
CHLORIDE, DISSOLVED	12	7.02	3.24	3.6	13.0	12	0.0233	-0.8542	0.508 *	2.93
DISSOLVED SOLIDS, SUM OF CONST	12	183.7	34.3	124	223	12	0.279	89.196	0.576	29.4
DISSOLVED SOLIDS, ROE 180 DEG C	0									
HARDNESS, TOTAL	12	140.8	31.9	99	170	12	0.265	50.951	0.588	27.0
HARDNESS, NONCARBONATE	12	31.5	14.0	10	47	12	0.101	-2.690	0.511 *	12.6
TURBIDITY (JTU)	11	6.7	11.6	0	30	11	-0.076	32.123	-0.476 *	10.8
FLOURIDE, DISSOLVED	12	0.42	0.09	0.2	0.6	12	0.0007	0.1835	0.520 *	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	388	373	368	363	359	346	253	222	211	200

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	6.06	6.00	2.54	88	1.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

13022500 -- SNAKE R AB RESERVOIR NR ALPINE, WYO

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	5	4	2	5
CADMIUM (CD), UG/L	3	<10	10	4	0	1
CHROMIUM (CR), UG/L	3	0	0	3	0	0
COBALT (CO), UG/L	3	0	<50	3	0	0
COPPER (CU), UG/L	3	<10	35	3	0	1
IRON (FE), UG/L	4	80	2200	3	0	10
LEAD (PB), UG/L	3	<100	100	3	2	2
MANGANESE (MN), UG/L	4	0	100	4	0	0
MERCURY (HG), UG/L	3	0.0	1.5	3	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	3	10	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.89	15.00			
BIOMASS, ASH WT., G/SQ M	3	.79	14.00			
CHLOROPHYLL A, MG/SQ M	3	1.0	53.0			
CHLOROPHYLL B, MG/SQ M	3	.1	9.0			
ORGANIC CARBON, MG/L	4	1.1	7.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 13154500 NAME: SNAKE RIVER AT KING HILL IDAHO

LAT 43D00M08S LONG 115D12M06S
DRAINAGE AREA: 35800 SQ MI (92722 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, ---B---	CONSTANT, ---B---	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.96	5.11	6.0	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	433.6	47.3	346	506					
STREAMFLOW (CUBIC FT/SEC)	12	13797.5	5582.8	6870	26000	12	-36.436	29595.406	-0.308 *	5569.8
PH (STANDARD UNITS)	12	8.47	0.17	8.2	8.7	12	-0.0006	8.7243	-0.164 *	0.17
PHOSPHORUS, TOTAL	12	0.071	0.016	0.05	0.10	12	0.00006	0.04447	0.184 *	0.016
NITRITE + NITRATE, TOTAL	12	0.783	0.319	0.24	1.20	12	0.00494	-1.35881	0.732	0.228
NITROGEN, KJELDAHL, TOTAL	12	0.797	1.037	0.28	4.00	12	0.00030	0.66803	0.014 *	1.087
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5775.0	5414.1	2100	21000	12	-39.719	22996.523	-0.347 *	5326.1
SEDIMENT, SUSPENDED	12	27.2	20.6	8	80					
SEDIMENT, CLAY-SILT (PERCENT)	12	88.4	7.8	70	96					
COLIFORM, FECAL (COL/100 ML)	12	43.9	34.4	10	115					
STREPTOCOCCI, FECAL (COL/100 ML)	12	203.1	163.1	44	568					
SILICA, DISSOLVED	12	26.00	4.63	17.0	31.0	12	0.0583	0.7086	0.595	3.90
CALCIUM, DISSOLVED	12	47.08	2.27	42.0	50.0	12	0.0366	31.2269	0.760	1.55
MAGNESIUM, DISSOLVED	12	18.42	1.78	16.0	22.0	12	0.0207	9.4494	0.549 *	1.56
SODIUM, DISSOLVED	12	27.33	4.16	21.0	33.0	12	0.0623	0.3006	0.708	3.08
POTASSIUM, DISSOLVED	12	4.45	0.48	3.4	5.0	12	0.0059	1.8722	0.584	0.41
BICARBONATE, ION	12	187.0	39.0	120	254	12	0.080	152.425	0.097 *	40.7
CARBONATE, ION	12	21.8	18.8	0	53	12	0.051	-0.231	0.128 *	19.6
SULFATE, DISSOLVED	12	45.17	3.04	40.0	50.0	12	0.0544	21.5726	0.846	1.70
CHLORIDE, DISSOLVED	12	22.83	2.59	18.0	26.0	12	0.0458	2.9926	0.836	1.49
DISSOLVED SOLIDS, SUM OF CONST	12	306.0	20.7	271	331	12	0.375	143.580	0.857	11.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	286.9	46.7	163	329	12	0.466	84.844	0.472 *	43.2
HARDNESS, TOTAL	12	193.3	12.3	170	210	12	0.192	110.264	0.736	8.7
HARDNESS, NONCARBONATE	12	7.9	11.0	0	29	12	0.031	-5.419	0.132 *	11.4
TURBIDITY (JTU)	12	7.9	8.4	1	30	12	-0.052	30.497	-0.292 *	8.5
FLOURIDE, DISSOLVED	12	0.70	0.35	0.5	1.8	12	-0.0008	1.0600	-0.112 *	0.37

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 365

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	521	518	512	488	461	444	434	402	389	380

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	13.44	4.79	2.34	78	1.79

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

13154500 -- SNAKE RIVER AT KING HILL IDAHO

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	5	4	2	5
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	10	45	4	2	7
IRON (FE), UG/L	4	300	1300	4	10	10
LEAD (PB), UG/L	4	<100	<100	4	0	4
MANGANESE (MN), UG/L	4	10	90	4	0	10
MERCURY (HG), UG/L	3	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	110	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	27.00	52.00			
BIOMASS, ASH WT., G/SQ M	4	17.00	50.00			
CHLOROPHYLL A, MG/SQ M	4	3.9	62.0			
CHLOROPHYLL B, MG/SQ M	4	.9	6.1			
ORGANIC CARBON, MG/L	4	3.0	8.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 13213000 NAME: BOISE RIVER NR PARMA IDA

LAT 43D46M54S LONG 116D58M17S
DRAINAGE AREA: 3970 SQ MI (10282 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.46	5.45	5.0	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	397.1	161.9	124	561					
STREAMFLOW (CUBIC FT/SEC)	12	2106.4	2204.1	920	7500	12	-11.038	6489.289	-0.811	1353.0
PH (STANDARD UNITS)	12	7.97	0.37	7.4	8.5	12	0.0018	7.2403	0.806	0.23
PHOSPHORUS, TOTAL	12	0.308	0.161	0.07	0.65	12	0.00066	0.04701	0.663	0.126
NITRITE + NITRATE, TOTAL	12	1.609	0.871	0.30	2.70	12	0.00490	-0.33636	0.911	0.376
NITROGEN, KJELDAHL, TOTAL	12	0.987	0.833	0.34	3.40	12	-0.00170	1.66271	-0.330*	0.825
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	4227.3	1982.0	2100	8600	11	-1.596	4840.992	-0.132*	2070.9
SEDIMENT, SUSPENDED	12	136.0	209.4	18	664					
SEDIMENT, CLAY-SILT (PERCENT)	12	64.8	28.2	5	94					
COLIFORM, FECAL (COL/100 ML)	12	545.7	427.7	149	1570					
STREPTOCOCCI, FECAL (COL/100 ML)	10	2454.2	3537.4	186	12100					
SILICA, DISSOLVED	12	25.42	6.68	15.0	34.0	12	0.0351	11.4877	0.850	3.69
CALCIUM, DISSOLVED	12	35.25	11.79	14.0	50.0	12	0.0712	6.9645	0.979	2.55
MAGNESIUM, DISSOLVED	12	9.43	3.99	2.3	14.0	12	0.0231	0.2540	0.938	1.45
SODIUM, DISSOLVED	12	44.00	19.20	10.0	61.0	12	0.1162	-2.1562	0.980	4.00
POTASSIUM, DISSOLVED	12	4.14	1.64	1.2	6.1	12	0.0096	0.3206	0.953	0.52
BICARBONATE, ION	12	182.4	64.2	73	268	12	0.338	48.271	0.852*	35.3
CARBONATE, ION	12	3.8	9.0	0	24	12	0.019	-3.680	0.342	8.8
SULFATE, DISSOLVED	12	42.81	19.16	7.7	66.0	12	0.1131	-2.0911	0.955	5.93
CHLORIDE, DISSOLVED	12	14.12	6.66	3.1	23.0	12	0.0393	-1.4959	0.956	2.06
DISSOLVED SOLIDS, SUM OF CONST	12	269.3	98.7	90	359	12	0.594	33.562	0.974	23.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	262.4	101.2	88	368	12	0.567	37.385	0.907	44.8
HARDNESS, TOTAL	12	128.1	46.8	45	180	12	0.282	16.258	0.975	10.9
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	11.3	7.7	2	29	12	-0.031	23.634	-0.649	6.2
FLOURIDE, DISSOLVED	12	0.45	0.11	0.3	0.7	12	0.0005	0.2706	0.673	0.08

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 198

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	629	542	528	508	487	450	439	339	309	294

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
191	13.15	9.25	3.02	82	2.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

13213000 -- BOISE RIVER NR PARMA IDA

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	8	20	4	6	11
CADMIUM (CD), UG/L	4	<10	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	10	50	4	5	13
IRON (FE), UG/L	4	670	2400	4	10	60
LEAD (PB), UG/L	4	<100	<100	4	5	7
MANGANESE (MN), UG/L	4	60	120	4	0	50
MERCURY (HG), UG/L	3	0.1	0.3	4	0.0	90.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	40	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	19.00	91.00			
BIOMASS, ASH WT., G/SQ M	4	11.00	84.00			
CHLOROPHYLL A, MG/SQ M	4	12.0	46.0			
CHLOROPHYLL B, MG/SQ M	4	1.4	8.8			
ORGANIC CARBON, MG/L	4	4.3	9.4			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 13213100 NAME: SNAKE R AT NYSSA OR

LAT 43D52M34S LONG 116D59M02S
DRAINAGE AREA: 58700 SQ MI (152033 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.92	7.07	3.5	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	457.0	97.3	302	568					
STREAMFLOW (CUBIC FT/SEC)	12	17627.5	9577.0	8790	39200	12	-71.846	50461.063	-0.730	6862.1
PH (STANDARD UNITS)	12	8.67	0.11	8.5	8.8	12	0.0002	8.5723	0.187 *	0.11
PHOSPHORUS, TOTAL	12	0.082	0.052	0.02	0.20	12	-0.00015	0.15130	-0.282 *	0.052
NITRITE + NITRATE, TOTAL	12	0.689	0.363	0.06	1.20	12	0.00272	-0.55500	0.729	0.261
NITROGEN, KJELDAHL, TOTAL	12	0.944	0.987	0.28	4.00	12	-0.00487	3.16960	-0.480 *	0.909
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	11590.9	7071.4	4500	28000	11	-27.465	23922.621	-0.380 *	6894.3
SEDIMENT, SUSPENDED	12	47.6	48.1	5	179					
SEDIMENT, CLAY-SILT (PERCENT)	12	67.1	21.4	9	87					
COLIFORM, FECAL (COL/100 ML)	12	702.4	1569.7	25	5530					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3025.2	7949.2	75	28100					
SILICA, DISSOLVED	12	24.17	4.78	14.0	30.0	12	0.0437	4.1818	0.890	2.29
CALCIUM, DISSOLVED	12	44.58	5.11	35.0	51.0	12	0.0376	27.4134	0.716	3.74
MAGNESIUM, DISSOLVED	12	16.67	3.60	11.0	21.0	12	0.0351	0.6367	0.948	1.20
SODIUM, DISSOLVED	12	34.17	8.93	21.0	47.0	12	0.0701	2.1155	0.764	6.04
POTASSIUM, DISSOLVED	12	4.92	1.36	3.0	8.1	12	0.0100	0.3356	0.715	1.00
BICARBONATE, ION	12	159.1	37.9	88	232	12	0.041	140.510	0.104 *	39.6
CARBONATE, ION	12	29.6	21.2	0	77	12	0.127	-28.306	0.581	18.1
SULFATE, DISSOLVED	12	55.00	11.86	34.0	72.0	12	0.0945	11.8165	0.776	7.84
CHLORIDE, DISSOLVED	12	22.33	5.60	14.0	32.0	12	0.0524	-1.6151	0.911	2.42
DISSOLVED SOLIDS, SUM OF CONST	12	310.3	52.1	210	367	12	0.489	86.637	0.914	22.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	305.7	58.9	210	376	12	0.570	45.037	0.942	20.8
HARDNESS, TOTAL	12	180.0	25.6	140	210	12	0.226	76.744	0.860	13.7
HARDNESS, NONCARBONATE	12	8.6	12.1	0	41	12	0.002	7.531	0.018 *	12.7
TURBIDITY (JTU)	12	11.3	9.7	1	31	12	-0.064	40.679	-0.644	7.8
FLOURIDE, DISSOLVED	12	0.62	0.11	0.5	0.9	12	0.0003	0.4943	0.264 *	0.11

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 104

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	575	570	565	553	480	428	401	352	322	296

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
97	14.37	10.67	2.99	88	2.27

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

13213100 -- SNAKE R AT NYSSA OR

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	10	4	4	7
CADMIUM (CD), UG/L	4	<10	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	22	4	0	10
COBALT (CO), UG/L	4	0	50	4	0	0
COPPER (CU), UG/L	4	10	80	4	5	8
IRON (FE), UG/L	4	30	5300	4	20	50
LEAD (PB), UG/L	4	<100	<100	4	3	4
MANGANESE (MN), UG/L	4	50	170	4	0	60
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	1	2	4	0	1
ZINC (ZN), UG/L	4	30	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.19	220.00			
BIOMASS, ASH WT., G/SQ M	3	1.69	530.00			
CHLOROPHYLL A, MG/SQ M	4	18.0	110.0			
CHLOROPHYLL B, MG/SQ M	4	.6	2.7			
ORGANIC CARBON, MG/L	4	2.8	7.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 13290450 NAME: SNAKE RIVER AT HELLS CANYON DAM ID-OR LINE

