QUALITY OF RIVERS OF THE UNITED STATES, 1976 WATER YEAR--BASED ON THE NATIONAL STREAM QUALITY ACCOUNTING NETWORK (NASQAN)

U.S. GEOLOGICAL SURVEY
Open-File Report 80-594

QUALITY OF RIVERS OF THE UNITED STATES, 1976 WATER YEAR--BASED ON THE NATIONAL STREAM QUALITY ACCOUNTING NETWORK (NASQAN)

by

Linda J. Britton, Kimball E. Goddard, and John C. Briggs

U.S. GEOLOGICAL SURVEY
Open-File Report 80-594

U.S. DEPARTMENT OF THE INTERIOR
March 3, 1849

July 1983

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, *SECRETARY*

GEOLOGICAL SURVEY

Dallas L. Peck, *Director*

For additional information write to:

Chief, Branch of Quality of Water
U.S. Geological Survey
412 National Center
12201 Sunrise Valley Drive
Reston, VA 22092

CONTENTS

ILLUSTRATIONS

Page

TABLES

METRIC CONVERSION TABLE

Multiply inch-pound 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, 1976 WATER YEAR--BASED ON THE NATIONAL STREAM QUALITY ACCOUNTING NETWORK (NASQAN)

by

Linda J. Britton, Kimball E. Goddard and John C. Briggs

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 United States rivers. Stations are generally at the downstream end of hydrologic accounting units in order to measure the quantity and quality of water flowing from the units. The 1976 water year is the second 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 1976 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, in Hawaii, and in Puerto Rico; mean temperatures were less than 10°C at 62 stations and greater than 24°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 are smallest for the subtropical and cold-climate streams.

Considering chemical and biological characteristics of United States streams as described by NASQAN data, water quality is best (by many standards) in the Northeast, Southeast, and Northwest. These waters are generally low in dissolved solids and minor chemical constituents, are generally soft (except in Florida), and carry relatively small amounts of suspended sediment. These conditions mainly reflect the geology of the areas and the relatively large amounts of precipitation. However, many of these waters show the effects of pollution and carry moderate or high concentrations of nutrients and have correspondingly high populations of attached and floating plants. High counts of indicator bacteria also show signs of local pollution, particularly in areas of the country with large human or animal populations or both. Streams in the mid-continent area generally contain higher concentrations of minor elements than other areas of the country.

Most streams in the Midcontinent and Southwest areas reflect the arid or semiarid climate, erodible soils, and agricultural activities. They are characterized by moderate to high levels of dissolved major and minor constituents, suspended sediment, major nutrients, and biota (floating and attached aquatic plants and indicator bacteria). In addition, pesticide residues were found most often and concentrations were highest in stream water and bottom sediments found in these areas.

INTRODUCTION

Water has been a topic of concern for as long as recorded history. In recent years, this concern has focused on the environmental changes resulting from population growth, industrial expansion, and agricultural practices. This increase in awareness of environmental problems has led the public and all levels of government to place greater emphasis on the protection and conservation of our water resources. Legislation to protect these resources includes the 1972 Federal Water Pollution Control Act Amendments (Public Law 92-500) which set a goal of having "fishable and swimmable" water in most of the Nation's streams by 1983. The Clean Water Act of 1977 (Public Law 95-217) was passed to help implement this goal. Other laws such as the Safe Drinking Water Act (Public Law 93-523) specify the allowable amounts of certain chemical constituents which may be in public drinking water. State governments have legislated their own water-quality standards which, in many cases, are more stringent than the Federal standards. As required to fulfill the objectives of these laws, actions have been taken by all levels of government as well as industry to develop water-quality monitoring networks and environmental studies that will assess water-quality problems.

At the Federal level, the U.S. Geological Survey designed and operates several national and regional networks for monitoring water quality. The National Stream Quality Accounting Network (NASQAN), the largest of these networks (345 stations in 1976), was established to provide uniform and continuing measurements to document the quality of the Nation's rivers. The operation of NASQAN includes the measurement of a comprehensive list of physical, chemical, and biological characteristics which were selected to fulfill information needs of national and regional water-resource planners and managers. The design of the network is described in Geological Survey Circular 719 (Ficke and Hawkinson, 1975), Pickering and Ficke (1976), and is summarized in a later section of this report.

PURPOSE AND SCOPE

This report summarizes the quality of the rivers of the United States during the 1976 water year (October 1975 through September 1976) as represented by the data from the 345 NASQAN stations. Data are presented to (1) show areal patterns of stream quality, and (2) account for the quality and quantity of water flowing from the accounting units.

It is important to realize that NASQAN is a fixed-station sampling network. Once monthly data from the network stations represent the quality of water leaving the respective accounting units at the time of sampling. Water quality at points within an accounting unit may vary greatly from that measured at the unit's downstream NASQAN station, therefore, the NASQAN values for that accounting unit are highly dependent upon the relative flow in the tributaries and the distance of the sampling point from upstream sources of pollution.

This is the third annual report on national stream quality as represented by NASQAN and the second report that includes data representing all accounting units. A report for the 1974 water year included data from 100 NASQAN stations (Hawkinson and others, 1977) and a report for the 1975 water year included data from 345 NASQAN stations (Briggs and Ficke, 1978). Comments from readers of these reports and from potential users of NASQAN data are welcome and should be addressed to:

Chief, Quality of Water Branch
U.S. Geological Survey, WRD
National Center, Mail Stop 412
Reston, Virginia 22092

ACKNOWLEDGEMENTS

NASQAN is a large program, with stations operated by U.S. Geological Survey employees in over 100 field offices, samples analyzed in two 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 Cecile Harris and Sharon Pero, who compiled many of the data tables and prepared several of the illustrations, and to the Wisconsin District Publications Services Unit, 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 United States 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 by numerous state and local organizations, other Federal agencies such as the Tennessee Valley Authority, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and International Boundary and Water Commission; and the Water Survey of Canada. 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 another 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 (U.S. Water Resources Council, 1970) and modified in 1974 by the Geological Survey. Outlines of accounting units are shown in this report on the maps (fig. 3-17) describing various components of water quality.

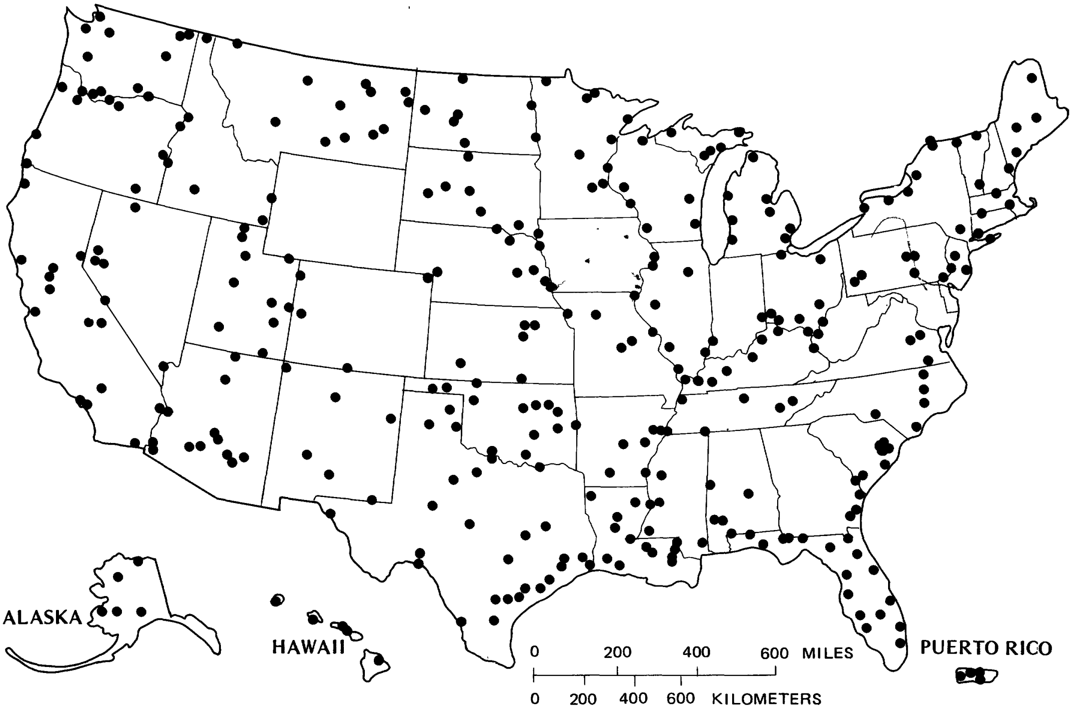


Figure 1. Locations of stations in the National Stream Quality Accounting Network in operation as of January 1, 1976.

The basic design of NASQAN assumes that the quantity and quality of the water flowing from a hydrologic accounting unit reflects both the sources of the water within the unit and changes which occur to the water from natural conditions such as climate and geology and from human activity while it is within the unit. A hydrologic accounting unit with a regular, integrated stream pattern having only one stream flowing from the unit can be represented by measurements at a single station on the stream near the downstream end of the unit. Site locations become more difficult for accounting units in coastal areas (including the Great Lakes) which have parallel drainage with several streams leaving the accounting unit. For these units, more than one NASQAN station may be needed to adequately describe the quantity and quality of flow from the unit. The final NASQAN design size, approximately 525 measuring and sampling stations, reflects the extra stations needed to adequately define national and regional water quality.

NASQAN was started with 50 stations in January 1973, with 295 stations added during 1974 (Ficke and Hawkinson, 1975, fig. 4). During the 1975 water year (October 1974 through September 1975), and 1976 water year (October 1975 through September 1976) 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 a standard set of water-quality characteristics is measured at each station using the same collecting techniques, sampling frequency, and analytical methods. Table 2 is a list of constituents measured at each station and the frequency of measurement. The only deviation in sampling frequency between stations is for temperature and specific conductance. Measurements may be monthly at some sites which in the past have long-term daily or continuous records for temperature and specific conductance.