LAT 45D15M05S LONG 116D41M50S
DRAINAGE AREA: 73300 SQ MI (189847 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.54	6.97	1.5	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	349.3	91.9	229	535					
STREAMFLOW (CUBIC FT/SEC)	12	28333.3	16122.4	10400	60100	12	-60.573	49488.566	-0.345*	15868.9
PH (STANDARD UNITS)	12	8.39	0.23	8.1	8.8	12	-0.0003	8.5005	-0.126*	0.24
PHOSPHORUS, TOTAL	12	0.072	0.032	0.03	0.15	12	0.00017	0.01058	0.505*	0.029
NITRITE + NITRATE, TOTAL	12	0.548	0.387	0.02	1.10	12	0.00353	-0.68522	0.839	0.221
NITROGEN, KJELDAHL, TOTAL	12	0.747	0.907	0.22	3.50	12	-0.00437	2.27318	-0.443*	0.853
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4742.5	5001.9	320	16000	12	-25.102	13509.523	-0.461*	4654.5
SEDIMENT, SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1.8	1.1	1	4					
STREPTOCOCCI, FECAL (COL/100 ML)	12	67.7	110.4	3	350					
SILICA, DISSOLVED	12	19.75	4.92	12.0	26.0	12	0.0447	4.1519	0.834	2.84
CALCIUM, DISSOLVED	12	34.75	6.72	25.0	43.0	12	0.0593	14.0223	0.812	4.11
MAGNESIUM, DISSOLVED	12	12.99	4.07	7.7	19.0	12	0.0351	0.7423	0.793	2.60
SODIUM, DISSOLVED	12	28.92	9.30	17.0	41.0	12	0.0876	-1.6887	0.866	4.87
POTASSIUM, DISSOLVED	12	4.01	0.93	2.7	5.0	12	0.0087	0.9799	0.861	0.49
BICARBONATE, ION	12	144.8	43.2	37	210	12	0.281	46.497	0.599	36.3
CARBONATE, ION	12	15.8	17.7	0	48	12	0.015	10.347	0.080*	18.5
SULFATE, DISSOLVED	12	41.75	11.50	28.0	59.0	12	0.1125	2.4432	0.900	5.26
CHLORIDE, DISSOLVED	12	15.98	4.71	9.8	23.0	12	0.0432	0.9064	0.842	2.67
DISSOLVED SOLIDS, SUM OF CONST	12	245.8	57.0	170	320	12	0.546	55.206	0.879	28.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	242.4	62.3	156	333	12	0.604	31.524	0.891	29.7
HARDNESS, TOTAL	12	141.3	33.7	97	190	12	0.290	40.137	0.790	21.7
HARDNESS, NONCARBONATE	12	3.9	5.6	0	18	12	0.017	-1.999	0.276*	5.7
TURBIDITY (JTU)	12	4.1	4.1	1	13	12	-0.021	11.266	-0.456*	3.9
FLOURIDE, DISSOLVED	12	0.51	0.08	0.4	0.7	12	0.0005	0.3442	0.545*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	12.60	9.59	2.47	97	1.24

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

13290450 -- SNAKE RIVER AT HELLS CANYON DAM ID-OR LINE

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	12	4	2	7
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	0
COPPER (CU), UG/L	4	10	140	4	1	3
IRON (FE), UG/L	4	200	820	4	20	30
LEAD (PB), UG/L	4	< 100	< 100	4	0	4
MANGANESE (MN), UG/L	4	30	100	4	0	50
MERCURY (HG), UG/L	3	0.0	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	4	4	0	1
ZINC (ZN), UG/L	4	10	50	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.50	42.00			
BIOMASS, ASH WT., G/SQ M	4	.39	40.00			
CHLOROPHYLL A, MG/SQ M	4	.0	140.0			
CHLOROPHYLL B, MG/SQ M	4	.0	16.0			
ORGANIC CARBON, MG/L	4	4.6	5.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 13317000 NAME: SALMON RIVER AT WHITEBIRD, IDAHO

LAT 45D45M01S LONG 116D19M23S
DRAINAGE AREA: 13550 SQ MI (35095 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.33	6.44	0.5	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	142.5	44.7	52	202					
STREAMFLOW (CUBIC FT/SEC)	12	13002.5	16999.1	2740	61200	12	-329.832	60003.563	-0.868	8861.0
PH (STANDARD UNITS)	12	7.65	0.39	7.1	8.2	12	0.0071	6.6371	0.816	0.24
PHOSPHORUS, TOTAL	12	0.032	0.019	0.01	0.07	12	-0.00028	0.07256	-0.657	0.015
NITRITE + NITRATE, TOTAL	12	0.059	0.052	0.00	0.16	12	-0.00012	0.07623	-0.104*	0.054
NITROGEN, KJELDAHL, TOTAL	12	0.529	1.033	0.06	3.80	12	-0.00998	1.95090	-0.432*	0.978
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1653.3	1590.9	230	5900	12	7.889	529.129	0.222*	1627.0
SEDIMENT, SUSPENDED	11	18.3	20.9	3	71					
SEDIMENT, CLAY-SILT (PERCENT)	11	66.1	25.0	25	94					
COLIFORM, FECAL (COL/100 ML)	12	21.7	33.6	1	114					
STREPTOCOCCI, FECAL (COL/100 ML)	12	114.6	199.5	7	685					
SILICA, DISSOLVED	12	14.17	1.27	11.0	16.0	12	0.0150	12.0357	0.528*	1.13
CALCIUM, DISSOLVED	12	19.13	6.50	7.6	34.0	12	0.1167	2.5056	0.803	4.06
MAGNESIUM, DISSOLVED	12	3.77	1.46	0.9	5.8	12	0.0301	-0.5079	0.921	0.60
SODIUM, DISSOLVED	12	6.60	1.90	2.8	8.8	12	0.0408	0.7888	0.958	0.57
POTASSIUM, DISSOLVED	12	1.33	0.28	0.7	1.7	12	0.0046	0.6831	0.736	0.20
BICARBONATE, ION	12	81.4	26.7	20	107	12	0.551	2.919	0.922	10.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.18	3.23	2.9	12.0	12	0.0693	-0.6856	0.959	0.96
CHLORIDE, DISSOLVED	12	2.00	0.53	1.0	2.8	12	0.0089	0.7285	0.752	0.37
DISSOLVED SOLIDS, SUM OF CONST	12	97.3	25.5	43	132	12	0.536	20.838	0.941	9.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	96.8	23.8	47	122	12	0.498	25.779	0.936	8.8
HARDNESS, TOTAL	12	63.5	22.0	23	110	12	0.417	4.145	0.846	12.3
HARDNESS, NONCARBONATE	12	3.0	6.6	0	22	12	0.005	2.262	0.035*	6.9
TURBIDITY (JTU)	12	5.2	7.1	1	20	12	-0.140	25.077	-0.878	3.6
FLOURIDE, DISSOLVED	12	0.33	0.08	0.2	0.4	12	0.0015	0.1125	0.890	0.04

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	8.30	8.32	2.50	86	2.63

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

13317000 -- SALMON RIVER AT WHITEBIRD, IDAHO

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	1	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	50	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	0
COPPER (CU), UG/L	4	20	170	4	1	8
IRON (FE), UG/L	4	120	3000	4	30	50
LEAD (PB), UG/L	4	<100	<100	4	2	9
MANGANESE (MN), UG/L	4	10	60	4	0	10
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	2	4	0	0
ZINC (ZN), UG/L	4	10	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	1	5.39				
CHLOROPHYLL A, MG/SQ M	1	.2				
CHLOROPHYLL B, MG/SQ M	1	.4				
ORGANIC CARBON, MG/L	4	.0	4.9			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 13353200 NAME: SNAKE RIVER AT BURBANK, WASH.

LAT 46D12M59S LONG 119D01M22S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.48	6.38	2.8	21.2					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	235.3	101.1	74	381					
STREAMFLOW (CUBIC FT/SEC)	12	62475.0	48347.0	27300	166000	12	-299.886	133048.250	-0.627	39484.8
PH (STANDARD UNITS)	12	7.94	0.33	7.4	8.6	12	0.0022	7.4151	0.694	0.25
PHOSPHORUS, TOTAL	12	0.122	0.190	0.04	0.72	12	-0.00081	0.31322	-0.433*	0.180
NITRITE + NITRATE, TOTAL	12	0.410	0.328	0.08	1.00	12	0.00252	-0.18262	0.776	0.217
NITROGEN, KJELDAHL, TOTAL	12	0.302	0.117	0.17	0.57	12	0.00037	0.21536	0.321*	0.116
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3091.7	3036.1	460	9100	12	-5.630	4416.598	-0.188*	3127.8
SEDIMENT, SUSPENDED	12	18.3	15.4	4	46					
SEDIMENT, CLAY-SILT (PERCENT)	10	95.8	5.9	80	100					
COLIFORM, FECAL (COL/100 ML)	11	6.2	8.0	1	22					
STREPTOCOCCI, FECAL (COL/100 ML)	11	12.9	13.1	1	39					
SILICA, DISSOLVED	12	16.08	3.15	11.0	19.0	12	0.0267	9.7919	0.859	1.69
CALCIUM, DISSOLVED	12	22.53	7.81	8.4	34.0	12	0.0749	4.9003	0.970	1.99
MAGNESIUM, DISSOLVED	12	7.23	3.60	1.3	13.0	12	0.0347	-0.9382	0.974	0.85
SODIUM, DISSOLVED	12	16.67	8.50	4.7	29.0	12	0.0825	-2.7528	0.982	1.68
POTASSIUM, DISSOLVED	12	2.53	0.91	1.1	3.9	12	0.0088	0.4739	0.968	0.24
BICARBONATE, ION	12	104.5	41.4	37	162	12	0.409	8.337	0.997	3.1
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	24.02	12.02	6.3	41.0	12	0.1162	-3.3237	0.978	2.63
CHLORIDE, DISSOLVED	12	9.02	4.79	2.0	16.0	12	0.0468	-1.9957	0.988	0.77
DISSOLVED SOLIDS, SUM OF CONST	12	150.1	60.3	53	236	12	0.594	10.365	0.996	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	156.1	61.4	55	241	12	0.604	13.967	0.994	6.8
HARDNESS, TOTAL	12	86.2	34.4	26	140	12	0.333	7.735	0.979	7.4
HARDNESS, NONCARBONATE	12	2.5	3.9	0	13	12	-0.002	2.960	-0.051*	4.1
TURBIDITY (JTU)	12	9.8	8.6	1	24	12	-0.043	19.905	-0.504*	7.8
FLOURIDE, DISSOLVED	12	0.41	0.25	0.2	1.1	12	0.0018	-0.0042	0.719	0.18

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 319

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	381	377	350	319	300	227	146	88	80	76

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
319	11.19	8.74	2.34	95	1.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

13353200 -- SNAKE RIVER AT BURBANK, WASH.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	4	4	3	5
CADMIUM (CD), UG/L	4	<10	20	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	<50	< .50	4	0	1
COPPER (CU), UG/L	4	<10	10	4	2	3
IRON (FE), UG/L	4	110	1100	4	20	300
LEAD (PB), UG/L	4	<100	100	4	0	4
MANGANESE (MN), UG/L	3	0	40	4	0	10
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	190	4	0	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.50	23.00			
BIOMASS, ASH WT., G/SQ M	4	.79	19.00			
CHLOROPHYLL A, MG/SQ M	4	.0	54.0			
CHLOROPHYLL B, MG/SQ M	4	.0	7.2			
ORGANIC CARBON, MG/L	4	1.8	17.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14048000 NAME: JOHN DAY R AT MCDONALD FERRY,OREG.

LAT 45D35M16S LONG 120D24M30S
DRAINAGE AREA: 7580 SQ MI (19632 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.03	7.51	2.2	26.2					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	220.6	85.7	105	355					
STREAMFLOW (CUBIC FT/SEC)	12	2572.6	2678.9	140	7750	12	-27.481	8634.484	-0.879	1339.8
PH (STANDARD UNITS)	12	7.84	0.39	6.8	8.3	12	0.0001	7.8135	0.028 *	0.41
PHOSPHORUS, TOTAL	12	0.112	0.221	0.00	0.80	12	-0.00113	0.36086	-0.437 *	0.209
NITRITE + NITRATE, TOTAL	12	0.069	0.095	0.00	0.35	12	-0.00025	0.12394	-0.224 *	0.097
NITROGEN, KJELDAHL, TOTAL	11	0.561	0.816	0.14	3.00	11	-0.00312	1.27097	-0.329 *	0.812
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	5700.0	7928.4	1000	28000	11	-19.243	9786.543	-0.206 *	8178.4
SEDIMENT, SUSPENDED	11	164.1	383.7	1	1310					
SEDIMENT, CLAY-SILT (PERCENT)	8	85.0	5.5	79	95					
COLIFORM, FECAL (COL/100 ML)	8	25.9	25.3	7	85					
STREPTOCOCCI, FECAL (COL/100 ML)	8	24.9	24.1	1	64					
SILICA, DISSOLVED	11	23.82	5.08	11.0	29.0	11	-0.0165	27.4836	-0.292 *	5.12
CALCIUM, DISSOLVED	12	20.33	6.92	11.0	31.0	12	0.0783	3.0715	0.969	1.79
MAGNESIUM, DISSOLVED	12	8.85	3.51	4.3	14.0	12	0.0404	-0.0675	0.986	0.62
SODIUM, DISSOLVED	12	12.12	6.54	4.8	24.0	12	0.0733	-4.0515	0.961	1.90
POTASSIUM, DISSOLVED	12	1.98	0.64	1.0	2.9	12	0.0048	0.9227	0.646	0.51
BICARBONATE, ION	12	124.5	51.0	62	210	12	0.589	-5.322	0.989	7.8
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	7.09	3.74	2.7	14.0	12	0.0425	-2.2842	0.973	0.91
CHLORIDE, DISSOLVED	12	2.45	0.83	1.3	3.5	12	0.0085	0.5859	0.876	0.42
DISSOLVED SOLIDS, SUM OF CONST	11	139.3	47.6	79	215	11	0.520	23.755	0.981	9.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	141.8	43.9	82	214	12	0.501	31.392	0.978	9.7
HARDNESS, TOTAL	12	88.4	32.8	46	140	12	0.379	4.922	0.987	5.4
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000 *	0.0
TURBIDITY (JTU)	12	31.6	67.0	1	240	12	-0.317	101.604	-0.406 *	64.2
FLOURIDE, DISSOLVED	12	0.12	0.06	0.0	0.2	12	0.0003	0.0432	0.494 *	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.93	9.49	2.72	84	3.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14048000 -- JOHN DAY R AT MCDONALD FERRY,OREG.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	2
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	3
CHROMIUM (CR), UG/L	4	0	60	4	0	0
COBALT (CO), UG/L	4	< 50	50	4	0	2
COPPER (CU), UG/L	4	< 10	120	4	2	10
IRON (FE), UG/L	4	70	8800	4	20	170
LEAD (PB), UG/L	4	< 100	100	4	0	3
MANGANESE (MN), UG/L	4	20	1600	4	0	30
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	300	4	0	90
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.19	1.50			
BIOMASS, ASH WT., G/SQ M	2	.09	.79			
CHLOROPHYLL A, MG/SQ M	2	.2	.5			
CHLOROPHYLL B, MG/SQ M	2	.0	.1			
ORGANIC CARBON, MG/L	3	2.7	28.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14103000 NAME: DESCHUTES RIVER AT MOODY, NEAR BIGGS OREG

LAT 45D37M20S LONG 120D54M05S
DRAINAGE AREA: 10500 SQ MI (27195 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.51	4.70	5.5	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	127.1	10.3	108	148					
STREAMFLOW (CUBIC FT/SEC)	12	6474.8	1493.5	4480	9170	12	19.638	3979.119	0.135*	1552.1
PH (STANDARD UNITS)	12	7.93	0.66	6.4	8.8	12	0.0048	7.3234	0.074*	0.69
PHOSPHORUS, TOTAL	12	0.074	0.020	0.04	0.10	12	-0.00051	0.13834	-0.262*	0.020
NITRITE + NITRATE, TOTAL	12	0.074	0.066	0.01	0.22	12	0.00190	-0.16703	0.294*	0.066
NITROGEN, KJELDAHL, TOTAL	11	0.225	0.113	0.10	0.46	11	-0.00445	0.79052	-0.424*	0.107
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3156.7	3069.9	560	10000	12	-98.655	15694.109	-0.330*	3039.8
SEDIMENT, SUSPENDED	11	23.0	22.7	8	85					
SEDIMENT, CLAY-SILT (PERCENT)	8	53.3	19.7	25	79					
COLIFORM, FECAL (COL/100 ML)	10	21.7	46.0	1	150					
STREPTOCOCCI, FECAL (COL/100 ML)	12	18.0	17.1	2	56					
SILICA, DISSOLVED	12	27.92	1.83	26.0	32.0	12	0.0796	17.8016	0.446*	1.72
CALCIUM, DISSOLVED	12	8.21	2.11	1.9	9.9	12	0.0181	5.9038	0.088*	2.21
MAGNESIUM, DISSOLVED	12	4.80	0.52	4.1	6.0	12	0.0290	1.1201	0.572*	0.45
SODIUM, DISSOLVED	12	10.01	0.94	8.7	11.0	12	0.0189	7.6043	0.206*	0.97
POTASSIUM, DISSOLVED	12	1.89	0.15	1.7	2.3	12	-0.0031	2.2859	-0.211*	0.15
BICARBONATE, ION	12	69.3	5.3	61	79	12	0.071	60.363	0.136*	5.5
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	2.48	0.58	1.6	3.8	12	0.0101	1.1961	0.180*	0.59
CHLORIDE, DISSOLVED	12	2.41	0.58	1.8	3.9	12	0.0255	-0.8315	0.451*	0.54
DISSOLVED SOLIDS, SUM OF CONST	12	92.6	5.6	85	103	12	0.213	65.515	0.390*	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	90.3	4.8	79	95	12	0.105	76.876	0.227*	4.9
HARDNESS, TOTAL	12	41.5	2.7	37	45	12	0.145	23.101	0.547*	2.4
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	5.7	7.2	1	23	12	-0.072	14.857	-0.103*	7.5
FLOURIDE, DISSOLVED	12	0.11	0.03	0.1	0.2	12	-0.0016	0.3180	-0.586	0.02

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.47	6.28	2.65	92	1.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14103000 -- DESCHUTES RIVER AT MOODY, NEAR BIGGS OREG

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	10	90	4	0	5
IRON (FE), UG/L	4	120	260	4	10	100
LEAD (PB), UG/L	4	< 100	<100	4	0	2
MANGANESE (MN), UG/L	4	0	40	4	0	0
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	20.00	120.00			
BIOMASS, ASH WT., G/SQ M	3	14.00	120.00			
CHLOROPHYLL A, MG/SQ M	3	5.0	55.0			
CHLOROPHYLL B, MG/SQ M	3	.1	.7			
ORGANIC CARBON, MG/L	3	1.8	3.7			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14113000 NAME: KLICKITAT R NR PITT

LAT 45D45M24S LONG 121D12M32S
DRAINAGE AREA: 1297 SQ MI (3359 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.44	4.16	4.0	17.6					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	70.6	12.5	48	91					
STREAMFLOW (CUBIC FT/SEC)	12	1935.2	1022.3	904	3660	12	-15.615	3037.344	-0.191*	1052.4
PH (STANDARD UNITS)	12	7.69	0.31	7.0	8.1	12	0.0007	7.6444	0.027*	0.33
PHOSPHORUS, TOTAL	12	0.112	0.183	0.03	0.68	12	0.00381	-0.15657	0.260*	0.186
NITRITE + NITRATE, TOTAL	12	0.153	0.226	0.00	0.73	12	0.00849	-0.44564	0.469*	0.210
NITROGEN, KJELDAHL, TOTAL	12	0.169	0.160	0.08	0.63	12	0.00268	-0.01997	0.209*	0.165
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	913.6	1456.3	150	5200	11	17.488	-318.459	0.157*	1516.0
SEDIMENT, SUSPENDED	12	49.2	110.4	5	386					
SEDIMENT, CLAY-SILT (PERCENT)	10	64.0	21.7	35	94					
COLIFORM, FECAL (COL/100 ML)	12	30.1	52.0	1	160					
STREPTOCOCCI, FECAL (COL/100 ML)	12	46.3	109.7	2	390					
SILICA, DISSOLVED	12	27.00	3.28	22.0	33.0	12	0.1827	14.1063	0.697	2.46
CALCIUM, DISSOLVED	12	7.00	1.56	5.3	11.0	12	0.0342	4.5895	0.273*	1.58
MAGNESIUM, DISSOLVED	12	3.05	0.49	1.9	3.6	12	0.0238	1.3684	0.611	0.40
SODIUM, DISSOLVED	12	4.59	3.31	2.7	15.0	12	0.0946	-2.0877	0.358*	3.24
POTASSIUM, DISSOLVED	12	1.35	0.22	1.0	1.7	12	0.0077	0.8100	0.436*	0.21
BICARBONATE, ION	12	41.1	6.2	27	48	12	0.405	12.528	0.810	3.8
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	2.31	0.65	1.4	3.4	12	0.0190	0.9638	0.367*	0.63
CHLORIDE, DISSOLVED	12	1.47	0.96	0.2	4.1	12	0.0194	0.1086	0.252*	0.98
DISSOLVED SOLIDS, SUM OF CONST	12	67.2	9.7	49	87	12	0.593	25.290	0.761	6.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	70.9	15.3	51	104	12	0.910	6.712	0.746	10.7
HARDNESS, TOTAL	12	30.3	4.9	22	40	12	0.172	18.085	0.440*	4.6
HARDNESS, NONCARBONATE	12	0.4	1.4	0	5	12	-0.016	1.563	-0.141*	1.5
TURBIDITY (JTU)	12	7.6	9.3	1	30	12	0.108	-0.010	0.144*	9.7
FLOURIDE, DISSOLVED	12	0.10	0.07	0.0	0.3	12	-0.0008	0.1575	-0.138*	0.08

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	9.15	5.28	2.71	86	1.73

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14113000 -- KLICKITAT R NR PITT

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	4	0	1
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	2
COPPER (CU), UG/L	4	0	20	4	2	6
IRON (FE), UG/L	4	120	3800	4	20	160
LEAD (PB), UG/L	4	<100	100	4	0	5
MANGANESE (MN), UG/L	4	10	80	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	6	80	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.50	130.00			
BIOMASS, ASH WT., G/SQ M	4	.50	120.00			
CHLOROPHYLL A, MG/SQ M	4	.0	55.0			
CHLOROPHYLL B, MG/SQ M	4	.0	7.7			
ORGANIC CARBON, MG/L	5	1.0	5.0			

STATION NUMBER: 14128910 NAME: COLUMBIA RIVER AT WARRENDALE,OREG.

AT 45D36M45S LONG 122D01M35S
RAINAGE AREA: 240400 SQ MI (622636 SQ KM)
ERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	10.18	5.36	3.0	20.3					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	188.4	37.5	107	230					
STREAMFLOW (CUBIC FT/SEC)	22	215500.0	72851.1	114000	351500	22	1297.153	-28836.375	0.667	55618.1
PH (STANDARD UNITS)	22	7.64	0.36	6.9	8.3	22	-0.0006	7.7501	-0.063*	0.36
PHOSPHORUS, TOTAL	21	0.045	0.026	0.02	0.12	21	0.00028	-0.00784	0.394*	0.025
NITRITE + NITRATE, TOTAL	21	0.373	1.022	0.01	4.80	21	0.00086	0.21046	0.031*	1.048
NITROGEN, KJELDAHL, TOTAL	22	0.280	0.214	0.07	1.00	22	0.00146	0.00595	0.255*	0.212
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	5957.1	3713.0	1400	12000	7	-37.872	12438.660	-0.513*	3491.0
SEDIMENT, SUSPENDED	20	22.5	16.3	1	48					
SEDIMENT, CLAY-SILT (PERCENT)	10	83.5	7.6	67	94					
COLIFORM, FECAL (COL/100 ML)	21	13.4	19.4	1	84					
STREPTOCOCCI, FECAL (COL/100 ML)	22	3.7	2.5	1	12					
SILICA, DISSOLVED	22	9.53	1.59	5.8	12.0	22	0.0268	4.4832	0.633	1.26
CALCIUM, DISSOLVED	12	18.25	3.62	12.0	23.0	12	0.0190	14.8390	0.232*	3.69
MAGNESIUM, DISSOLVED	12	5.67	1.44	3.6	8.8	12	0.0241	1.3334	0.745	1.01
SODIUM, DISSOLVED	12	6.36	1.57	3.9	8.3	12	0.0091	4.7257	0.257*	1.59
POTASSIUM, DISSOLVED	12	1.45	0.38	1.0	2.1	12	0.0038	0.7669	0.443*	0.36
BICARBONATE, ION	14	76.8	16.4	48	103	14	0.121	54.150	0.302*	16.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	14	12.64	3.10	7.7	18.0	14	0.0248	8.0186	0.326*	3.05
CHLORIDE, DISSOLVED	14	3.37	0.94	1.5	5.1	14	0.0097	1.5663	0.420*	0.89
DISSOLVED SOLIDS, SUM OF CONST	11	94.9	19.4	64	127	11	0.200	58.356	0.462*	18.1
DISSOLVED SOLIDS, ROE 180 DEG C	21	106.4	19.6	57	146	21	0.408	30.207	0.787	12.4
HARDNESS, TOTAL	12	69.0	11.8	45	94	12	0.145	42.976	0.543*	10.4
HARDNESS, NONCARBONATE	11	6.8	5.8	0	16	11	0.032	0.930	0.250*	5.9
TURBIDITY (JTU)	12	5.8	4.1	2	13	12	0.049	-2.896	0.529*	3.6
FLOURIDE, DISSOLVED	12	0.21	0.03	0.2	0.3	12	0.0001	0.1842	0.206*	0.03

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
22	11.50	7.85	2.23	95	1.28

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14128910 -- COLUMBIA RIVER AT WARRENDALE,OREG.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	20	0	4	3	0	1
CADMIUM (CD), UG/L	20	0	10	3	0	0
CHROMIUM (CR), UG/L	20	0	20	3	0	10
COBALT (CO), UG/L	3	< 50	50	3	0	1
COPPER (CU), UG/L	20	< 10	230	3	4	18
IRON (FE), UG/L	20	170	1400	3	10	120
LEAD (PB), UG/L	20	< 100	< 100	3	0	2
MANGANESE (MN), UG/L	3	10	30	3	0	0
MERCURY (HG), UG/L	19	0.0	0.5	3	0.0	0.2
SELENIUM (SE), UG/L	20	0	1	3	0	1
ZINC (ZN), UG/L	20	20	100	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.19	10.00			
BIOMASS, ASH WT., G/SQ M	3	.09	10.00			
CHLOROPHYLL A, MG/SQ M	3	.0	7.1			
CHLOROPHYLL B, MG/SQ M	3	.0	1.5			
ORGANIC CARBON, MG/L	20	1.5	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14207500 NAME: TUALATIN RIVER AT WEST LINN,OREG.

LAT 45D21M03S LONG 122D40M30S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.95	5.32	5.0	20.4					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	117.5	56.9	70	282					
STREAMFLOW (CUBIC FT/SEC)	12	1768.3	2027.4	58	6250	12	-19.867	4102.664	-0.558*	1764.9
PH (STANDARD UNITS)	12	7.61	0.52	6.9	8.7	12	-0.0017	7.8061	-0.183*	0.54
PHOSPHORUS, TOTAL	12	0.271	0.135	0.14	0.60	12	0.00221	0.01105	0.931	0.052
NITRITE + NITRATE, TOTAL	12	1.038	0.592	0.16	2.10	12	0.00428	0.53578	0.411*	0.566
NITROGEN, KJELDAHL, TOTAL	12	0.629	0.225	0.31	1.10	12	0.00271	0.31124	0.683	0.173
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	19703.3	25848.6	530	74000	9	302.101	-17555.738	0.742	18521.6
SEDIMENT, SUSPENDED	9	25.3	14.7	11	50					
SEDIMENT, CLAY-SILT (PERCENT)	11	84.7	7.7	71	95					
COLIFORM, FECAL (COL/100 ML)	7	86.4	119.2	16	350					
STREPTOCOCCI, FECAL (COL/100 ML)	7	98.9	96.7	3	230					
SILICA, DISSOLVED	12	18.50	1.62	16.0	21.0	12	0.0173	16.4716	0.605	1.36
CALCIUM, DISSOLVED	12	9.67	3.81	6.0	21.0	12	0.0653	2.0078	0.974	0.90
MAGNESIUM, DISSOLVED	12	3.42	1.25	2.3	6.8	12	0.0202	1.0410	0.922	0.51
SODIUM, DISSOLVED	12	7.46	4.48	4.2	21.0	12	0.0766	-1.5411	0.972	1.10
POTASSIUM, DISSOLVED	12	1.52	0.56	1.1	3.2	12	0.0096	0.3991	0.975	0.13
BICARBONATE, ION	12	40.0	14.6	25	79	12	0.212	15.072	0.828	8.6
CARBONATE, ION	8	1.8	4.9	0	14	8	0.080	-6.618	0.397*	4.9
SULFATE, DISSOLVED	12	5.39	2.63	3.3	13.0	12	0.0436	0.2657	0.942	0.92
CHLORIDE, DISSOLVED	12	8.24	7.02	4.0	30.0	12	0.1190	-5.7391	0.964	1.95
DISSOLVED SOLIDS, SUM OF CONST	12	75.3	27.0	54	155	12	0.459	21.367	0.969	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	85.6	28.8	59	168	12	0.481	29.066	0.952	9.3
HARDNESS, TOTAL	12	38.1	14.2	25	80	12	0.244	9.380	0.976	3.3
HARDNESS, NONCARBONATE	12	4.0	4.7	0	16	12	0.065	-3.665	0.788	3.0
TURBIDITY (JTU)	12	12.4	10.6	1	30	12	-0.088	22.699	-0.469*	9.1
FLOURIDE, DISSOLVED	12	0.10	0.13	0.0	0.5	12	0.0002	0.0743	0.092*	0.14

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	12.00	6.81	2.82	94	1.50

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14207500 -- TUALATIN RIVER AT WEST LINN,OREG.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	< 10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	4	0	1
COPPER (CU), UG/L	4	10	40	4	4	11
IRON (FE), UG/L	4	330	3200	4	30	620
LEAD (PB), UG/L	4	< 100	< 100	4	0	4
MANGANESE (MN), UG/L	4	80	150	4	0	30
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	60	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	1.5	8.2			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14211720 NAME: WILLAMETTE RIVER AT PORTLAND,OREG.