NASQAN stations are normally sampled at monthly intervals, without regard to the hydrologic patterns of high or low flows. Many of the samples, consequently, are collected during periods of medium to low flow. The samples provide a fairly good representation of what one would expect to find in the stream on an average 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 samples usually are not collected during the periods of highest flows.

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state).

USGS STAT.NO.	STATION NAME	ST	LATI-TUDE DEG/MIN	LONGI-TUDE 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

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state)--Continued.

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
02226010	ALTAMAHA RIVER NEAR GARDI	GA	3137	08146
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

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state)--Continued.

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

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state)--Continued.

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
01059400	ANDROSCOGGIN RIVER AT BRUNSWICK	ME	4355	06958
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
04057004	MANISTIQUE RIVER ABOVE 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 RIVER NEAR SHELL BLUFF	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

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state)--Continued.

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

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state)--Continued.

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

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state)--Continued.

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	PRAIRIE DOG TOWN FORK RED R NR WAYSIDE	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

Table 1. National Stream Quality Accounting Network stations operated during the 1976 water year (by state)--Continued.

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
Bacteria:	
Fecal coliform	M
Fecal streptococci	M
Common constituents:	M
(Dissolved[2] calcium, magnesium, fluoride, sodium, potassium, dissolved solids, silica, chloride, sulfate, hardness, and noncarbonate hardness; total[3] 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	Q
Periphyton, chlorophyll	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 of continuous or daily values is available.

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

[3] 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 a water resource is determined by various measurements of physical, chemical, and biological characteristics. Results of the 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 of either continuous or daily temperature records be available for analysis. Generally, if three or more years of continuous or daily temperature records exists, the sampling frequency is monthly. Whether temperature is measured continuously by instrument or once daily by an observer depends on the physical location of the station and on the availability of an observer to make the measurement once daily.

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 daily temperature has the form:

$$T'_d = M + A \sin [(b) \times (d) + C]$$

EXPLANATION

Region numbers and names

01	New England
02	Mid Atlantic
03	South Atlantic-Gulf
04	Great Lakes
05	Ohio
06	Tennessee
07	Upper Mississippi
08	Lower Mississippi
09	Souris-Red-Rainy
10	Missouri Basin
11	Arkansas-White-Red
12	Texas-Gulf
13	Rio Grande
14	Upper Colorado
15	Lower Colorado
16	Great Basin
17	Pacific Northwest
18	California
19	Alaska
20	Hawaii
21	Carribbean

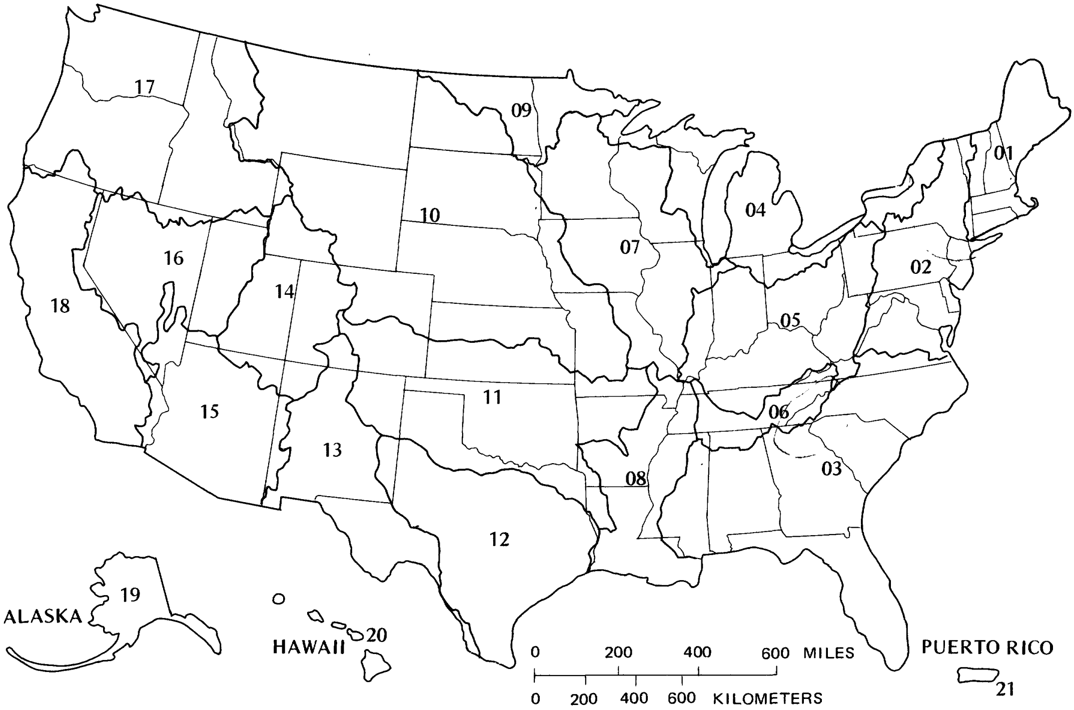


Figure 2. Water Resources Regions of the United States as designated by the United States Water Resources Council.

where

T'_d represents estimated temperature on the d^{th} 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 annual mean water temperature, in °C, and

C represents the phase angle, in radians.

The annual harmonic analyses of 1976 stream temperature records for each station, where available, are summarized near the middle of each page of table 12. Each summary in table 12 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 annual mean temperatures either from the daily records or from the monthly samples is presented on the map in figure 3. As would be expected, mean stream 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 temperature data are shown in figure 3, mean temperatures of less than 10°C were found at 62 (18 percent). All but seven of these were at latitudes greater than 41° N. Mean temperatures were in the range of 20°-25°C at 46 stations, all located south of latitude 35° N. Seven of the mean temperatures exceeded 24°C, and four of those were for stations in Puerto Rico.

The map at the bottom of figure 4 shows the values of harmonic amplitude of the stream temperature curves. Amplitudes were greatest (greater than 12°C) for the streams in the Upper Mississippi, Great Lakes, and the Souris-Red-Rainy Regions. Streams in these regions had temperatures ranging from freezing in the winter to close to 30°C in the summer. The largest amplitude, 14.8°C, was on the Mississippi River at St. Paul, Minnesota (05331000). Amplitudes were smallest for the subtropical streams, which are consistently warm, and for streams in the Upper and Lower Colorado Regions which show the temperature damping influence of reservoirs. Amplitudes in the range of 1 to 2°C were found at nine stations including five in Hawaii, and an amplitude of less than 1°C was found for Colorado River at Lees Ferry, Arizona (09380000), which is below Glen Canyon Dam. Standard errors of estimate of stream temperature provided by the harmonic equation were 2°C or less at about 49 percent of the stations and were 3°C or less at about 87 percent of the stations.