LAT 45D31M03S LONG 122D40M03S
DRAINAGE AREA: 11100 SQ MI (28749 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.72	4.70	5.5	20.1					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	67.8	11.5	42	89					
STREAMFLOW (CUBIC FT/SEC)	12	33975.0	26163.5	12100	92600	12	-542.555	70733.063	-0.238*	26649.8
PH (STANDARD UNITS)	12	7.87	0.44	7.0	8.5	12	0.0045	7.5708	0.119*	0.45
PHOSPHORUS, TOTAL	12	0.067	0.021	0.04	0.10	12	0.00004	0.06459	0.024*	0.021
NITRITE + NITRATE, TOTAL	12	0.682	1.023	0.13	3.90	12	-0.00102	0.75170	-0.011*	1.073
NITROGEN, KJELDAHL, TOTAL	12	0.338	0.152	0.17	0.65	12	0.00054	0.30170	0.041*	0.160
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2605.0	1882.3	460	6900	12	92.185	-3640.547	0.563*	1631.9
SEDIMENT, SUSPENDED	11	11.7	6.8	4	24					
SEDIMENT, CLAY-SILT (PERCENT)	8	85.1	7.0	76	94					
COLIFORM, FECAL (COL/100 ML)	11	96.9	112.9	1	400					
STREPTOCOCCI, FECAL (COL/100 ML)	11	27.0	27.2	2	100					
SILICA, DISSOLVED	12	15.00	1.28	13.0	17.0	12	0.0441	12.0143	0.396*	1.23
CALCIUM, DISSOLVED	12	6.45	1.15	5.1	9.0	12	0.0566	2.6176	0.564*	1.00
MAGNESIUM, DISSOLVED	11	1.85	0.37	1.1	2.3	11	0.0028	1.6672	0.091*	0.39
SODIUM, DISSOLVED	12	3.99	0.74	3.1	5.7	12	0.0399	1.2869	0.619	0.61
POTASSIUM, DISSOLVED	12	0.82	0.26	0.5	1.5	12	0.0004	0.7864	0.020*	0.27
BICARBONATE, ION	11	27.3	3.1	23	32	11	0.123	18.922	0.485*	2.8
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.61	1.15	1.9	6.2	12	0.0364	1.1439	0.362*	1.13
CHLORIDE, DISSOLVED	12	3.76	1.20	2.4	6.4	12	0.0655	-0.6818	0.626	0.98
DISSOLVED SOLIDS, SUM OF CONST	11	49.7	5.5	43	60	11	0.313	28.562	0.688	4.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	56.1	5.8	47	66	12	0.042	53.226	0.083*	6.1
HARDNESS, TOTAL	11	24.0	3.4	19	32	11	0.165	12.809	0.585	2.9
HARDNESS, NONCARBONATE	11	2.1	2.7	0	9	11	0.091	-4.081	0.402*	2.6
TURBIDITY (JTU)	12	7.8	6.0	2	20	12	-0.062	12.009	-0.117*	6.3
FLOURIDE, DISSOLVED	12	0.06	0.05	0.0	0.1	12	0.0014	-0.0385	0.319*	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	12.03	6.37	2.56	92	1.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14211720 -- WILLAMETTE RIVER AT PORTLAND,OREG.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	< 10	< 10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	50	4	0	3
COPPER (CU), UG/L	4	< 10	180	4	2	20
IRON (FE), UG/L	4	270	1700	4	60	210
LEAD (PB), UG/L	4	< 100	< 100	4	1	2
MANGANESE (MN), UG/L	4	20	80	4	0	58
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	230	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	4.50				
BIOMASS, ASH WT., G/SQ M	1	.50				
CHLOROPHYLL A, MG/SQ M	1	2.5				
CHLOROPHYLL B, MG/SQ M	1	.3				
ORGANIC CARBON, MG/L	4	2.0	3.1			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14301000 NAME: NEHALEM RIVER NEAR FOSS, OREG.

LAT 45D42M15S LONG 123D45M15S
DRAINAGE AREA: 667 SQ MI (1728 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.62	4.39	4.9	17.3					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	65.9	18.5	45	91					
STREAMFLOW (CUBIC FT/SEC)	12	2641.0	3000.2	62	7510	12	-133.407	11434.727	-0.825	1780.1
PH (STANDARD UNITS)	12	7.57	0.49	6.9	8.2	12	-0.0027	7.7467	-0.104 *	0.51
PHOSPHORUS, TOTAL	12	0.017	0.014	0.00	0.04	12	-0.00023	0.03253	-0.297 *	0.014
NITRITE + NITRATE, TOTAL	12	0.203	0.179	0.03	0.61	12	-0.00691	0.65876	-0.715	0.131
NITROGEN, KJELDAHL, TOTAL	10	0.360	0.386	0.08	1.20	10	0.00194	0.22625	0.096 *	0.408
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2798.9	5195.3	45	18000	12	143.634	-6668.984	0.513 *	4678.2
SEDIMENT, SUSPENDED	12	11.9	13.4	1	44					
SEDIMENT, CLAY-SILT (PERCENT)	9	81.3	11.1	57	94					
COLIFORM, FECAL (COL/100 ML)	9	29.0	47.5	1	144					
STREPTOCOCCI, FECAL (COL/100 ML)	6	38.7	44.7	1	116					
SILICA, DISSOLVED	12	13.50	0.90	12.0	15.0	12	0.0033	13.2822	0.068 *	0.95
CALCIUM, DISSOLVED	12	5.64	2.04	3.5	9.2	12	0.0962	-0.6965	0.874	1.04
MAGNESIUM, DISSOLVED	12	1.18	0.50	0.4	2.2	12	0.0153	0.1730	0.564 *	0.44
SODIUM, DISSOLVED	12	5.20	1.15	4.0	6.8	12	0.0587	1.3334	0.949	0.38
POTASSIUM, DISSOLVED	12	0.68	0.10	0.5	0.8	12	0.0030	0.4850	0.542 *	0.09
BICARBONATE, ION	12	21.4	8.3	11	36	12	0.359	-2.271	0.808	5.1
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	3.62	1.31	2.1	6.1	12	0.0435	0.7517	0.615	1.08
CHLORIDE, DISSOLVED	12	5.01	1.12	3.5	6.9	12	0.0554	1.3542	0.920	0.46
DISSOLVED SOLIDS, SUM OF CONST	12	45.5	9.4	34	59	12	0.458	15.329	0.900	4.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	50.9	9.9	37	69	12	0.401	24.467	0.754	6.8
HARDNESS, TOTAL	12	18.9	6.5	12	32	12	0.301	-0.929	0.861	3.5
HARDNESS, NONCARBONATE	12	2.0	2.6	0	7	12	0.030	0.014	0.218 *	2.6
TURBIDITY (JTU)	12	4.3	3.7	1	13	12	-0.093	10.379	-0.460 *	3.5
FLOURIDE, DISSOLVED	12	0.04	0.05	0.0	0.1	12	0.0025	-0.1229	0.899	0.02

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	10.67	5.76	2.57	94	1.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14301000 -- NEHALEM RIVER NEAR FOSS, OREG.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	2
CADMIUM (CD), UG/L	4	< 10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	< 50	< 50	4	0	0
COPPER (CU), UG/L	4	< 10	100	4	1	11
IRON (FE), UG/L	4	190	490	4	60	170
LEAD (PB), UG/L	4	<100	< 100	4	0	3
MANGANESE (MN), UG/L	4	0	40	4	0	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	60	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	.19	.29			
BIOMASS, ASH WT., G/SQ M	2	.19	.19			
CHLOROPHYLL A, MG/SQ M	2	.0	2.1			
CHLOROPHYLL B, MG/SQ M	2	.0	.3			
ORGANIC CARBON, MG/L	3	1.0	2.5			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14321000 NAME: UMPQUA RIVER NEAR ELKTON, OREG.

LAT 43D35M10S LONG 123D33M0 S
DRAINAGE AREA: 3683 SQ MI (9539 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.58	5.83	5.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	79.2	22.2	51	138					
STREAMFLOW (CUBIC FT/SEC)	12	6263.2	4287.0	1130	11900	12	-22.955	8080.434	-0.119 *	4464.2
PH (STANDARD UNITS)	12	7.20	0.41	6.6	8.2	12	-0.0008	7.2628	-0.043 *	0.43
PHOSPHORUS, TOTAL	12	0.062	0.042	0.02	0.18	12	-0.00040	0.09364	-0.214 *	0.043
NITRITE + NITRATE, TOTAL	11	0.130	0.194	0.00	0.68	11	0.00264	-0.07651	0.315 *	0.194
NITROGEN, KJELDAHL, TOTAL	11	0.285	0.236	0.10	0.81	11	-0.00495	0.67315	-0.484 *	0.218
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	4890.0	11092.2	150	36000	10	-66.333	10130.328	-0.145 *	11640.5
SEDIMENT, SUSPENDED	11	11.5	8.3	2	27					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	273.0	695.5	1	2450					
STREPTOCOCCI, FECAL (COL/100 ML)	12	56.4	110.6	1	400					
SILICA, DISSOLVED	12	17.25	2.56	13.0	23.0	12	0.0281	15.0273	0.243 *	2.61
CALCIUM, DISSOLVED	12	7.60	1.81	5.0	11.0	12	0.0401	4.4228	0.493 *	1.65
MAGNESIUM, DISSOLVED	12	2.27	0.71	0.4	3.0	12	0.0076	1.6652	0.239 *	0.72
SODIUM, DISSOLVED	12	5.35	2.10	3.2	10.0	12	-0.0197	6.9096	-0.208 *	2.15
POTASSIUM, DISSOLVED	12	0.98	0.35	0.5	1.6	12	0.0045	0.6243	0.291 *	0.35
BICARBONATE, ION	12	34.8	4.8	27	43	12	0.125	24.875	0.577	4.1
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	12	2.98	0.96	1.6	5.0	12	-0.0046	3.3486	-0.107 *	1.00
CHLORIDE, DISSOLVED	12	3.02	1.39	1.7	6.0	12	0.0161	1.7447	0.257 *	1.41
DISSOLVED SOLIDS, SUM OF CONST	12	56.7	8.0	44	71	12	0.133	46.105	0.369 *	7.8
DISSOLVED SOLIDS, ROE 180 DEG C	10	59.8	10.2	42	71	10	0.067	54.430	0.155 *	10.7
HARDNESS, TOTAL	12	28.3	4.3	19	34	12	0.131	17.880	0.679	3.3
HARDNESS, NONCARBONATE	12	1.1	1.4	0	4	12	0.005	0.707	0.077 *	1.4
TURBIDITY (JTU)	11	12.7	29.1	1	100	11	-0.311	37.071	-0.247 *	29.8
FLOURIDE, DISSOLVED	12	0.06	0.07	0.0	0.2	12	-0.0004	0.0921	-0.142 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
22	12.33	7.48	2.66	89	1.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14321000 -- UMPQUA RIVER NEAR ELKTON, OREG.

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	1	3	0	1
CADMIUM (CD), UG/L	3	< 10	< 10	2	0	2
CHROMIUM (CR), UG/L	3	0	10	3	0	0
COBALT (CO), UG/L	3	< 50	< 50	3	0	1
COPPER (CU), UG/L	3	10	1500	2	3	12
IRON (FE), UG/L	3	60	1300	4	10	190
LEAD (PB), UG/L	3	< 100	100	3	1	9
MANGANESE (MN), UG/L	3	20	40	3	0	20
MERCURY (HG), UG/L	2	0.0	0.3	3	0.0	0.3
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	30	360	3	8	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	.59	20.00			
BIOMASS, ASH WT., G/SQ M	3	.59	17.00			
CHLOROPHYLL A, MG/SQ M	2	.3	2.7			
CHLOROPHYLL B, MG/SQ M	2	.0	.5			
ORGANIC CARBON, MG/L	3	1.8	8.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 14372300 NAME: ROGUE RIVER NR AGNESS

LAT 42D34M50S LONG 124D03M30S
DRAINAGE AREA: 3939 SQ MI (10202 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.67	5.66	4.5	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	112.7	29.0	69	173					
STREAMFLOW (CUBIC FT/SEC)	12	12373.3	25079.0	1400	90900	12	428.005	-35848.574	0.495*	22855.6
PH (STANDARD UNITS)	12	7.27	0.27	6.6	7.7	12	-0.0006	7.3377	-0.067*	0.29
PHOSPHORUS, TOTAL	12	0.175	0.293	0.05	1.10	12	0.00501	-0.38939	0.495*	0.267
NITRITE + NITRATE, TOTAL	11	0.068	0.051	0.01	0.15	11	-0.00004	0.07275	-0.024*	0.053
NITROGEN, KJELDAHL, TOTAL	11	0.718	1.160	0.02	4.00	11	-0.00515	1.29432	-0.134*	1.212
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1393.6	1149.8	120	3700	11	-8.553	2350.073	-0.225*	1180.9
SEDIMENT, SUSPENDED	12	237.4	744.2	4	2600					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	124.2	344.2	3	1160					
STREPTOCOCCI, FECAL (COL/100 ML)	11	164.5	413.1	2	1400					
SILICA, DISSOLVED	12	21.75	4.69	14.0	29.0	12	-0.0196	23.9545	-0.121*	4.89
CALCIUM, DISSOLVED	12	9.70	1.36	7.4	12.0	12	0.0267	6.6894	0.571*	1.17
MAGNESIUM, DISSOLVED	12	3.22	0.93	0.8	4.3	12	0.0062	2.5143	0.195*	0.95
SODIUM, DISSOLVED	12	5.78	3.24	2.2	15.0	12	0.0549	-0.3968	0.491*	2.96
POTASSIUM, DISSOLVED	12	1.19	0.28	0.8	1.6	12	0.0029	0.8669	0.301*	0.28
BICARBONATE, ION	12	50.1	7.6	38	62	12	0.095	39.422	0.362*	7.4
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.15	0.85	2.3	4.8	12	0.0017	2.9624	0.057*	0.89
CHLORIDE, DISSOLVED	12	2.81	1.56	0.8	5.8	12	0.0266	-0.1858	0.494*	1.42
DISSOLVED SOLIDS, SUM OF CONST	12	72.5	9.9	56	88	12	0.154	55.205	0.447*	9.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	77.2	19.2	55	118	11	0.340	39.195	0.534*	17.1
HARDNESS, TOTAL	12	37.5	5.1	30	45	12	0.091	27.233	0.519*	4.6
HARDNESS, NONCARBONATE	12	0.4	0.8	0	2	12	-0.001	0.579	-0.053*	0.8
TURBIDITY (JTU)	11	45.4	118.8	1	400	11	1.956	-173.356	0.498*	108.6
FLOURIDE, DISSOLVED	12	0.08	0.08	0.0	0.3	12	0.0017	-0.1071	0.587	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.72	7.49	2.57	95	1.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