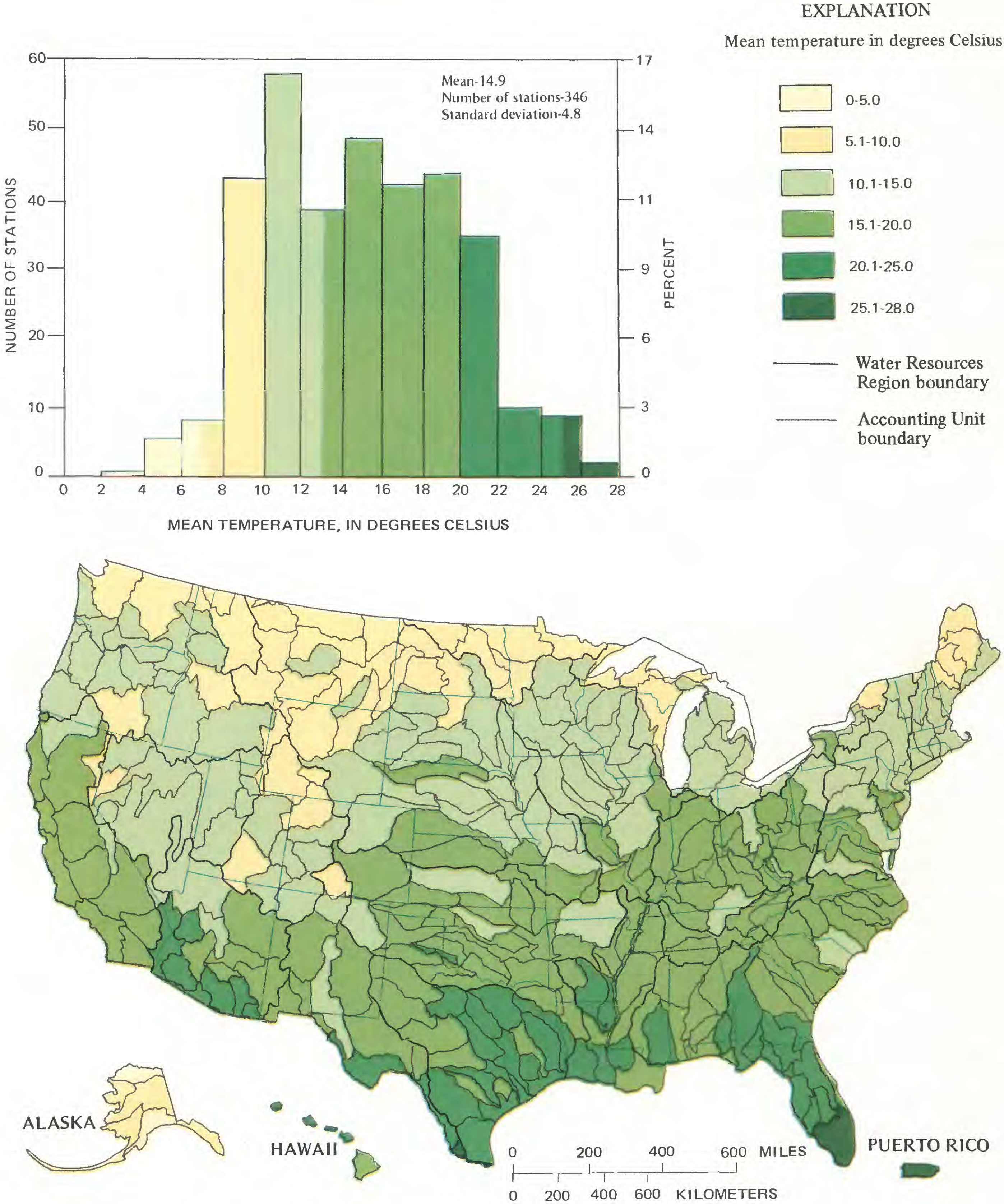
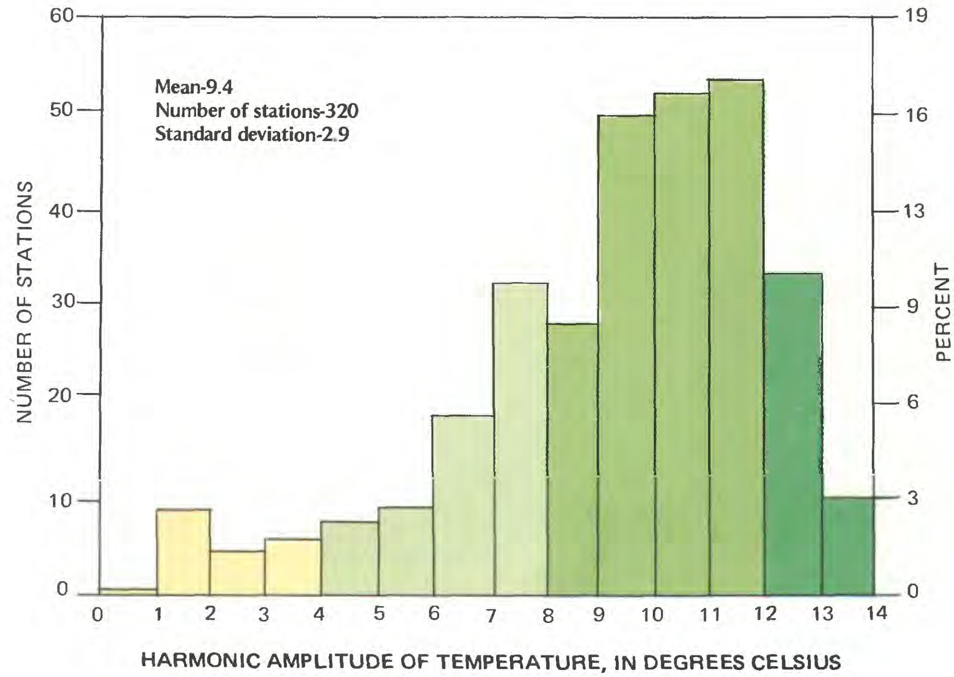


Figure 3. Annual mean temperature at NASQAN stations during 1976 water year.
Map at bottom is colored to show mean data for stations representing flow from the accounting unit.



EXPLANATION

Harmonic amplitude of temperature, in degrees Celsius

- No value
- 0.0-4.0
- 4.1-8.0
- 8.1-12.0
- 12.1-15.0

Water Resources Region boundary

Accounting Unit boundary

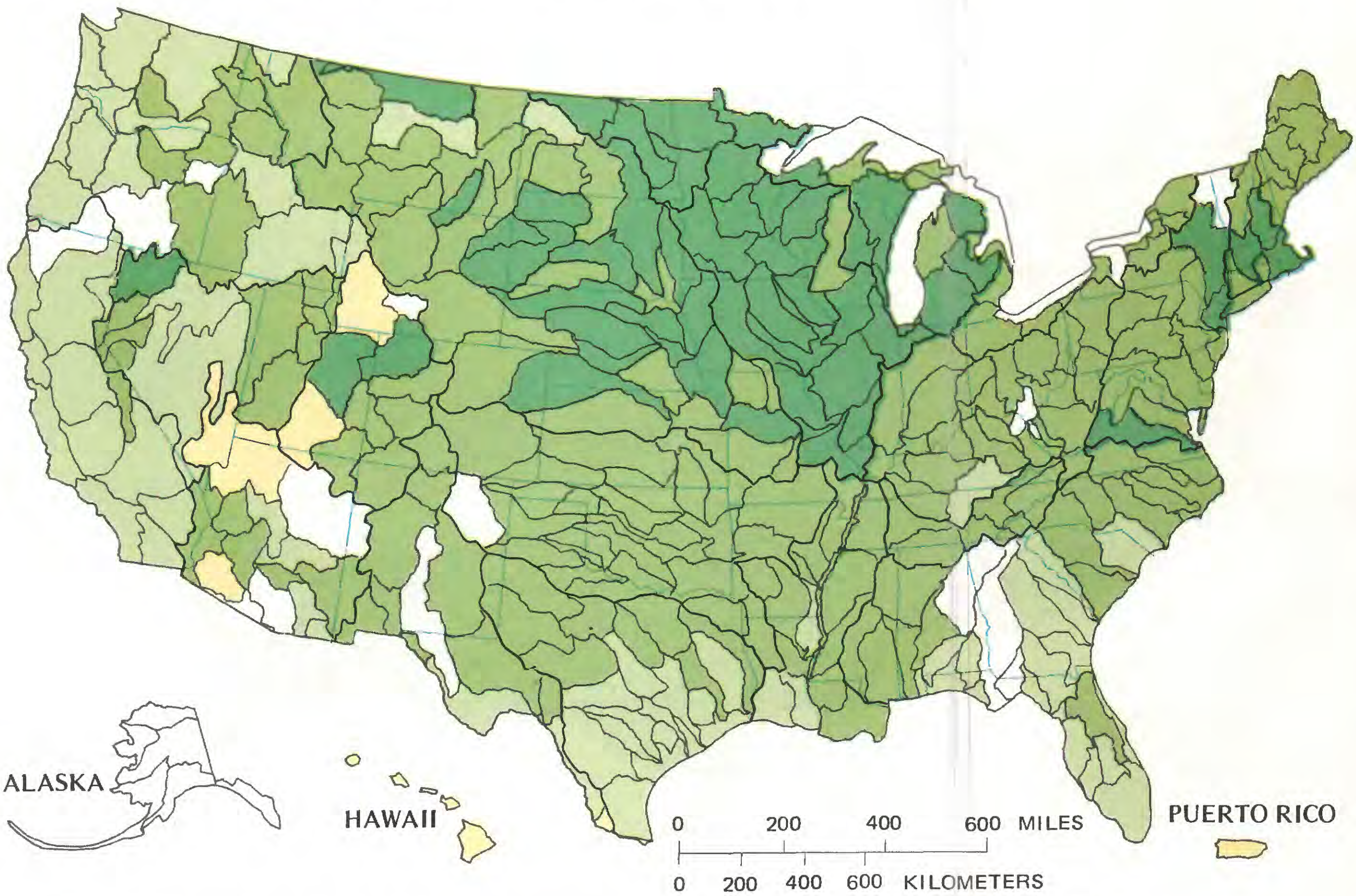


Figure 4. Harmonic amplitude of the stream temperature curve at NASQAN stations during the 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

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 data from 88 NASQAN stations by Steele and others (1974), the 1974 water year NASQAN report by Hawkinson and others (1977), and the 1975 water year NASQAN report by Briggs and Ficke (1978).

A summary of data on major inorganic chemicals measured at each NASQAN station during the 1976 water year is given in the top portions of each page of table 12 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 1976 water year.

In this subsection, histograms and maps are used to show frequencies, ranges, and distribution of common constituents at the NASQAN sites during the 1976 water year. Histograms for each of 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 United States 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. It is important to note that 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. In fact, a wide range of concentrations should be expected within the accounting unit. The color reflects the net effect or integration of all streams entering or originating within the accounting unit.

Dissolved solids.--The concentration of dissolved solids, which represents the amount of dissolved minerals in water, is widely used as a general indicator of inorganic water quality. Waters with dissolved-solids concentrations of less than 500 milligrams per liter (mg/L) 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), although sensitive crops may be affected in the range of 500-1,000 mg/L (U.S. Environmental Protection Agency, 1976a, p. 208). Higher concentrations can be tolerated by some crops grown on permeable soils with careful management practices. 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 344 stations are shown on the histogram at the top of figure 5. Mean concentrations were less than 300 mg/L at about 58 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 eleven stations; seven were in the range of 4,000-8,000 mg/L, one was in the range of 8,000-10,000 mg/L, and two were in the range of 10,000-20,000 mg/L. The highest mean value was 24,900 mg/L. The seventeen highest values are lumped in the last bar of the histogram in order to maintain the expanded scale shown.

Areal distribution patterns of dissolved-solids concentrations are shown on figure 5. Accounting units are outlined on the map and 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 Regions, and in sizable parts of the South Atlantic-Gulf, Lower Mississippi, Pacific Northwest, and California Regions (fig. 2). Most of these are areas with relatively large amounts of precipitation.

Highest dissolved-solids concentrations occurred in the Missouri, Arkansas-White-Red, Rio Grande, Texas-Gulf, and in the southernmost part of the California Regions. Most of these are regions with annual precipitation rates considerably less than the national average and have significant amounts of irrigated agriculture. The highest mean concentration of dissolved solids, 24,900 mg/L, was at the station on the Salt Fork of the Brazos River near Aspermont, Texas (08082000). Mean concentrations greater than 4,000 mg/L were found at 11 NASQAN stations--5 in Texas, 3 in Oklahoma, 2 in New Mexico, and 1 in California.

Hardness.--Many industrial and domestic water users are concerned about hardness. Hard water requires more soap and synthetic detergents for home laundry and washing than soft water, and contributes to scaling in boilers and industrial equipment. Hardness is primarily caused by compounds of calcium and magnesium although other metals such as iron, strontium, and manganese also contribute to hardness. 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 concentrations of hardness at 345 stations during the 1976 water year are represented by the histogram at the top of figure 6. The highest ten values, those greater than 1,050 mg/L, are lumped in the last bar of the histogram in order to maintain the scale. About half of the mean hardness concentrations for the stations are in the soft to moderately hard categories, and about half can be classified as hard to very hard.

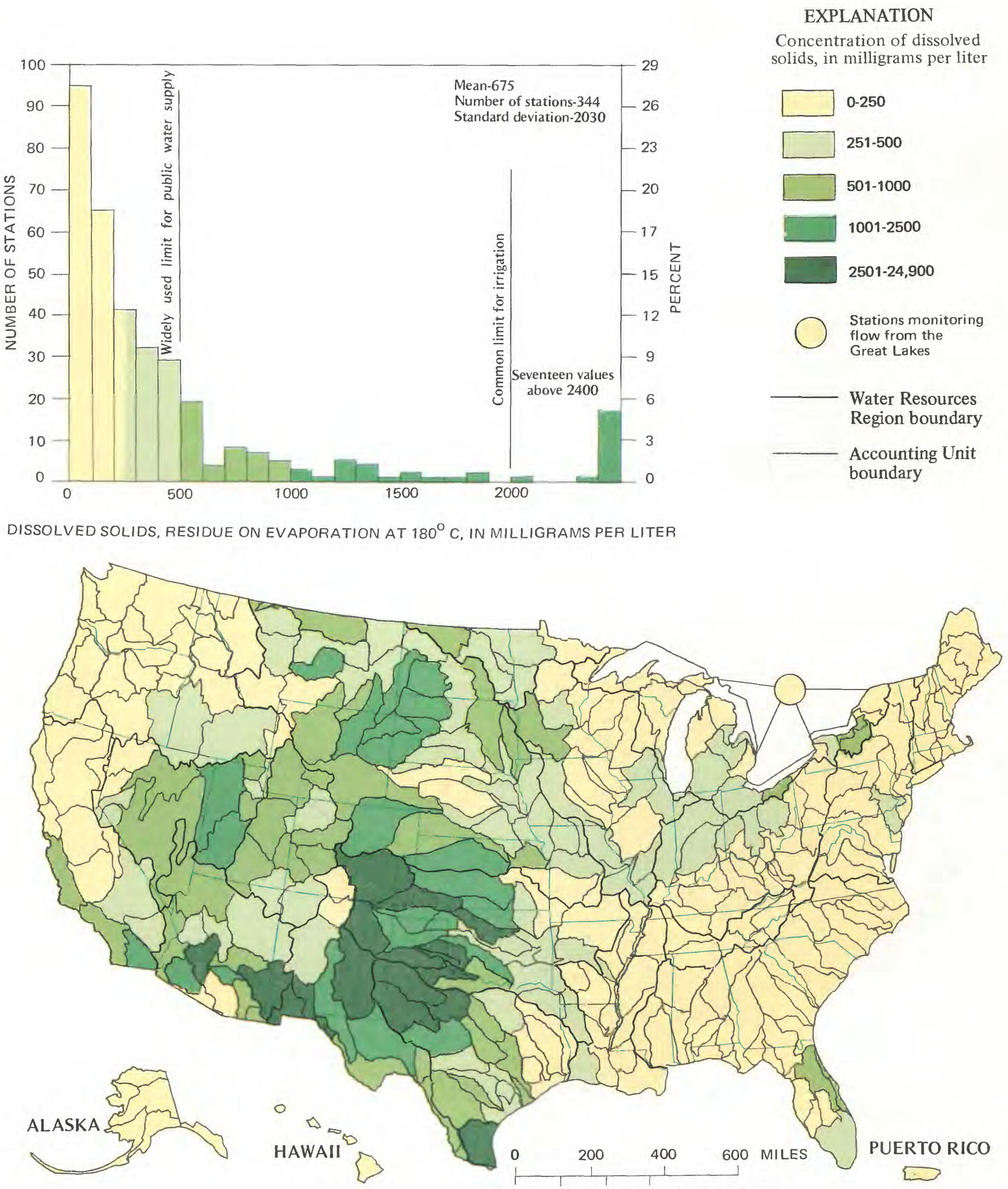


Figure 5. Mean concentration of dissolved solids measured as residue on evaporation (ROE) at 180° C at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

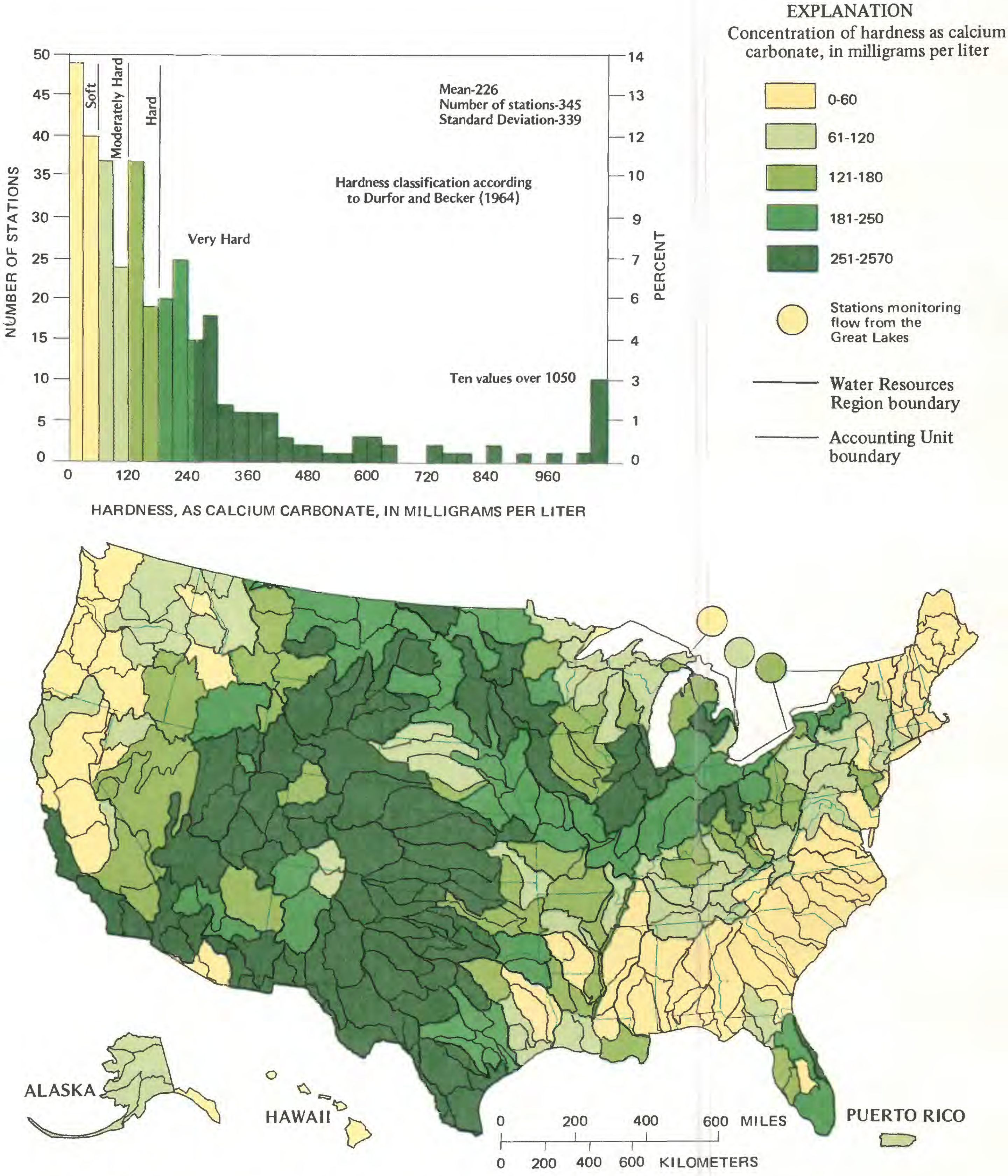


Figure 6. Mean concentration of hardness as calcium carbonate at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

Distribution patterns of hardness in the United States are shown on the map of accounting units at the bottom of figure 6. Softest waters were measured in streams of the New England, South Atlantic-Gulf, Pacific Northwest, California, and Hawaii Regions. Moderately hard waters were common in many of the streams 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.--The presence of chloride can adversely affect taste in drinking water, and can cause corrosion and other problems in industrial water supplies. Water Quality Criteria 1972 (National Academy of Sciences and National Academy of Engineering, 1972) recommends that chloride in drinking water not exceed 250 mg/L, because of problems with taste.

Ranges of mean chloride concentrations at 345 stations during the 1976 water year are shown in the histogram at the top of figure 7. 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 concentrations to be represented-data from 29 stations with mean concentrations greater than 290 mg/L are lumped in the bar at the right edge of the histogram.

Distribution patterns of chloride concentrations are shown on the map at the bottom of figure 7. Mean concentrations exceeding 250 mg/L were measured in streams of the Texas-Gulf, Lower Mississippi, Arkansas-White-Red, Rio Grande, Great Basin, and Lower Colorado Regions and at one station in each of the South Atlantic-Gulf, Missouri, and California Regions. The highest mean concentration, 13,149 mg/L, was measured at the Salt Fork of the Brazos River in Texas (08082000). The mean chloride concentration was greater than 1,000 mg/L at 14 stations.

Sulfate.--Large concentrations 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).