14372300 -- ROGUE RIVER NR AGNESS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	1	3	1	4
CADMIUM (CD), UG/L	3	< 10	10	2	1	1
CHROMIUM (CR), UG/L	3	0	10	3	0	0
COBALT (CO), UG/L	3	< 50	< 50	3	0	1
COPPER (CU), UG/L	3	< 10	2300	2	3	4
IRON (FE), UG/L	3	150	1200	4	20	330
LEAD (PB), UG/L	3	< 100	100	3	1	4
MANGANESE (MN), UG/L	3	20	40	3	0	0
MERCURY (HG), UG/L	3	0.1	0.3	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	40	140	3	8	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	14.00	25.00			
BIOMASS, ASH WT., G/SQ M	2	6.09	23.00			
CHLOROPHYLL A, MG/SQ M	2	16.0	24.0			
CHLOROPHYLL B, MG/SQ M	2	2.3	3.0			
ORGANIC CARBON, MG/L	3	2.7	5.6			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 15024800 NAME: STIKINE R NR WRANGELL AK

LAT 56D42M07S LONG 132D08M28S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	3	6.00	1.73	5.0	8.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	2	119.5	54.4	81	158					
STREAMFLOW (CUBIC FT/SEC)	3	44366.7	40991.9	20700	91700					
PH (STANDARD UNITS)	2	7.50	0.14	7.4	7.6					
PHOSPHORUS, TOTAL	2	0.115	0.092	0.05	0.18					
NITRITE + NITRATE, TOTAL	2	0.085	0.078	0.03	0.14					
NITROGEN, KJELDAHL, TOTAL	2	0.160	0.113	0.08	0.24					
PHYTOPLANKTON, TOTAL (CELLS/ML)	1	17.0	0.0	17						
SEDIMENT, SUSPENDED	2	89.5	0.7	89	90					
SEDIMENT, CLAY-SILT (PERCENT)	2	56.0	5.7	52	60					
COLIFORM, FECAL (COL/100 ML)	1	1.0	0.0	1						
STREPTOCOCCI, FECAL (COL/100 ML)	1	1.0	0.0	1						
SILICA, DISSOLVED	2	4.30	2.26	2.7	5.9					
CALCIUM, DISSOLVED	2	21.50	9.19	15.0	28.0					
MAGNESIUM, DISSOLVED	2	2.50	0.71	2.0	3.0					
SODIUM, DISSOLVED	2	2.85	1.77	1.6	4.1					
POTASSIUM, DISSOLVED	2	1.00	0.28	0.8	1.2					
BICARBONATE, ION	2	64.0	26.9	45	83					
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	2	12.95	5.73	8.9	17.0					
CHLORIDE, DISSOLVED	2	2.20	1.13	1.4	3.0					
DISSOLVED SOLIDS, SUM OF CONST	2	79.5	34.6	55	104					
DISSOLVED SOLIDS, ROE 180 DEG C	2	80.5	37.5	54	107					
HARDNESS, TOTAL	2	64.0	25.5	46	82					
HARDNESS, NONCARBONATE	2	11.5	3.5	9	14					
TURBIDITY (JTU)	3	24.0	36.4	2	66					
FLOURIDE, DISSOLVED	2	0.10	0.00	0.1	0.1					

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

15024800 -- STIKINE R NR WRANGELL AK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	5	2	0	1
CADMIUM (CD), UG/L	2	< 10	< 10	2	0	1
CHROMIUM (CR), UG/L	2	10	20	2	0	0
COBALT (CO), UG/L	2	< 50	< 50	2	0	0
COPPER (CU), UG/L	2	30	50	2	3	5
IRON (FE), UG/L	2	1200	6900	2	130	500
LEAD (PB), UG/L	2	< 100	< 100	2	3	5
MANGANESE (MN), UG/L	2	70	190	2	0	60
MERCURY (HG), UG/L	2	1.5	2.2	2	1.7	1.8
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	40	50	2	10	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	1	1.0				

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 15294350 NAME: SUSITNA R AT SUSITNA STATION AK

LAT 61D32M41S LONG 150D30M45S
DRAINAGE AREA: 19400 SQ MI (50246 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	6	6.33	4.88	0.0	10.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	154.8	57.9	88	225					
STREAMFLOW (CUBIC FT/SEC)	6	71211.6	53882.6	7080	141000	6	-676.470	175951.625	-0.727*	41353.1
PH (STANDARD UNITS)	6	7.75	0.40	7.2	8.3	6	-0.0047	8.4713	-0.677*	0.33
PHOSPHORUS, TOTAL	6	0.250	0.229	0.01	0.57	6	-0.00244	0.62769	-0.617*	0.202
NITRITE + NITRATE, TOTAL	6	0.248	0.195	0.08	0.62	6	0.00042	0.18328	0.125*	0.216
NITROGEN, KJELDAHL, TOTAL	6	0.353	0.267	0.05	0.76	6	-0.00275	0.77918	-0.597*	0.239
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	184.2	270.9	0	590	6	-2.961	642.633	-0.633*	234.4
SEDIMENT, SUSPENDED	6	441.5	387.5	5	994					
SEDIMENT, CLAY-SILT (PERCENT)	4	56.5	20.7	26	72					
COLIFORM, FECAL (COL/100 ML)	5	15.8	20.5	1	50					
STREPTOCOCCI, FECAL (COL/100 ML)	5	12.2	17.5	1	42					
SILICA, DISSOLVED	6	6.68	2.57	4.6	10.0	6	0.0370	0.9471	0.834	1.58
CALCIUM, DISSOLVED	6	20.17	6.77	11.0	28.0	6	0.1146	2.4157	0.982	1.44
MAGNESIUM, DISSOLVED	6	2.97	1.03	2.0	4.3	6	0.0158	0.5228	0.884	0.54
SODIUM, DISSOLVED	6	4.60	2.74	2.3	8.4	6	0.0420	-1.9026	0.887	1.42
POTASSIUM, DISSOLVED	6	1.65	0.51	1.1	2.5	6	0.0082	0.3823	0.925	0.22
BICARBONATE, ION	6	64.0	18.0	44	86	6	0.306	16.603	0.986	3.3
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	6	12.37	4.21	5.2	17.0	6	0.0626	2.6754	0.862	2.38
CHLORIDE, DISSOLVED	6	6.40	5.94	2.0	15.0	6	0.0919	-7.8300	0.896	2.95
DISSOLVED SOLIDS, SUM OF CONST	6	86.5	30.5	54	125	6	0.521	5.797	0.991	4.5
DISSOLVED SOLIDS, ROE 180 DEG C	6	90.7	29.1	66	130	6	0.477	16.737	0.949	10.2
HARDNESS, TOTAL	6	62.7	20.7	36	88	6	0.354	7.852	0.990	3.3
HARDNESS, NONCARBONATE	6	10.0	7.9	0	20	6	0.102	-5.728	0.747*	5.9
TURBIDITY (JTU)	6	104.7	105.4	1	240	6	-0.983	256.911	-0.540*	99.1
FLOURIDE, DISSOLVED	6	0.12	0.08	0.0	0.2	6	-0.0006	0.2116	-0.472*	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
126	3.16	7.48	2.75	36	2.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

15294350 -- SUSITNA R AT SUSITNA STATION AK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	11	3	0	2
CADMIUM (CD), UG/L	3	< 10	10	3	0	0
CHROMIUM (CR), UG/L	3	0	20	3	0	30
COBALT (CO), UG/L	3	< 50	< 50	3	0	0
COPPER (CU), UG/L	3	60	140	3	1	6
IRON (FE), UG/L	3	360	16000	3	60	460
LEAD (PB), UG/L	3	< 100	< 100	3	1	3
MANGANESE (MN), UG/L	3	30	320	3	0	20
MERCURY (HG), UG/L	3	0.0	0.0	3	0.0	0.0
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	30	90	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.19				
BIOMASS, ASH WT., G/SQ M	1	.19				
CHLOROPHYLL A, MG/SQ M	1	.1				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	3	.8	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 15304000 NAME: KUSKOKWIM R AT CROOKED C AK

LAT 61D52M10S LONG 158D06M42S
DRAINAGE AREA: 31100 SQ MI (80549 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	5	9.90	6.66	0.0	16.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	5	175.8	49.5	132	253					
STREAMFLOW (CUBIC FT/SEC)	5	61324.0	35706.3	8920	96600	5	-708.401	185860.938	-0.982*	7883.1
PH (STANDARD UNITS)	5	7.74	0.40	7.2	8.2	5	-0.0035	8.3498	-0.432*	0.41
PHOSPHORUS, TOTAL	4	0.060	0.040	0.00	0.08	4	-0.00062	0.17015	-0.884*	0.023
NITRITE + NITRATE, TOTAL	5	0.106	0.049	0.05	0.18	5	0.00072	-0.02069	0.731*	0.038
NITROGEN, KJELDAHL, TOTAL	5	0.394	0.270	0.19	0.86	5	0.00016	0.36628	0.029*	0.312
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	435.4	377.7	27	1000	5	-5.684	1434.731	-0.745*	291.1
SEDIMENT, SUSPENDED	4	78.8	51.4	3	116					
SEDIMENT, CLAY-SILT (PERCENT)	2	49.0	8.5	43	55					
COLIFORM, FECAL (COL/100 ML)	4	9.0	8.1	1	19					
STREPTOCOCCI, FECAL (COL/100 ML)	4	13.3	11.8	3	30					
SILICA, DISSOLVED	4	7.60	1.04	6.3	8.8	4	0.0123	5.6680	0.331*	1.20
CALCIUM, DISSOLVED	5	24.20	7.69	16.0	36.0	5	0.1532	-2.7370	0.985*	1.52
MAGNESIUM, DISSOLVED	5	5.50	2.08	2.7	8.4	5	0.0389	-1.3411	0.927*	0.90
SODIUM, DISSOLVED	4	2.20	0.61	1.8	3.1	4	-0.0085	3.5370	-0.394*	0.68
POTASSIUM, DISSOLVED	4	0.77	0.15	0.6	0.9	4	0.0050	-0.0038	0.927*	0.07
BICARBONATE, ION	5	89.6	29.7	66	139	5	0.595	-15.056	0.991*	4.6
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	14.15	6.00	7.6	21.0	4	0.2064	-18.1459	0.961*	2.02
CHLORIDE, DISSOLVED	5	0.66	0.13	0.5	0.8	5	-0.0005	0.7541	-0.197*	0.15
DISSOLVED SOLIDS, SUM OF CONST	4	89.5	18.1	71	110	4	0.634	-9.775	0.978*	4.6
DISSOLVED SOLIDS, ROE 180 DEG C	4	94.8	17.7	74	117	4	0.544	9.547	0.862*	11.0
HARDNESS, TOTAL	5	82.2	26.0	51	120	5	0.507	-6.899	0.966*	7.7
HARDNESS, NONCARBONATE	5	9.8	6.6	0	16	5	-0.002	10.091	-0.012*	7.7
TURBIDITY (JTU)	5	32.4	30.0	2	80	5	-0.153	59.308	-0.252*	33.5
FLOURIDE, DISSOLVED	4	0.15	0.06	0.1	0.2	4	0.0020	-0.1575	0.951*	0.02

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

15304000 -- KUSKOKWIM R AT CROOKED C AK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	5	2	0	1
CADMIUM (CD), UG/L	3	<10	<10	2	0	0
CHROMIUM (CR), UG/L	3	0	10	2	0	0
COBALT (CO), UG/L	3	<50	<50	2	0	2
COPPER (CU), UG/L	3	10	45	2	2	2
IRON (FE), UG/L	3	680	4500	2	20	310
LEAD (PB), UG/L	3	<100	<100	2	1	2
MANGANESE (MN), UG/L	3	0	130	2	10	40
MERCURY (HG), UG/L	3	0.1	0.3	2	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	2	0	1
ZINC (ZN), UG/L	3	30	50	2	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	3.0	6.7			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 15565447 NAME: YUKON R AT PILOT STATION AK

LAT 61D56M04S LONG 162D52M50S
DRAINAGE AREA: 321000 SQ MI (831390 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	5	10.70	6.92	0.0	16.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	5	202.4	67.4	150	319					
STREAMFLOW (CUBIC FT/SEC)	5	385999.2	214512.9	43000	622999	5	-3104.267	1014302.813	-0.975*	55283.5
PH (STANDARD UNITS)	5	7.76	0.30	7.3	8.0	5	-0.0034	8.4449	-0.747*	0.23
PHOSPHORUS, TOTAL	5	0.210	0.181	0.00	0.50	5	-0.00184	0.58337	-0.688*	0.151
NITRITE + NITRATE, TOTAL	5	0.130	0.072	0.06	0.24	5	0.00027	0.07446	0.256*	0.080
NITROGEN, KJELDAHL, TOTAL	5	0.596	0.474	0.24	1.40	5	-0.00427	1.45930	-0.606*	0.436
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	538.0	878.6	0	2100	5	-6.666	1887.125	-0.511*	872.1
SEDIMENT, SUSPENDED	5	204.6	141.2	4	383					
SEDIMENT, CLAY-SILT (PERCENT)	4	81.5	8.7	70	90					
COLIFORM, FECAL (COL/100 ML)	3	8.0	6.1	1	12					
STREPTOCOCCI, FECAL (COL/100 ML)	3	6.0	5.3	2	12					
SILICA, DISSOLVED	4	6.45	1.21	4.7	7.3	4	0.0405	-0.5645	0.658*	1.11
CALCIUM, DISSOLVED	5	29.60	10.99	23.0	49.0	5	0.1621	-3.2181	0.994*	1.42
MAGNESIUM, DISSOLVED	5	6.42	2.71	4.3	11.0	5	0.0399	-1.6614	0.994*	0.35
SODIUM, DISSOLVED	4	2.12	0.33	1.8	2.5	4	0.0152	-0.5119	0.904*	0.17
POTASSIUM, DISSOLVED	4	1.15	0.24	1.0	1.5	4	0.0070	-0.0577	0.575*	0.24
BICARBONATE, ION	5	102.6	45.1	73	182	5	0.662	-31.467	0.990*	7.3
CARBONATE, ION	5	0.0	0.0	0	0	5	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	16.00	3.74	12.0	21.0	4	0.1775	-14.7566	0.931*	1.67
CHLORIDE, DISSOLVED	5	1.02	0.08	0.9	1.1	5	0.0007	0.8688	0.601*	0.08
DISSOLVED SOLIDS, SUM OF CONST	4	98.0	11.6	88	112	4	0.564	0.329	0.955*	4.2
DISSOLVED SOLIDS, ROE 180 DEG C	4	116.5	8.3	109	126	4	0.354	55.212	0.832*	5.7
HARDNESS, TOTAL	5	100.8	39.5	75	170	5	0.585	-17.550	0.997*	3.7
HARDNESS, NONCARBONATE	5	16.2	3.1	11	19	5	0.024	11.387	0.514*	3.1
TURBIDITY (JTU)	5	63.8	52.8	4	140	5	-0.436	151.952	-0.556*	50.6
FLOURIDE, DISSOLVED	4	0.10	0.00	0.1	0.1	4	0.0000	0.1000	0.000*	0.00

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

15565447 -- YUKON R AT PILOT STATION AK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	6	2	0	4
CADMIUM (CD), UG/L	3	<10	< 10	2	0	1
CHROMIUM (CR), UG/L	3	0	10	2	0	0
COBALT (CO), UG/L	3	<50	< 50	2	0	0
COPPER (CU), UG/L	3	30	60	2	4	5
IRON (FE), UG/L	3	1500	11000	2	20	1200
LEAD (PB), UG/L	3	<100	<100	2	0	10
MANGANESE (MN), UG/L	3	150	310	2	0	80
MERCURY (HG), UG/L	3	0.1	0.3	2	0.1	0.3
SELENIUM (SE), UG/L	2	0	1	2	0	1
ZINC (ZN), UG/L	3	30	70	2	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	3	6.7	30.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 15744500 NAME: KOBUK R NR KIANA AK