The distribution of sulfate concentrations in NASQAN streams is shown in the histogram at the top of figure 8. Mean concentrations of less than 50 mg/L were measured at about 56 percent of the NASQAN stations, and concentrations greater than the recommended drinking water limit of 250 mg/L were measured at about 14 percent of the stations. Mean sulfate concentrations of more than 2,100 mg/L were found at NASQAN stations on the Red River near Wayside, Texas (07297910), and the Pecos River at Red Bluff, New Mexico (08407500).

Distribution patterns of sulfate concentrations are shown on the map at the bottom of figure 8. Lowest concentrations were found in the New England, Mid-Atlantic, South Atlantic-Gulf, Pacific Northwest, Tennessee, Alaska, Hawaii, and Caribbean Regions. Moderate concentrations, less than the recommended limit of 250 mg/L, existed throughout most of the Midwest. Streams with mean sulfate concentrations in excess of 1,000 mg/L included the two streams mentioned above plus the Belle Fourche

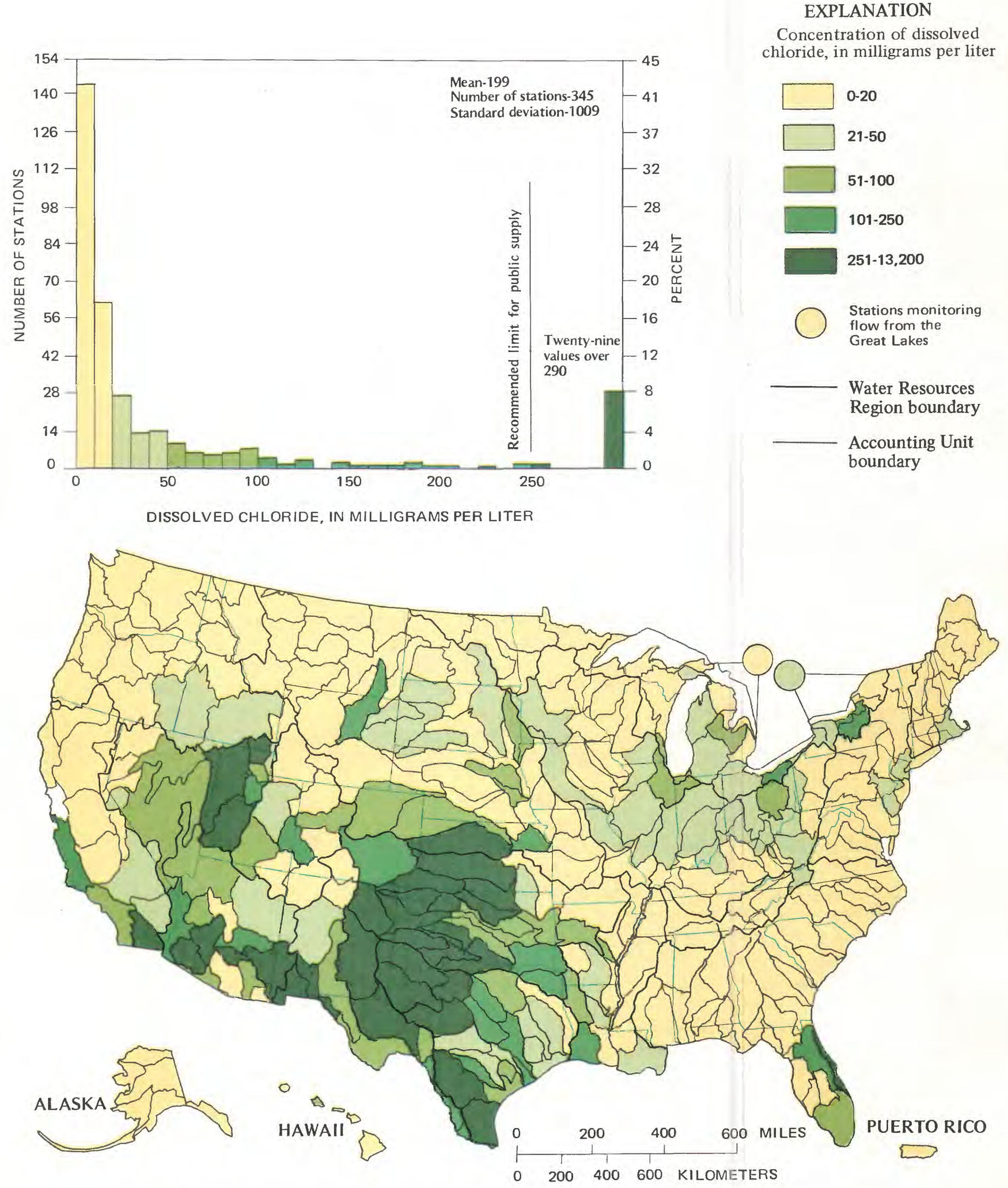


Figure 7. Mean concentration of dissolved chloride at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

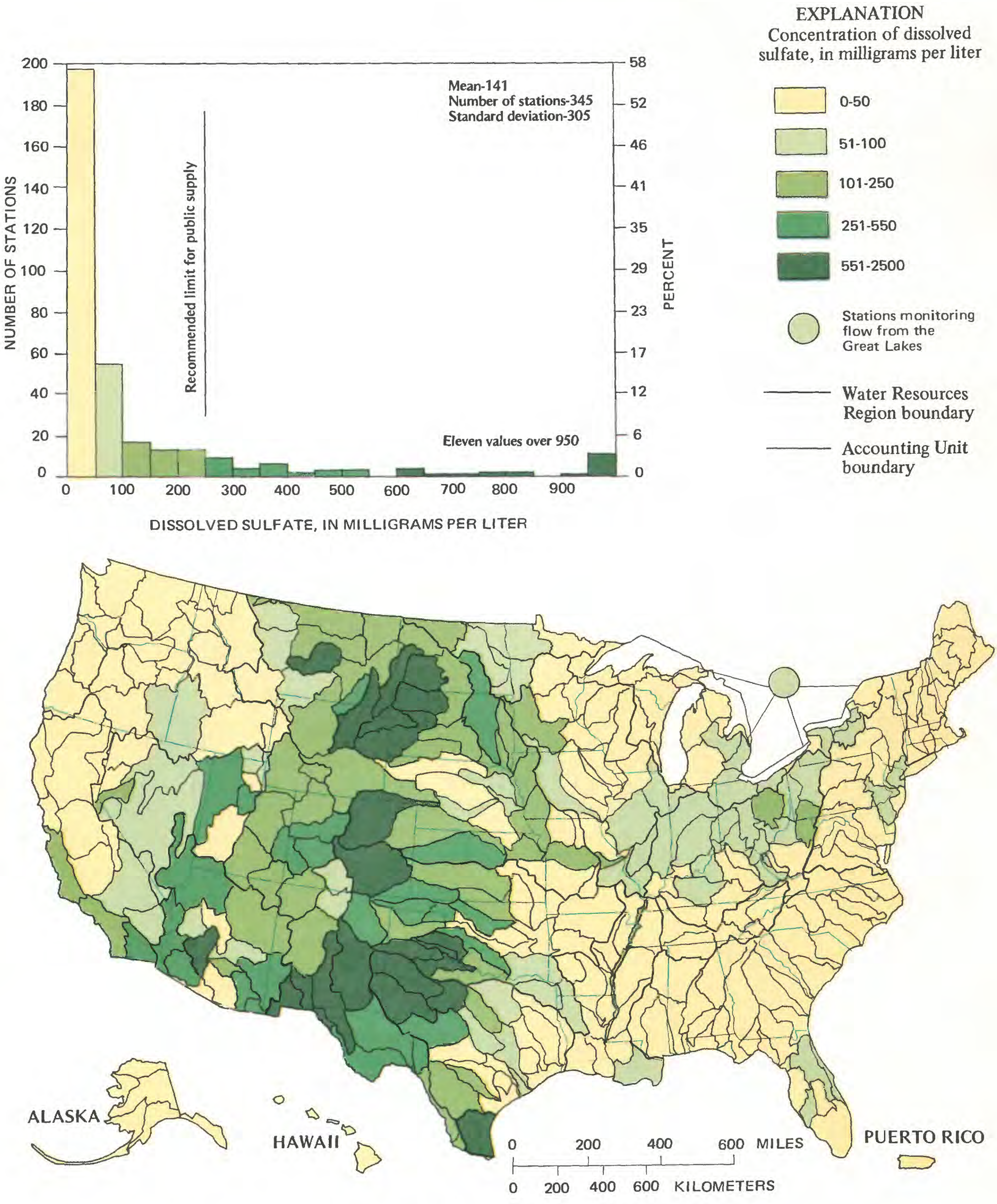


Figure 8. Mean concentration of dissolved sulfate at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

River in South Dakota (06438000), the Arkansas River near Coolidge in Kansas (07137500), and six streams in Texas: the Salt Fork Red River near Wellington (07300000), the Brazos River at Seymour (08082500), Beals Creek near Westbrook (08123800), Los Olmos Creek near Falfurrias (08212400), Red River near Burkburnett (07308500), and the Salt Fork Brazos River near Aspermont (08082000).

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. The alkalinity determination is an indication of the concentrations of bicarbonates, carbonates, and hydroxides which tend to elevate the pH of water above a value of about 4.5; therefore, it is a measure of the base content of water, that is, the capability of water to neutralize acids. Alkalinity usually is measured directly, but it also can be estimated from concentrations of bicarbonate and carbonate by the relation:

$$\text{Alkalinity as } CaCO_3 = 50.04 \times [(\text{bicarbonate} \times 0.01639) + (\text{carbonate} \times 0.03323)]$$

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 12.

A moderate amount of alkalinity is desirable in streams to prevent fluctuation of pH due to 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 suitability for irrigation through induction of iron chlorosis in some plants at concentrations exceeding 600 mg/L (U.S. Environmental Protection Agency 1976a). Large concentrations 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 9. The histogram is quite uniform, with about 99 percent of the NASQAN stations having concentrations less than 300 mg/L. The four highest values (over 300 mg/L) are lumped in the bar at the right edge of the histogram. The greatest mean alkalinity was 430 mg/L and the median was about 106 mg/L.

National patterns in alkalinity are shown on the map at the bottom of figure 9. Lowest alkalinities (poor buffering capacity) were found in some of the streams in the New England, Mid-Atlantic, South Atlantic-Gulf, Tennessee, Pacific Northwest, and Hawaii Regions; the same waters that contained small concentrations of dissolved solids. Moderate or high alkalinities are found in some streams of all the other Water Resource Regions.

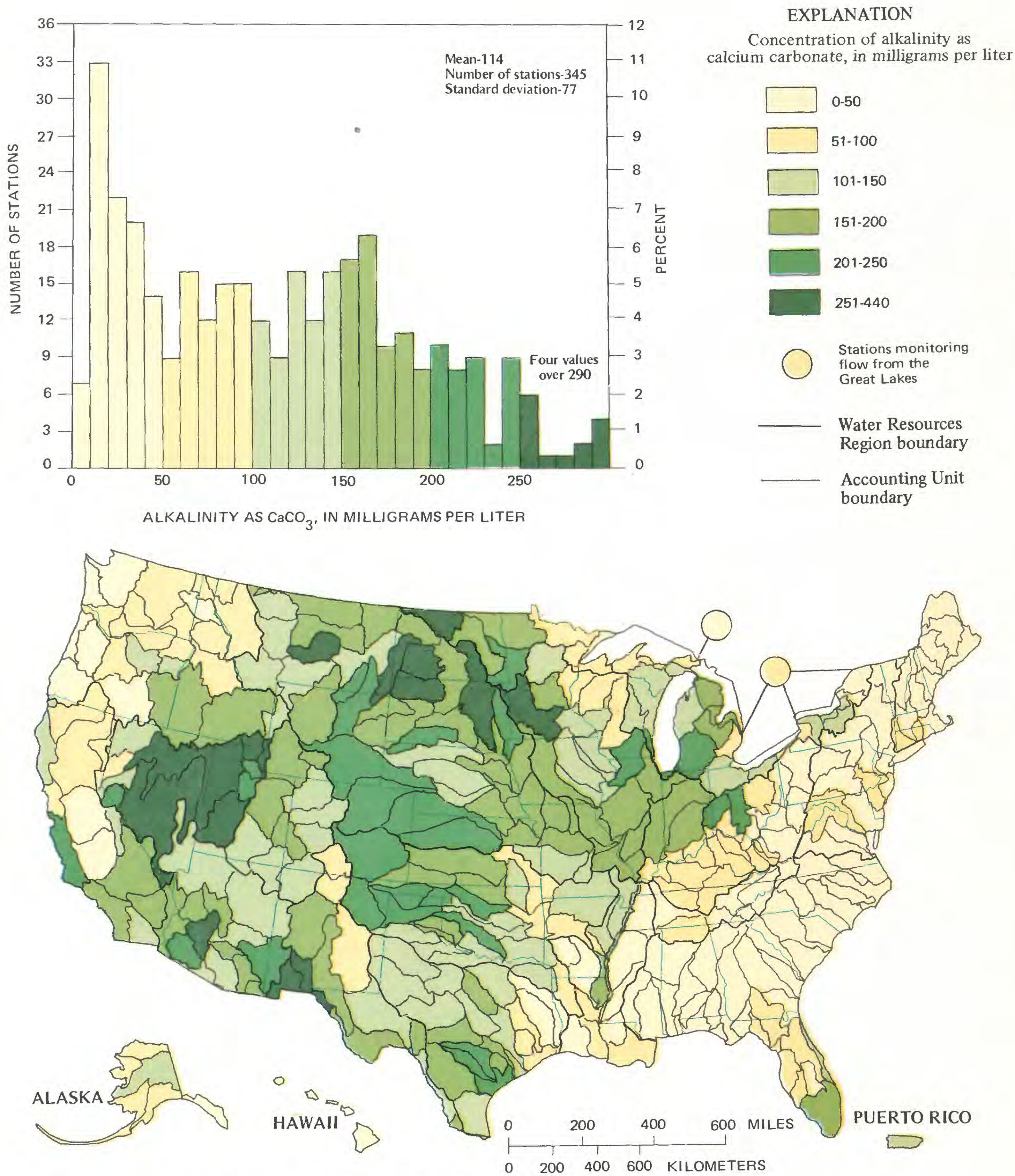


Figure 9. Mean alkalinity as calcium carbonate at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

Fluoride.--Small concentrations of fluoride (up to about 1 mg/L) in drinking water are considered to have a beneficial health effect through the reduction in the incidence of tooth decay. However, large concentrations 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 concentrations of fluoride in drinking water consider the annual average of maximum daily air temperature (U.S. Environmental Protection Agency, 1975, p. 59570).

The histogram at the top of figure 10 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 concentration for livestock of 2.0 mg/L also is noted on the illustration. Figure 10 shows that over three-fourths of the streams have mean fluoride concentrations less than 0.5 mg/L, and only seven streams have concentrations greater than 1.4 mg/L.

Distribution patterns of fluoride concentration are shown on the map at the bottom of figure 10. Concentrations were less than 1 mg/L except in the Peace River at Arcadia, Florida (02296750), 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.

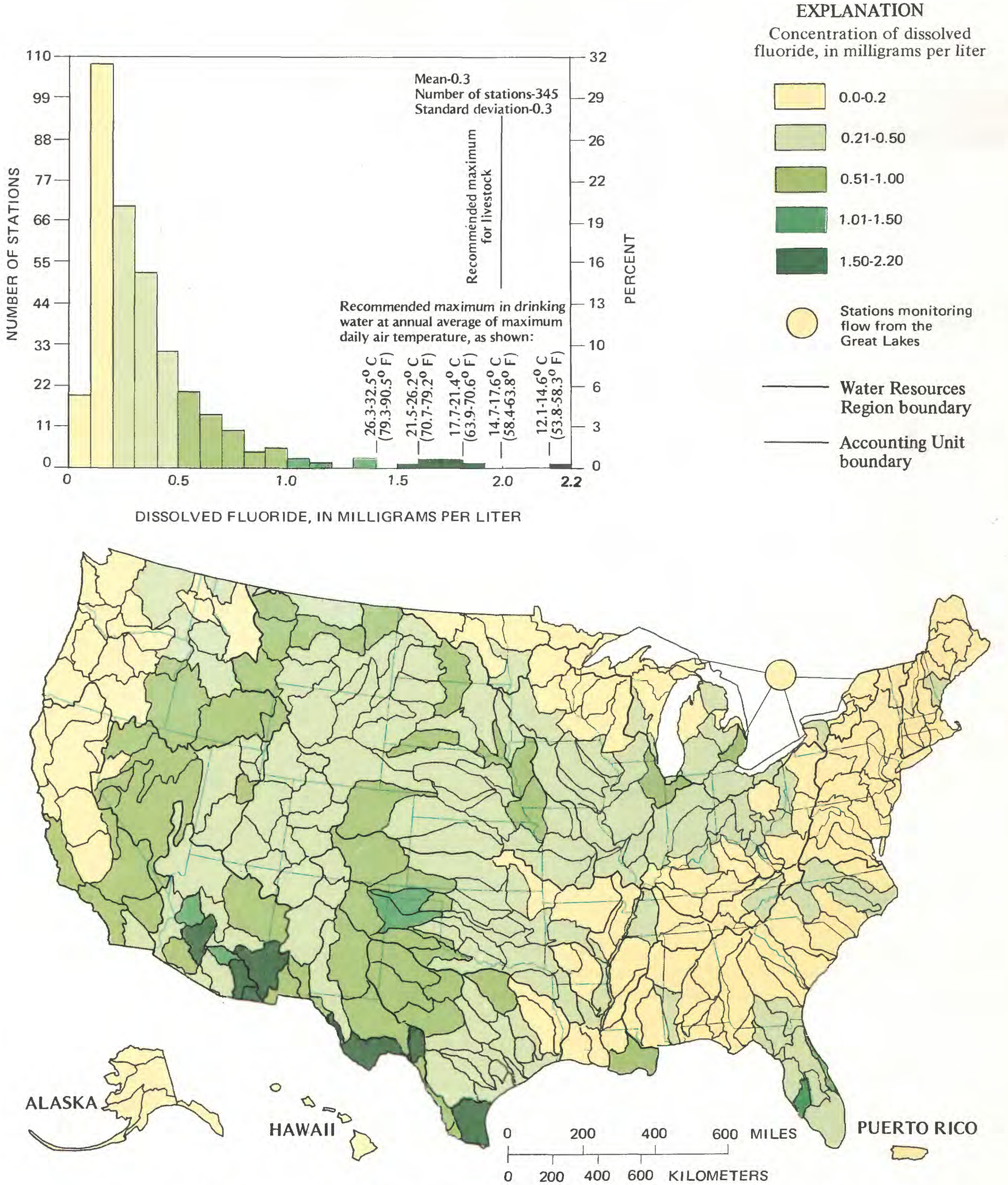


Figure 10. Mean concentration of dissolved fluoride at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

SPECIFIC CONDUCTANCE

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 $CaCO_3$.

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 12. Terms including the regression coefficient, $\underline{R}$, and the regression constant, $\underline{B}$, 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 12 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 specific conductance are included in table 12 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. 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 12 or so periodic measurements.