LAT 66D58M27S LONG 160D07M51S
DRAINAGE AREA: 952 SQ MI (2466 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)				REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE	SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	0								
SPECIFIC CONDUCTANCE (MICROMHOS)	0								
STREAMFLOW (CUBIC FT/SEC)	0								
PH (STANDARD UNITS)	0								
PHOSPHORUS, TOTAL	0								
NITRITE + NITRATE, TOTAL	0								
NITROGEN, KJELDAHL, TOTAL	0								
PHYTOPLANKTON, TOTAL (CELLS/ML)	0								
SEDIMENT, SUSPENDED	0								
SEDIMENT, CLAY-SILT (PERCENT)	0								
COLIFORM, FECAL (COL/100 ML)	0								
STREPTOCOCCI, FECAL (COL/100 ML)	0								
SILICA, DISSOLVED	0								
CALCIUM, DISSOLVED	0								
MAGNESIUM, DISSOLVED	0								
SODIUM, DISSOLVED	0								
POTASSIUM, DISSOLVED	0								
BICARBONATE, ION	0								
CARBONATE, ION	0								
SULFATE, DISSOLVED	0								
CHLORIDE, DISSOLVED	0								
DISSOLVED SOLIDS, SUM OF CONST	0								
DISSOLVED SOLIDS, ROE 180 DEG C	0								
HARDNESS, TOTAL	0								
HARDNESS, NONCARBONATE	0								
TURBIDITY (JTU)	0								
FLOURIDE, DISSOLVED	0								

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

15744500 -- KOBUK R NR KIANA AK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	0			0		
CADMIUM (CD), UG/L	0			0		
CHROMIUM (CR), UG/L	0			0		
COBALT (CO), UG/L	0			0		
COPPER (CU), UG/L	0			0		
IRON (FE), UG/L	0			0		
LEAD (PB), UG/L	0			0		
MANGANESE (MN), UG/L	0			0		
MERCURY (HG), UG/L	0			0		
SELENIUM (SE), UG/L	0			0		
ZINC (ZN), UG/L	0			0		
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	0					

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 15896000 NAME: KUPARUK R NR DEADHORSE AK

LAT 70D16M54S LONG 148D57M35S
DRAINAGE AREA: 3130 SQ MI (8107 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	5	5.30	6.42	0.0	13.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	3	225.3	175.6	100	426					
STREAMFLOW (CUBIC FT/SEC)	4	3605.3	6266.7	235	13000					
PH (STANDARD UNITS)	5	7.42	0.43	6.8	7.8	3	-0.0010	7.9200	-0.990 *	0.03
PHOSPHORUS, TOTAL	2	0.000	0.000	0.00	0.00					
NITRITE + NITRATE, TOTAL	2	0.060	0.057	0.02	0.10					
NITROGEN, KJELDAHL, TOTAL	2	0.260	0.057	0.22	0.30					
PHYTOPLANKTON, TOTAL (CELLS/ML)	2	71.5	96.9	3	140					
SEDIMENT, SUSPENDED	2	50.5	68.6	2	99					
SEDIMENT, CLAY-SILT (PERCENT)	1	81.0	0.0	81						
COLIFORM, FECAL (COL/100 ML)	1	1.0	0.0	1						
STREPTOCOCCI, FECAL (COL/100 ML)	1	1.0	0.0	1						
SILICA, DISSOLVED	4	1.60	1.91	0.1	4.4	3	0.0124	-0.9873	0.950 *	1.01
CALCIUM, DISSOLVED	3	20.67	4.04	17.0	25.0					
MAGNESIUM, DISSOLVED	3	1.53	0.98	0.4	2.1					
SODIUM, DISSOLVED	4	2.40	1.57	0.9	4.6	3	0.0108	0.0283	0.993 *	0.33
POTASSIUM, DISSOLVED	4	0.57	0.49	0.2	1.3	3	0.0033	-0.1184	1.000 *	0.02
BICARBONATE, ION	5	135.2	84.6	67	246	3	0.555	9.381	1.000 *	3.4
CARBONATE, ION	5	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	2.62	1.53	1.2	4.8	3	0.0105	0.3683	0.992 *	0.34
CHLORIDE, DISSOLVED	4	1.65	1.64	0.6	4.1	3	0.0103	-0.3195	0.993 *	0.30
DISSOLVED SOLIDS, SUM OF CONST	3	64.3	11.2	56	77					
DISSOLVED SOLIDS, ROE 180 DEG C	1	70.0	0.0	70						
HARDNESS, TOTAL	3	58.0	11.3	51	71					
HARDNESS, NONCARBONATE	3	0.0	0.0	0	0					
TURBIDITY (JTU)	4	5.8	9.5	1	20					
FLOURIDE, DISSOLVED	4	0.02	0.05	0.0	0.1	3	-0.0002	0.0791	-0.618 *	0.06

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

15896000 -- KUPARUK R NR DEADHORSE AK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	0	3	0	0
CADMIUM (CD), UG/L	3	<10	<10	3	0	0
CHROMIUM (CR), UG/L	3	0	10	3	0	10
COBALT (CO), UG/L	3	<50	<50	3	0	0
COPPER (CU), UG/L	3	<10	20	3	1	10
IRON (FE), UG/L	3	0	4000	3	0	160
LEAD (PB), UG/L	3	<100	<100	3	0	3
MANGANESE (MN), UG/L	2	0	60	3	0	60
MERCURY (HG), UG/L	3	0.0	0.3	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	60	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.79				
BIOMASS, ASH WT., G/SQ M	1	1.29				
CHLOROPHYLL A, MG/SQ M	1	.1				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	4	3.7	18.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 16031000 NAME: WAIMEA RIVER NR WAIMEA, KAUAI, HI

LAT 21D59M02S LONG 159D39M46S
DRAINAGE AREA: 58 SQ MI (150 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	22.88	2.72	17.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	160.0	63.7	40	220					
STREAMFLOW (CUBIC FT/SEC)	13	52.5	137.7	3	504	13	-1.433	281.870	-0.663	107.7
PH (STANDARD UNITS)	13	7.17	0.34	6.4	7.9	13	-0.0015	7.4063	-0.276*	0.34
PHOSPHORUS, TOTAL	12	0.020	0.024	0.00	0.09	12	-0.00020	0.05255	-0.534*	0.021
NITRITE + NITRATE, TOTAL	12	0.026	0.046	0.00	0.16	12	-0.00052	0.11080	-0.736	0.032
NITROGEN, KJELDAHL, TOTAL	12	0.473	0.866	0.09	3.20	12	0.00331	-0.06965	0.248*	0.879
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	793.6	473.7	270	1800	11	2.554	385.938	0.357*	466.5
SEDIMENT, SUSPENDED	12	6.9	10.8	2	41					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.8	13.3	63	100					
COLIFORM, FECAL (COL/100 ML)	11	156.4	71.0	90	320					
STREPTOCOCCI, FECAL (COL/100 ML)	11	359.2	364.6	56	1200					
SILICA, DISSOLVED	13	21.02	5.12	9.3	27.0	13	0.0740	9.1864	0.920	2.09
CALCIUM, DISSOLVED	13	8.01	2.97	2.4	13.0	13	0.0419	1.2957	0.902	1.34
MAGNESIUM, DISSOLVED	13	9.52	4.34	2.0	15.0	13	0.0671	-1.2268	0.985	0.78
SODIUM, DISSOLVED	13	8.58	2.45	3.4	11.0	13	0.0376	2.5626	0.978	0.54
POTASSIUM, DISSOLVED	13	0.83	0.15	0.7	1.2	13	0.0007	0.7218	0.280*	0.16
BICARBONATE, ION	13	71.1	30.4	16	104	13	0.471	-4.288	0.989	4.7
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	2.36	0.61	1.5	3.4	13	-0.0008	2.4849	-0.081*	0.63
CHLORIDE, DISSOLVED	13	12.38	3.81	4.7	17.0	13	0.0581	3.0907	0.972	0.94
DISSOLVED SOLIDS, SUM OF CONST	13	98.0	33.0	33	132	13	0.512	16.103	0.988	5.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	98.8	31.9	36	133	12	0.484	19.324	0.984	6.1
HARDNESS, TOTAL	13	59.2	24.7	14	90	13	0.381	-1.808	0.982	4.9
HARDNESS, NONCARBONATE	13	2.1	3.0	0	10	13	0.011	0.390	0.227*	3.0
TURBIDITY (JTU)	13	3.5	5.0	1	20	13	-0.046	10.957	-0.592	4.2
FLOURIDE, DISSOLVED	13	0.09	0.10	0.0	0.4	13	0.0002	0.0621	0.116*	0.11

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	22.58	2.86	3.09	71	1.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

16031000 -- WAIMEA RIVER NR WAIMEA, KAUAI, HI

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	0	100	4	0	1
COPPER (CU), UG/L	4	10	260	4	1	1
IRON (FE), UG/L	4	270	650	5	50	260
LEAD (PB), UG/L	4	<100	<100	4	1	7
MANGANESE (MN), UG/L	4	20	70	5	0	30
MERCURY (HG), UG/L	3	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	110	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.09	13.00			
BIOMASS, ASH WT., G/SQ M	4	1.00	9.79			
CHLOROPHYLL A, MG/SQ M	4	7.1	24.0			
CHLOROPHYLL B, MG/SQ M	4	1.0	6.2			
ORGANIC CARBON, MG/L	4	3.0	5.3			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 16213000 NAME: WAIKELE STREAM AT WAIPAHU, OAHU, HI

LAT 21D23M11S LONG 158D00M49S
DRAINAGE AREA: 46 SQ MI (118 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.40	0.86	21.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	354.4	91.1	185	465					
STREAMFLOW (CUBIC FT/SEC)	16	424.8	1377.0	3	5550	13	-0.281	138.051	-0.915	11.8
PH (STANDARD UNITS)	13	6.93	0.25	6.5	7.3	13	-0.0003	7.0282	-0.102*	0.26
PHOSPHORUS, TOTAL	12	1.090	0.346	0.57	1.60	12	0.00318	-0.06154	0.836	0.199
NITRITE + NITRATE, TOTAL	12	2.119	0.697	0.83	3.00	12	0.00623	-0.13412	0.812	0.426
NITROGEN, KJELDAHL, TOTAL	12	0.492	0.210	0.30	0.94	12	-0.00146	1.02099	-0.633	0.170
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	742.8	553.7	94	1900	12	-0.498	922.859	-0.082*	578.8
SEDIMENT, SUSPENDED	14	836.1	2366.2	6	8660					
SEDIMENT, CLAY-SILT (PERCENT)	14	93.9	8.0	79	100					
COLIFORM, FECAL (COL/100 ML)	12	1622.5	1669.5	360	6600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1198.3	1026.4	210	3000					
SILICA, DISSOLVED	12	45.17	10.84	28.0	60.0	12	0.1138	4.0527	0.959	3.22
CALCIUM, DISSOLVED	12	10.33	2.29	5.5	15.0	12	0.0206	2.9036	0.820	1.37
MAGNESIUM, DISSOLVED	12	7.48	2.06	3.6	9.8	12	0.0221	-0.5018	0.979	0.44
SODIUM, DISSOLVED	12	46.83	14.73	23.0	64.0	12	0.1593	-10.7231	0.988	2.41
POTASSIUM, DISSOLVED	12	3.03	0.72	1.6	4.6	12	0.0053	1.1183	0.674	0.56
BICARBONATE, ION	12	59.6	14.9	33	80	12	0.156	3.128	0.959	4.4
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	19.07	4.85	9.9	27.0	12	0.0512	0.5831	0.964	1.36
CHLORIDE, DISSOLVED	12	61.58	17.56	33.0	82.0	12	0.1898	-7.0193	0.987	2.93
DISSOLVED SOLIDS, SUM OF CONST	12	223.0	58.9	121	294	12	0.639	-8.032	0.992	7.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	236.4	62.9	119	312	12	0.688	-12.303	0.999	3.4
HARDNESS, TOTAL	12	56.8	13.4	29	76	12	0.141	5.906	0.959	4.0
HARDNESS, NONCARBONATE	12	7.7	4.0	1	14	12	0.015	2.214	0.348*	3.9
TURBIDITY (JTU)	12	24.8	28.7	2	100	12	-0.241	112.093	-0.767	19.3
FLOURIDE, DISSOLVED	12	0.17	0.08	0.1	0.3	12	0.0005	-0.0176	0.646	0.06

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 226

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	523	504	495	485	476	465	413	300	270	202

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
283	22.58	0.98	3.16	66	0.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

16213000 -- WAIKELE STREAM AT WAIPAHU, OAHU, HI

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	60	4	0	<10
COBALT (CO), UG/L	4	<50	<50	4	0	4
COPPER (CU), UG/L	4	<10	400	4	1	5
IRON (FE), UG/L	4	550	8600	4	0	80
LEAD (PB), UG/L	4	<100	100	4	0	9
MANGANESE (MN), UG/L	4	20	210	4	20	70
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	2	4	1	1
ZINC (ZN), UG/L	4	10	90	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.79	13.00			
BIOMASS, ASH WT., G/SQ M	4	.79	8.59			
CHLOROPHYLL A, MG/SQ M	4	.0	81.0			
CHLOROPHYLL B, MG/SQ M	4	.0	39.0			
ORGANIC CARBON, MG/L	4	1.8	7.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 16229300 NAME: KALIHI STREAM AT KALIHI, OAHU, HI