As an example of the application of the duration tables and the regression equations, consider the data in table 12 for station 01404100, the Raritan River near South Bound Brook, New Jersey. As shown by values in the duration table, specific conductance at the station was in the range of 187 to 703 micromhos for 80 percent of the year. Also, hardness correlates with conductance having a correlation coefficient of 0.984, and the regression equation is:

$$\text{Hardness, in mg/L, as } CaCO_3 = 0.226 \text{ (SC)} + 6.37.$$

Therefore, hardness values ranged from 49 to 165 mg/L for 80 percent of the time, with a standard error of estimate of 9.4 mg/L. The table further shows that specific conductance exceeded 986 micromhos for 1 percent of the time, from which it can be estimated that hardness exceeded 229 mg/L as $CaCO_3$ for about 1 percent of the time.

As mentioned previously, users of table 12 should keep in mind that limited data can create false impressions regarding both the mean and standard deviation 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 collected; 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

The major nutritive species of nitrogen and phosphorus are commonly found in all waters at low concentrations. Significant concentrations of nitrogen and phosphorus are usually the result of the addition of municipal or industrial wastewater or runoff from agricultural areas. This nutrient enrichment is undesirable because it may lead to algal blooms and subsequently produce low dissolved oxygen concentrations. There frequently is confusion caused by the units used in the reporting of concentrations of nitrogen and phosphorus. Some investigators report the concentrations of the ions in mass per unit volume; nitrogen as NO_3 (nitrate) and phosphorus as PO_4 (phosphate). Other investigators report only the mass of nitrogen or phosphorus; nitrogen as N and phosphorus as P. The latter method is used throughout this report and gives results considerably different from the former--1.0 mg/L of "nitrite nitrogen as N" (NO_2--N) is equivalent to 3.3 mg/L of nitrite (NO_2); 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 "phosphorus as P" is equivalent to 3.07 mg/L phosphorus as phosphate (PO_4). Differences may also be found in the schemes for reporting nitrogen and phosphorus as dissolved, suspended, or total. Data in this report represent "total" concentrations and, therefore, include the portions that are in solution (dissolved) plus the portions that are associated with suspended sediments.

Nitrogen.-Numerous species of nitrogen are found in natural waters. Most common are several forms of organic nitrogen, ammonia (NH_4), nitrite (NO_2), and nitrate (NO_3). In oxygenated water, organic nitrogen and ammonia are converted by micro-organisms to nitrite and then rapidly to nitrate. Water samples at NASQAN stations are analyzed for the sum of organic nitrogen and ammonia, frequently called kjeldahl nitrogen, and for the sum of nitrite plus nitrate ($NO_2 + NO_3$).

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 (1976a) specifies a maximum concentration of 0.02 mg/L of un-ionized ammonia (NH_3) for protection of freshwater aquatic life and a maximum allowable concentration of nitrate nitrogen (NO_3--N) of 10 mg/L for domestic water supply. The Annual Report of the U.S. Council on Environmental Quality (CEQ, 1975, p. 353), used a maximum nitrate nitrogen (NO_3--N) concentration of 0.6 mg/L as a "benchmark" level for "aquatic life protection," suggesting that higher levels are indicative of undesirable enrichment. Many state water-quality standards specify a maximum equivalent of 10 mg/L nitrate nitrogen (NO_3--N), but several states have adopted more rigid criteria.

The distribution of data on the mean concentrations of kjeldahl nitrogen, KN, (ammonia plus organic nitrogen) at NASQAN stations during the 1976 water year is represented on the histogram at the top of figure 11. Concentrations of KN alone were enough to exceed some of the more rigid criteria for aquatic life protection for levels of total nitrogen.

Patterns of KN concentrations are shown on the map at the bottom of figure 11. Highest concentrations (greater than 1 mg/L as N) were in farming regions, near population centers in the Midwest and Southwest, and in four accounting units in Florida. Two extremely high concentrations of 1,800 mg/L and 880 mg/L were measured on the Little Colorado River at Cameron, Arizona (09401200). These values were high enough to raise the national mean shown on figure 11. With these values, the national mean concentration is 1.5 mg/L; without it the national mean concentration is 0.89 mg/L. It should be noted that when the high values of KN were measured, suspended sediment concentrations were extremely high, greater than 70,000 mg/L.

Data representing annual mean concentration of nitrite plus nitrate as nitrogen ($NO_2 + NO_3$--N) at NASQAN stations during the 1976 water year is represented on the histogram at the top of figure 12. Mean concentrations were less than 0.5 mg/L at about 60 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 was exceeded at the station on the Gila River above the diversion at Gillespie Dam, Arizona (09518000), where the mean $NO_2 + NO_3$--N was 10.8 mg/L and where a maximum concentration of 17 mg/L was measured during the year.

Patterns of national distribution of nitrite plus nitrate nitrogen are shown on the map at the bottom of figure 12. Some of the lowest concentrations were in regions having moderate to high rainfall and relatively small amounts of intensive agriculture. Higher concentrations, those

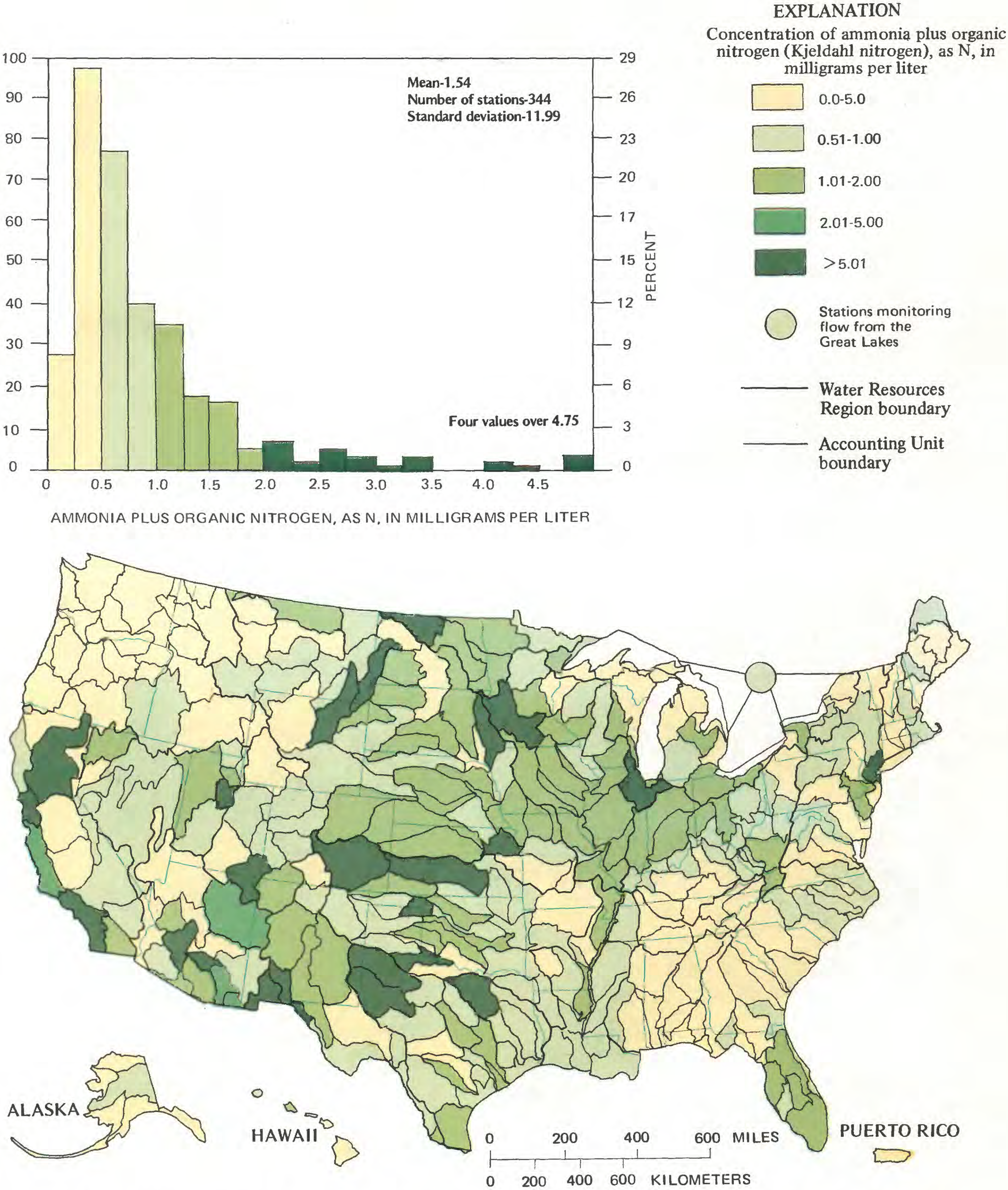


Figure 11. Mean concentration of ammonia plus organic nitrogen (Kjeldahl nitrogen), as N, at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