LAT 21D20M29S LONG 157D52M36S
DRAINAGE AREA: 5 SQ MI (13 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	22.76	2.33	18.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	252.6	40.0	190	340					
STREAMFLOW (CUBIC FT/SEC)	14	7.5	4.9	1	16	14	-0.078	27.158	-0.634	4.0
PH (STANDARD UNITS)	14	7.74	0.48	6.7	8.5	14	0.0017	7.2989	0.145*	0.49
PHOSPHORUS, TOTAL	12	0.091	0.064	0.04	0.28	12	0.00024	0.03124	0.159*	0.067
NITRITE + NITRATE, TOTAL	12	0.182	0.134	0.02	0.38	12	-0.00126	0.50033	-0.408*	0.128
NITROGEN, KJELDAHL, TOTAL	12	0.302	0.177	0.12	0.71	12	0.00132	-0.03289	0.325*	0.176
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1149.2	1648.0	80	5700	12	-13.240	4560.734	-0.312*	1642.3
SEDIMENT, SUSPENDED	12	14.4	22.4	1	80					
SEDIMENT, CLAY-SILT (PERCENT)	12	98.6	3.2	89	100					
COLIFORM, FECAL (COL/100 ML)	12	4825.0	3010.9	2000	12000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	5439.2	6735.7	540	22000					
SILICA, DISSOLVED	13	15.00	2.08	11.0	18.0	13	0.0105	12.2973	0.187*	2.14
CALCIUM, DISSOLVED	13	15.69	2.43	12.0	21.0	13	0.0589	0.5346	0.901	1.10
MAGNESIUM, DISSOLVED	13	8.26	1.74	5.6	12.0	13	0.0433	-2.8992	0.928	0.67
SODIUM, DISSOLVED	13	23.08	3.93	17.0	32.0	13	0.1020	-3.1820	0.966	1.07
POTASSIUM, DISSOLVED	13	1.57	0.36	1.1	2.5	13	0.0008	1.3613	0.083*	0.38
BICARBONATE, ION	13	83.2	17.7	62	129	13	0.442	-30.650	0.931	6.7
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	10.54	2.53	7.4	16.0	13	0.0007	10.3619	0.010*	2.64
CHLORIDE, DISSOLVED	13	31.46	4.81	23.0	41.0	13	0.1230	-0.1981	0.951	1.55
DISSOLVED SOLIDS, SUM OF CONST	13	146.9	21.3	114	197	13	0.560	2.817	0.977	4.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	148.1	21.4	115	199	12	0.527	12.376	0.957	6.5
HARDNESS, TOTAL	13	73.1	12.3	53	100	13	0.315	-8.013	0.949	4.1
HARDNESS, NONCARBONATE	13	5.2	4.0	0	13	13	-0.015	9.151	-0.141*	4.1
TURBIDITY (JTU)	13	15.1	19.3	0	70	13	-0.029	22.540	-0.056*	20.1
FLOURIDE, DISSOLVED	13	0.08	0.06	0.0	0.2	13	0.0007	-0.1017	0.485*	0.05

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	23.22	2.32	2.70	58	1.64

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

16229300 -- KALIHI STREAM AT KALIHI, OAHU, HI

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	10	4	0	8
CADMIUM (CD), UG/L	4	<10	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	50	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	3
COPPER (CU), UG/L	4	10	1000	4	1	4
IRON (FE), UG/L	4	150	1700	5	60	170
LEAD (PB), UG/L	4	<100	<100	4	2	100
MANGANESE (MN), UG/L	4	10	30	5	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.19	6.19			
BIOMASS, ASH WT., G/SQ M	4	1.09	3.79			
CHLOROPHYLL A, MG/SQ M	4	2.2	36.0			
CHLOROPHYLL B, MG/SQ M	4	.0	22.0			
ORGANIC CARBON, MG/L	4	3.7	5.5			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 16400000 NAME: HALAWA STREAM NR HALAWA, MOLOKAI, HI

LAT 21D09M32S LONG 156D45M53S
DRAINAGE AREA: 5 SQ MI (12 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.14	1.95	16.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	58.9	4.1	52	66					
STREAMFLOW (CUBIC FT/SEC)	11	6.6	3.1	2	12	11	-0.451	33.201	-0.583	2.7
PH (STANDARD UNITS)	11	6.69	0.29	6.2	7.2	11	-0.0237	8.0872	-0.330 *	0.29
PHOSPHORUS, TOTAL	10	0.026	0.016	0.00	0.05	10	0.00253	-0.12459	0.566 *	0.014
NITRITE + NITRATE, TOTAL	10	0.034	0.038	0.00	0.13	10	-0.00182	0.14218	-0.170 *	0.039
NITROGEN, KJELDAHL, TOTAL	10	0.206	0.096	0.08	0.43	10	0.00609	-0.15672	0.224 *	0.099
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	162.9	108.4	35	360	10	21.891	-1141.830	0.714	80.6
SEDIMENT, SUSPENDED	10	2.2	0.8	1	4					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	10	657.4	609.6	30	1600					
STREPTOCOCCI, FECAL (COL/100 ML)	10	141.6	73.2	42	260					
SILICA, DISSOLVED	11	7.93	1.49	5.2	9.6	11	0.2136	-4.6562	0.581 *	1.28
CALCIUM, DISSOLVED	11	1.79	0.62	0.9	2.7	11	-0.0007	1.8300	-0.004 *	0.65
MAGNESIUM, DISSOLVED	11	1.07	0.33	0.4	1.6	11	0.0186	-0.0247	0.232 *	0.33
SODIUM, DISSOLVED	11	7.27	0.59	6.6	8.6	11	0.1278	-0.2548	0.879	0.30
POTASSIUM, DISSOLVED	11	0.63	0.12	0.5	0.9	11	-0.0071	1.0464	-0.243 *	0.12
BICARBONATE, ION	11	8.5	2.5	5	12	11	0.179	-2.009	0.295 *	2.5
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	2.59	0.40	2.0	3.3	11	-0.0510	5.5944	-0.523 *	0.36
CHLORIDE, DISSOLVED	11	11.59	1.20	9.5	13.0	11	0.1764	1.1990	0.597 *	1.02
DISSOLVED SOLIDS, SUM OF CONST	11	37.2	3.6	32	43	11	0.583	2.824	0.663	2.8
DISSOLVED SOLIDS, ROE 180 DEG C	10	40.4	3.5	37	47	10	0.317	21.523	0.323 *	3.5
HARDNESS, TOTAL	11	8.8	2.4	6	13	11	0.060	5.311	0.099 *	2.6
HARDNESS, NONCARBONATE	11	2.3	2.2	0	6	11	-0.126	9.677	-0.228 *	2.3
TURBIDITY (JTU)	11	1.7	0.8	1	3	11	-0.099	7.540	-0.510 *	0.7
FLOURIDE, DISSOLVED	11	0.06	0.07	0.0	0.2	11	0.0052	-0.2448	0.315 *	0.07

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

16400000 -- HALAWA STREAM NR HALAWA, MOLOKAI, HI

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	< 10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	0	<50	4	0	0
COPPER (CU), UG/L	4	< 10	50	4	0	1
IRON (FE), UG/L	4	100	210	5	30	80
LEAD (PB), UG/L	4	<100	<100	4	0	10
MANGANESE (MN), UG/L	4	0	10	5	0	0
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	20	4	0	6
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.19	8.59			
BIOMASS, ASH WT., G/SQ M	5	.50	1.79			
CHLOROPHYLL A, MG/SQ M	5	2.5	12.0			
CHLOROPHYLL B, MG/SQ M	5	.6	2.7			
ORGANIC CARBON, MG/L	3	1.5	3.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 16618000 NAME: KAHAKULOA STREAM NR HONOKOHAU, MAUI, HI

LAT 20D58M54S LONG 156D33M26S
DRAINAGE AREA: 3 SQ MI (9 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.36	1.07	18.5	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	73.9	16.2	45	95					
STREAMFLOW (CUBIC FT/SEC)	11	12.7	12.1	4	42	11	-0.704	64.770	-0.942	4.3
PH (STANDARD UNITS)	11	7.20	0.46	6.5	7.9	11	0.0213	5.6257	0.741	0.33
PHOSPHORUS, TOTAL	11	0.025	0.012	0.00	0.04	11	0.00048	-0.01091	0.639	0.010
NITRITE + NITRATE, TOTAL	11	0.086	0.033	0.04	0.14	11	-0.00084	0.14865	-0.414 *	0.032
NITROGEN, KJELDAHL, TOTAL	11	0.247	0.391	0.03	1.40	11	0.00901	-0.41884	0.373 *	0.383
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	528.7	459.7	56	1500	11	15.976	-652.014	0.562 *	400.8
SEDIMENT, SUSPENDED	11	2.6	1.9	0	6					
SEDIMENT, CLAY-SILT (PERCENT)	11	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	11	887.3	790.7	110	2900					
STREPTOCOCCI, FECAL (COL/100 ML)	11	330.8	250.1	89	740					
SILICA, DISSOLVED	11	16.25	4.77	6.8	21.0	11	0.2769	-4.2104	0.938	1.75
CALCIUM, DISSOLVED	11	3.98	1.24	1.7	6.4	11	0.0627	-0.6503	0.819	0.75
MAGNESIUM, DISSOLVED	11	2.03	0.73	0.6	2.8	11	0.0394	-0.8819	0.873	0.38
SODIUM, DISSOLVED	11	7.25	1.08	5.5	8.4	11	0.0643	2.4904	0.966	0.29
POTASSIUM, DISSOLVED	11	1.05	0.29	0.7	1.6	11	0.0009	0.9880	0.051 *	0.30
BICARBONATE, ION	11	24.2	10.4	9	37	11	0.581	-18.785	0.907	4.6
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	11	2.23	0.56	1.2	3.3	11	-0.0107	3.0179	-0.310 *	0.56
CHLORIDE, DISSOLVED	11	10.16	1.18	8.3	12.0	11	0.0287	8.0424	0.393 *	1.15
DISSOLVED SOLIDS, SUM OF CONST	11	54.8	12.7	31	69	11	0.751	-0.716	0.959	3.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	56.1	13.2	32	71	11	0.799	-2.984	0.978	2.9
HARDNESS, TOTAL	11	18.4	5.8	7	27	11	0.317	-5.078	0.884	2.9
HARDNESS, NONCARBONATE	11	0.9	1.4	0	4	11	-0.030	3.145	-0.338	1.4
TURBIDITY (JTU)	11	2.7	3.6	0	13	11	-0.164	14.860	-0.741	2.5
FLOURIDE, DISSOLVED	11	0.05	0.05	0.0	0.1	11	0.0020	-0.1056	0.633	0.04

*Not significant at the 95 percent confidence level.

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

16618000 -- KAHAKULOA STREAM NR HONOKOHAU, MAUI, HI

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	< 10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	< 50	< 50	4	0	4
COPPER (CU), UG/L	4	0	20	4	0	1
IRON (FE), UG/L	4	60	300	4	10	50
LEAD (PB), UG/L	4	<100	< 100	4	2	8
MANGANESE (MN), UG/L	4	0	10	4	0	5
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	70	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	.89	18.00			
BIOMASS, ASH WT., G/SQ M	4	.50	14.00			
CHLOROPHYLL A, MG/SQ M	4	5.1	100.0			
CHLOROPHYLL B, MG/SQ M	4	1.1	31.0			
ORGANIC CARBON, MG/L	4	.7	4.1			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 16704000 NAME: WAILUKU RIVER AT PIIHONUA HAWAII HI

LAT 19D42M58S LONG 155D09M13S
DRAINAGE AREA: 125 SQ MI (324 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.25	1.80	16.5	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	41.2	11.6	26	70					
STREAMFLOW (CUBIC FT/SEC)	12	131.1	136.5	6	500	12	-5.224	346.149	-0.444*	128.3
PH (STANDARD UNITS)	11	6.84	0.53	5.8	7.9	11	0.0322	5.5008	0.732	0.38
PHOSPHORUS, TOTAL	12	0.018	0.019	0.00	0.05	12	-0.00052	0.03994	-0.321*	0.019
NITRITE + NITRATE, TOTAL	12	0.106	0.062	0.05	0.26	12	0.00057	0.08251	0.105*	0.065
NITROGEN, KJELDAHL, TOTAL	12	0.310	0.258	0.08	0.91	12	0.00985	-0.09564	0.444*	0.242
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	390.7	582.0	29	2100	12	-14.254	977.460	-0.284*	585.2
SEDIMENT, SUSPENDED	12	1.9	3.1	0	11					
SEDIMENT, CLAY-SILT (PERCENT)	12	96.1	9.3	73	100					
COLIFORM, FECAL (COL/100 ML)	12	59.5	71.7	3	230					
STREPTOCOCCI, FECAL (COL/100 ML)	12	293.0	463.8	31	1700					
SILICA, DISSOLVED	12	10.72	2.81	5.8	15.0	12	0.1934	2.7552	0.799	1.77
CALCIUM, DISSOLVED	12	3.68	1.00	1.9	5.2	12	0.0599	1.2174	0.696	0.75
MAGNESIUM, DISSOLVED	12	1.74	0.69	0.8	3.1	12	0.0475	-0.2119	0.795	0.44
SODIUM, DISSOLVED	12	2.82	0.42	2.2	3.8	12	0.0329	1.4715	0.907	0.19
POTASSIUM, DISSOLVED	12	0.46	0.15	0.3	0.8	12	-0.0012	0.5089	-0.095*	0.16
BICARBONATE, ION	12	18.9	6.7	8	33	12	0.493	-1.370	0.852	3.7
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	2.08	0.82	0.8	4.1	12	-0.0194	2.8809	-0.275*	0.82
CHLORIDE, DISSOLVED	12	3.15	0.96	1.0	4.5	12	0.0360	1.6699	0.435*	0.90
DISSOLVED SOLIDS, SUM OF CONST	12	33.9	7.6	23	50	12	0.593	9.485	0.909	3.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	32.5	7.6	20	44	12	0.511	11.467	0.782	4.9
HARDNESS, TOTAL	12	16.3	4.8	9	26	12	0.350	1.912	0.844	2.7
HARDNESS, NONCARBONATE	12	1.8	2.3	0	8	12	-0.057	4.101	-0.293*	2.3
TURBIDITY (JTU)	12	2.3	2.5	1	10	12	-0.069	5.190	-0.322*	2.5
FLOURIDE, DISSOLVED	12	0.03	0.05	0.0	0.1	12	-0.0008	0.0658	-0.186*	0.05

*Not significant at the 95 percent confidence level.

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 141

DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	53	50	49	44	42	39	36	31	29	26

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
141	19.40	1.84	2.66	54	0.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

16704000 -- WAILUKU RIVER AT PIIHONUA HAWAII HI

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	3	4	0	3
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	<10	20	4	0	3
IRON (FE), UG/L	4	160	240	4	40	110
LEAD (PB), UG/L	4	<100	200	4	1	13
MANGANESE (MN), UG/L	3	0	10	4	0	5
MERCURY (HG), UG/L	4	0.1	0.9	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	40	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.59	4.59			
BIOMASS, ASH WT., G/SQ M	2	.79	4.50			
CHLOROPHYLL A, MG/SQ M	2	.5	1.0			
CHLOROPHYLL B, MG/SQ M	2	.0	.3			
ORGANIC CARBON, MG/L	4	1.3	4.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 50038100 NAME: RIO GRANDE DE MANATI AT HWY 2 NR MANATI, PR

LAT 18D25M52S LONG 066D31M37S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	25.39	1.98	22.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	258.5	69.0	130	335					
STREAMFLOW (CUBIC FT/SEC)	2	1443.0	1707.0	236	2650					
PH (STANDARD UNITS)	12	7.52	0.31	6.7	7.8	12	0.0010	7.2421	0.225 *	0.32
PHOSPHORUS, TOTAL	11	0.183	0.198	0.09	0.77	11	-0.00201	0.71299	-0.721	0.145
NITRITE + NITRATE, TOTAL	11	0.687	0.363	0.23	1.30	11	-0.00315	1.51997	-0.617	0.301
NITROGEN, KJELDAHL, TOTAL	11	0.561	0.555	0.19	2.20	11	-0.00422	1.67626	-0.541 *	0.493
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1623.4	2885.7	57	10000	11	-20.619	7076.023	-0.509 *	2618.4
SEDIMENT, SUSPENDED	17	171.7	333.3	5	1350					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	18116.7	18409.6	3000	61000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	9119.2	16193.6	640	57000					
SILICA, DISSOLVED	8	19.38	1.69	17.0	22.0	7	0.0043	18.5325	0.143 *	1.62
CALCIUM, DISSOLVED	5	38.40	7.06	29.0	48.0	5	0.1586	-7.2787	0.785 *	5.05
MAGNESIUM, DISSOLVED	5	7.50	1.02	6.2	8.4	5	0.0227	0.9493	0.775 *	0.75
SODIUM, DISSOLVED	7	9.30	3.74	1.1	12.0	7	-0.0017	9.7748	-0.023 *	4.09
POTASSIUM, DISSOLVED	7	1.79	0.24	1.5	2.2	7	-0.0019	2.3090	-0.393 *	0.24
BICARBONATE, ION	8	135.5	34.7	67	178	8	0.633	-41.095	0.878	17.9
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	8	8.85	1.90	6.9	12.0	7	-0.0273	16.6123	-0.728 *	1.40
CHLORIDE, DISSOLVED	8	12.50	0.53	12.0	13.0	7	0.0064	10.8173	0.594 *	0.47
DISSOLVED SOLIDS, SUM OF CONST	5	172.0	19.0	145	195	5	0.422	50.426	0.775 *	13.9
DISSOLVED SOLIDS, ROE 180 DEG C	5	170.6	32.1	132	219	5	0.579	3.820	0.630 *	28.8
HARDNESS, TOTAL	5	125.6	21.4	98	150	5	0.511	-21.705	0.836 *	13.5
HARDNESS, NONCARBONATE	5	7.0	4.3	1	13	5	0.027	-0.672	0.216 *	4.8
TURBIDITY (JTU)	5	19.0	24.0	1	50	5	-0.340	116.967	-0.495 *	24.1
FLOURIDE, DISSOLVED	8	0.29	0.26	0.1	0.9	7	-0.0004	0.4179	-0.070 *	0.29

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	25.36	2.20	2.74	69	1.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

50038100 -- RIO GRANDE DE MANATI AT HWY 2 NR MANATI, PR

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	5	0	0
CADMIUM (CD), UG/L	5	0	2	5	0	1
CHROMIUM (CR), UG/L	5	< 10	10	5	0	1
COBALT (CO), UG/L	5	0	5	5	0	1
COPPER (CU), UG/L	5	4	19	5	1	6
IRON (FE), UG/L	6	320	6800	5	0	190
LEAD (PB), UG/L	5	1	6	5	0	2
MANGANESE (MN), UG/L	8	20	500	5	0	40
MERCURY (HG), UG/L	5	0.1	0.3	5	0.0	0.2
SELENIUM (SE), UG/L	2	0	0	5	0	0
ZINC (ZN), UG/L	5	30	170	5	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	6	1.5	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 50046000 NAME: RIO DE LA PLATA AT TOA ALTA, PR

LAT 18D23M50S LONG 066D15M17S
DRAINAGE AREA: 200 SQ MI (518 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	26.46	2.02	23.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	425.3	145.8	225	660					
STREAMFLOW (CUBIC FT/SEC)	2	1172.0	1595.2	44	2300					
PH (STANDARD UNITS)	12	7.37	0.38	6.8	8.1	12	-0.0001	7.4046	-0.032*	0.40
PHOSPHORUS, TOTAL	12	0.097	0.109	0.02	0.43	12	-0.00045	0.29410	-0.589	0.092
NITRITE + NITRATE, TOTAL	12	0.412	0.449	0.01	1.60	12	-0.00233	1.43600	-0.742	0.316
NITROGEN, KJELDAHL, TOTAL	12	0.476	0.122	0.30	0.66	12	-0.00021	0.56866	-0.248*	0.123
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2273.7	3626.8	13	12000	11	-12.810	7877.449	-0.528*	3245.8
SEDIMENT, SUSPENDED	14	67.0	114.6	4	417					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	3384.2	4052.3	50	14000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	904.2	944.7	100	2700					
SILICA, DISSOLVED	7	16.43	2.64	13.0	19.0	7	0.0055	13.8982	0.289*	2.77
CALCIUM, DISSOLVED	5	53.20	14.13	40.0	70.0	5	0.1054	2.3607	0.937*	5.71
MAGNESIUM, DISSOLVED	5	12.80	2.59	10.0	17.0	5	0.0182	4.0379	0.881*	1.41
SODIUM, DISSOLVED	7	20.86	5.08	13.0	30.0	7	0.0311	6.5738	0.846	2.97
POTASSIUM, DISSOLVED	7	2.67	1.25	0.2	3.8	7	-0.0027	3.9151	-0.300*	1.30
BICARBONATE, ION	8	191.0	47.8	104	262	8	0.365	23.373	0.980	10.3
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	7	18.14	5.70	15.0	31.0	7	0.0090	14.0052	0.219*	6.09
CHLORIDE, DISSOLVED	7	32.71	11.54	17.0	52.0	7	0.0823	-5.1349	0.987	2.04
DISSOLVED SOLIDS, SUM OF CONST	5	259.6	50.6	210	332	5	0.399	67.185	0.990*	8.2
DISSOLVED SOLIDS, ROE 180 DEG C	5	267.8	62.0	208	364	5	0.432	59.368	0.875*	34.7
HARDNESS, TOTAL	5	184.0	43.4	140	240	5	0.334	22.943	0.967*	12.7
HARDNESS, NONCARBONATE	5	20.4	9.5	10	31	5	0.070	-13.423	0.927*	4.1
TURBIDITY (JTU)	5	3.6	3.2	1	9	5	-0.021	13.729	-0.822*	2.1
FLOURIDE, DISSOLVED	7	0.39	0.41	0.1	1.3	7	-0.0004	0.5790	-0.142*	0.44

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	26.44	1.32	3.12	24	1.94

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

50046000 -- RIO DE LA PLATA AT TOA ALTA, PR

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	5	0	1
CADMIUM (CD), UG/L	5	0	20	5	0	5
CHROMIUM (CR), UG/L	5	<10	10	5	0	1
COBALT (CO), UG/L	5	0	3	5	0	1
COPPER (CU), UG/L	5	0	14	5	0	10
IRON (FE), UG/L	5	220	910	5	0	130
LEAD (PB), UG/L	5	0	7	5	1	10
MANGANESE (MN), UG/L	7	60	370	5	0	100
MERCURY (HG), UG/L	5	0.1	0.3	5	0.0	0.3
SELENIUM (SE), UG/L	2	0	0	5	0	0
ZINC (ZN), UG/L	5	0	90	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.19				
BIOMASS, ASH WT., G/SQ M	1	.19				
CHLOROPHYLL A, MG/SQ M	1	.0				
CHLOROPHYLL B, MG/SQ M	1	.0				
ORGANIC CARBON, MG/L	6	3.0	11.0			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 50092000 NAME: RIO GRANDE DE PATILLAS NR PATILLAS

LAT 18D02M04S LONG 066D01M58S
DRAINAGE AREA: 18 SQ MI (47 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	25.16	2.85	20.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	161.0	31.4	110	230					
STREAMFLOW (CUBIC FT/SEC)	1	11.0	0.0	11						
PH (STANDARD UNITS)	13	7.67	0.54	6.5	8.4	13	0.0072	6.5026	0.420 *	0.51
PHOSPHORUS, TOTAL	11	0.076	0.129	0.01	0.42	11	0.00020	0.04362	0.046 *	0.135
NITRITE + NITRATE, TOTAL	11	0.166	0.198	0.00	0.59	11	-0.00191	0.48332	-0.290 *	0.199
NITROGEN, KJELDAHL, TOTAL	10	0.148	0.117	0.00	0.36	10	0.00011	0.13029	0.021 *	0.124
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	230.7	147.4	51	570	11	-1.871	528.955	-0.430 *	140.2
SEDIMENT, SUSPENDED	13	7.5	9.6	0	29					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1477.5	1004.9	290	3800					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1559.1	1800.0	250	6300					
SILICA, DISSOLVED	7	22.57	3.15	17.0	26.0	7	0.0598	12.4602	0.680 *	2.53
CALCIUM, DISSOLVED	6	11.62	2.15	8.7	14.0	6	0.0430	4.4850	0.765 *	1.54
MAGNESIUM, DISSOLVED	6	5.12	1.00	3.5	6.4	6	0.0233	1.2439	0.893	0.50
SODIUM, DISSOLVED	7	14.29	1.98	10.0	16.0	7	0.0422	7.1484	0.766	1.39
POTASSIUM, DISSOLVED	7	0.56	0.10	0.4	0.7	7	0.0011	0.3656	0.416 *	0.10
BICARBONATE, ION	8	62.6	11.3	40	74	8	0.258	19.202	0.766	7.8
CARBONATE, ION	4	0.5	1.0	0	2	4	-0.020	4.337	-0.617 *	1.0
SULFATE, DISSOLVED	7	11.23	1.64	7.6	12.0	7	0.0274	6.5969	0.598 *	1.44
CHLORIDE, DISSOLVED	7	11.43	0.79	10.0	12.0	7	0.0187	8.2606	0.854	0.45
DISSOLVED SOLIDS, SUM OF CONST	6	107.3	16.1	77	123	6	0.345	50.106	0.819	10.3
DISSOLVED SOLIDS, ROE 180 DEG C	6	101.7	13.0	82	115	6	0.205	67.667	0.603 *	11.6
HARDNESS, TOTAL	6	50.0	9.3	36	61	6	0.198	17.091	0.819	5.9
HARDNESS, NONCARBONATE	6	0.7	1.2	0	3	6	-0.010	2.348	-0.320 *	1.3
TURBIDITY (JTU)	6	1.5	2.3	0	6	6	-0.041	8.364	-0.700 *	1.8
FLOURIDE, DISSOLVED	7	0.23	0.14	0.1	0.5	7	0.0012	0.0188	0.322 *	0.14

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	25.15	2.97	2.89	68	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

50092000 -- RIO GRANDE DE PATILLAS NR PATILLAS

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	0	6	0	0
CADMIUM (CD), UG/L	6	0	1	6	0	4
CHROMIUM (CR), UG/L	6	<10	10	6	0	1
COBALT (CO), UG/L	6	0	7	6	0	1
COPPER (CU), UG/L	6	1	29	6	0	34
IRON (FE), UG/L	6	50	560	6	0	80
LEAD (PB), UG/L	6	0	15	6	0	17
MANGANESE (MN), UG/L	7	0	20	6	0	10
MERCURY (HG), UG/L	5	0.1	0.2	6	0.0	0.3
SELENIUM (SE), UG/L	2	0	0	6	0	0
ZINC (ZN), UG/L	6	10	40	6	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	5	.8	3.1			

Table 14.--Summary of measurement at each station--Continued

STATION NUMBER: 50144000 NAME: RIO GRANDE DE ANASCO NR SAN SEBASTIAN, PR

LAT 18D16M53S LONG 067D02M56S
DRAINAGE AREA: 94 SQ MI (244 SQ KM)
PERIOD OF RECORD: 10/01/74 - 09/30/75

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION SUMMARY				
	SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	23.13	2.33	20.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	207.3	36.3	128	252					
STREAMFLOW (CUBIC FT/SEC)	1	110.0	0.0	110						
PH (STANDARD UNITS)	12	7.39	0.35	6.6	7.7	12	0.0027	6.8222	0.283 *	0.35
PHOSPHORUS, TOTAL	11	0.062	0.033	0.02	0.13	11	-0.00016	0.09590	-0.191 *	0.034
NITRITE + NITRATE, TOTAL	11	0.759	0.327	0.19	1.20	11	-0.00501	1.79538	-0.583 *	0.280
NITROGEN, KJELDAHL, TOTAL	11	0.260	0.156	0.04	0.61	11	-0.00027	0.31675	-0.067 *	0.164
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	840.7	1487.7	65	4700	11	-4.477	1763.479	-0.114 *	1557.9
SEDIMENT, SUSPENDED	13	120.3	164.0	3	464					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	915.8	832.1	56	2400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1042.8	1214.6	4	3600					
SILICA, DISSOLVED	6	29.17	2.56	26.0	33.0	6	-0.0178	32.8541	-0.296 *	2.74
CALCIUM, DISSOLVED	5	26.40	2.97	22.0	30.0	5	0.0195	22.3751	0.313 *	3.25
MAGNESIUM, DISSOLVED	5	9.60	1.47	8.3	12.0	5	0.0103	7.4824	0.331 *	1.60
SODIUM, DISSOLVED	6	9.87	0.92	9.1	11.0	6	0.0139	6.9899	0.645 *	0.78
POTASSIUM, DISSOLVED	6	1.53	0.18	1.3	1.8	6	-0.0006	1.6662	-0.156 *	0.19
BICARBONATE, ION	7	122.1	8.4	110	132	7	0.016	118.826	0.075 *	9.1
CARBONATE, ION	3	0.0	0.0	0	0	3	0.000	0.000	0.000 *	0.0
SULFATE, DISSOLVED	6	10.32	1.18	9.1	12.0	6	0.0134	7.5387	0.482 *	1.16
CHLORIDE, DISSOLVED	6	6.02	0.69	5.2	6.9	6	0.0039	5.2082	0.242 *	0.74
DISSOLVED SOLIDS, SUM OF CONST	5	154.8	9.3	146	170	5	0.075	139.295	0.386 *	9.9
DISSOLVED SOLIDS, ROE 180 DEG C	5	153.6	14.0	144	178	5	0.145	123.779	0.489 *	14.1
HARDNESS, TOTAL	5	103.8	11.5	90	120	5	0.114	80.337	0.470 *	11.7
HARDNESS, NONCARBONATE	5	3.8	6.9	0	16	5	0.067	-10.013	0.463 *	7.0
TURBIDITY (JTU)	5	24.4	42.6	1	100	5	0.391	-56.052	0.435 *	44.4
FLOURIDE, DISSOLVED	6	0.15	0.08	0.1	0.3	6	0.0006	0.0240	0.309 *	0.09

*Not significant at the 95 percent confidence level.

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	HARMONIC MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	23.11	2.41	3.23	60	1.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1975 WY)

50144000 -- RIO GRANDE DE ANASCO NR SAN SEBASTIAN, PR

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	5	0	0
CADMIUM (CD), UG/L	5	0	1	5	0	1
CHROMIUM (CR), UG/L	5	< 10	10	5	0	1
COBALT (CO), UG/L	5	0	6	5	0	4
COPPER (CU), UG/L	5	1	22	5	0	13
IRON (FE), UG/L	5	70	8500	5	0	2400
LEAD (PB), UG/L	5	0	8	5	0	2
MANGANESE (MN), UG/L	6	0	450	5	0	360
MERCURY (HG), UG/L	5	0.0	0.3	5	0.0	0.2
SELENIUM (SE), UG/L	2	0	0	5	0	0
ZINC (ZN), UG/L	5	0	60	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	.59				
BIOMASS, ASH WT., G/SQ M	1	.50				
CHLOROPHYLL A, MG/SQ M	1	.7				
CHLOROPHYLL B, MG/SQ M	1	.1				
ORGANIC CARBON, MG/L	5	2.0	4.5			

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7885