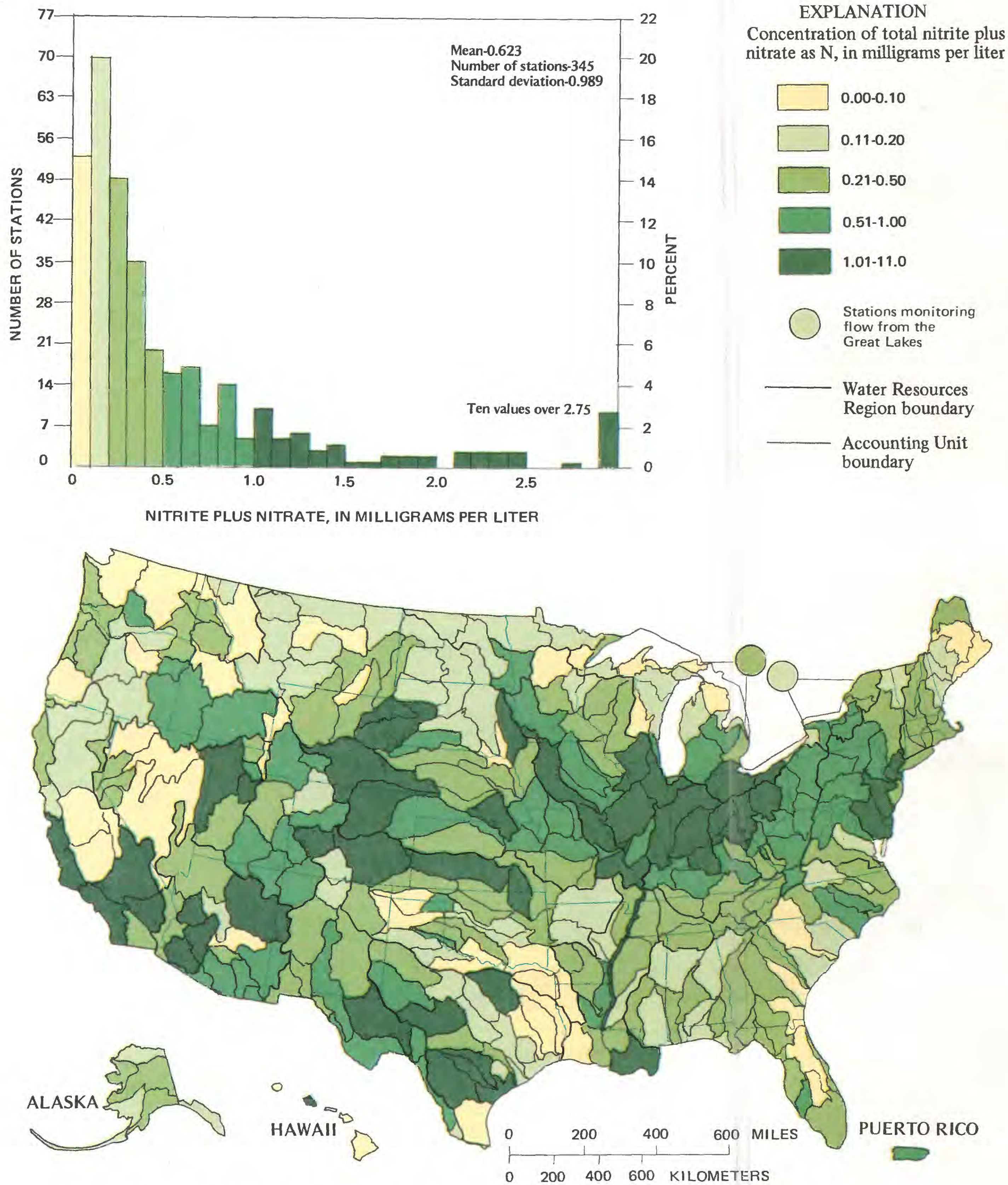


Figure 12. Mean concentration of total nitrite plus nitrate as N at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

greater than 1.0 mg/L, generally are associated with farming regions or areas of high population density. The single highest concentration, measured at the Gila River above the diversion of Gillespie Dam (09518000), is in an area that apparently received local runoff that was high in nitrogen.

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) human and animal wastes, (3) synthetic detergents, (4) fertilizers, and (5) plant detritus. 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 contributing to excessive growths of algae and rooted plants.

There are no generally accepted, uniform standards or criteria for maximum concentrations of phosphorus in natural waters. The U.S. Council on Environmental Quality (1976, p. 271) has suggested maximum concentrations of phosphorus of 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, 1971).

Distribution of the mean concentrations of total phosphorus at NASQAN stations during the 1976 water year is shown on the histogram at the top of figure 13. About one fourth of the stations had mean concentrations of P of less than 0.05 mg/L; about half the stations had mean concentrations less than 0.1 mg/L, and about 30 percent had mean concentrations greater than 0.2 mg/L.

The map at the bottom of figure 13 shows the national pattern of total phosphorus concentration measured at NASQAN stations. Lowest concentrations were measured in the East (parts of New England, Mid-Atlantic, and South Atlantic-Gulf Regions), in 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 10.9 mg/L for the Little Colorado River at Cameron, Arizona (09401200).

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. In order to assess these problems, it is necessary to document the amount of suspended sediment being carried by streams.

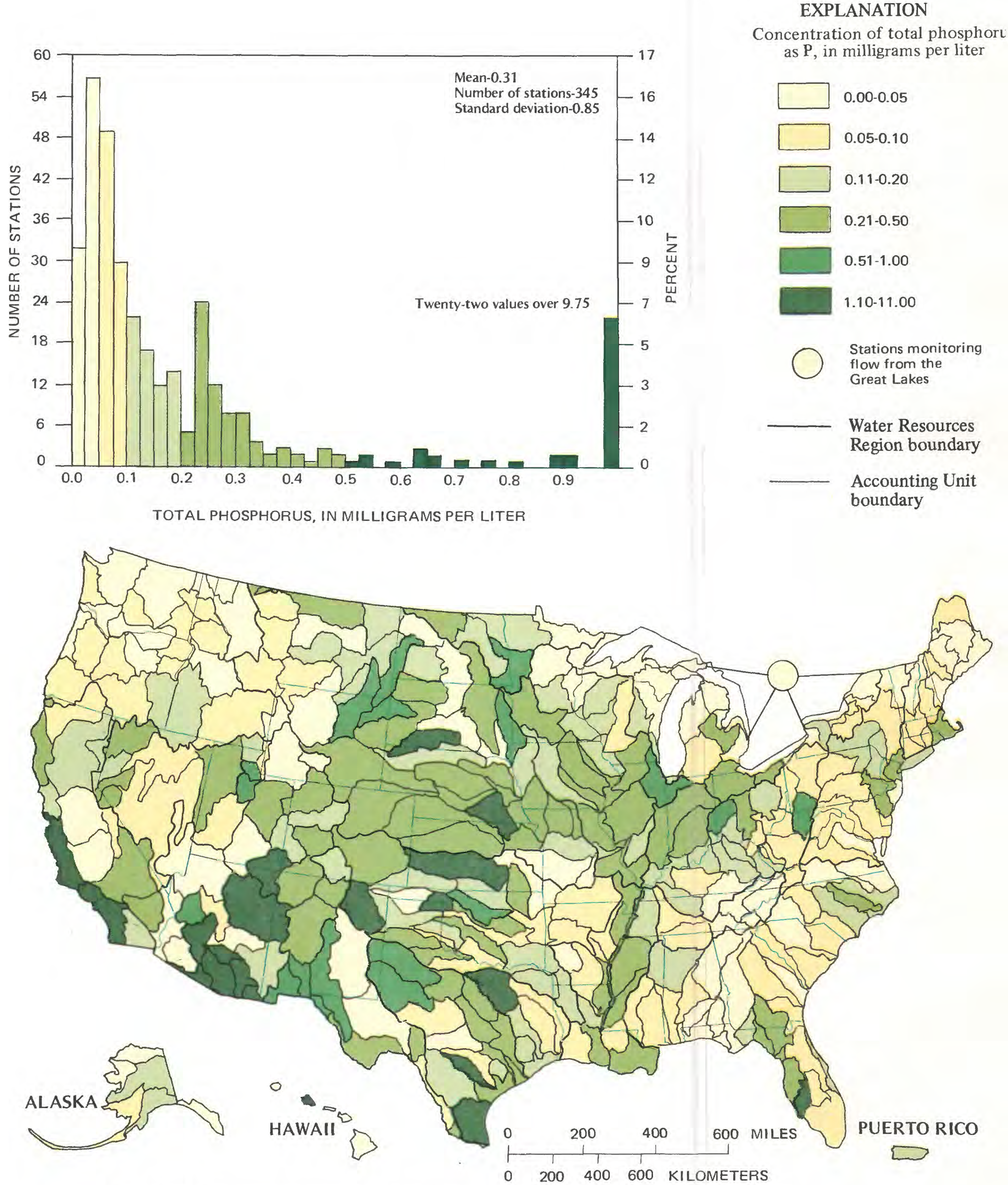


Figure 13. Mean concentration of total phosphorus as P at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

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 samples are collected at most NASQAN stations normally 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 presented in this report generally provide a fairly accurate representation of what one would expect to find during average conditions in the stream. In many cases this annual data does not provide sufficient information to determine the suspended sediment load or the mean size of the sediment carried in a stream during a year, since the samples are usually not collected during the periods of highest concentrations or greatest sediment loads.

Summaries of the suspended-sediment data collected at NASQAN stations during the 1976 water year are in table 12. Histograms and maps in figures 14 and 15 show the national patterns of suspended sediment as represented by the mean and maximum concentrations measured at the stations. Mean concentrations were less than 100 mg/L at about 60 percent of the stations, and exceeded 1,000 mg/L at only 26 stations (fig. 14). Both the largest mean concentration, 84,880 mg/L, and the highest reported single value, 149,000 mg/L, were at the San Pedro River at Winkelman, Arizona (09473500). In fact, only two NASQAN concentrations were greater than 90,000 mg/L. These were the San Pedro River and the Gila River at Kelvin, Arizona (09474000), (mean = 54,077 mg/L; maximum = 95,800 mg/L).

In general, lowest mean concentrations of suspended sediment were measured in the East, Southeast, Great Lakes, and Pacific Northwest. In some cases, anomalously low concentrations were measured at NASQAN stations located short distances downstream from reservoirs, which serve as sediment traps. In these cases, although sediments are being eroded from the land, they are not leaving the basins because they are trapped in the reservoirs.

Highest concentrations of suspended sediment were measured in streams draining the more heavily farmed, semiarid, or sparsely vegetated areas of the Mid-Atlantic, Mississippi, Missouri, Ohio, Colorado, Texas-Gulf, Rio Grande, and Alaska Regions (fig. 15).

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 <u>indicator</u>

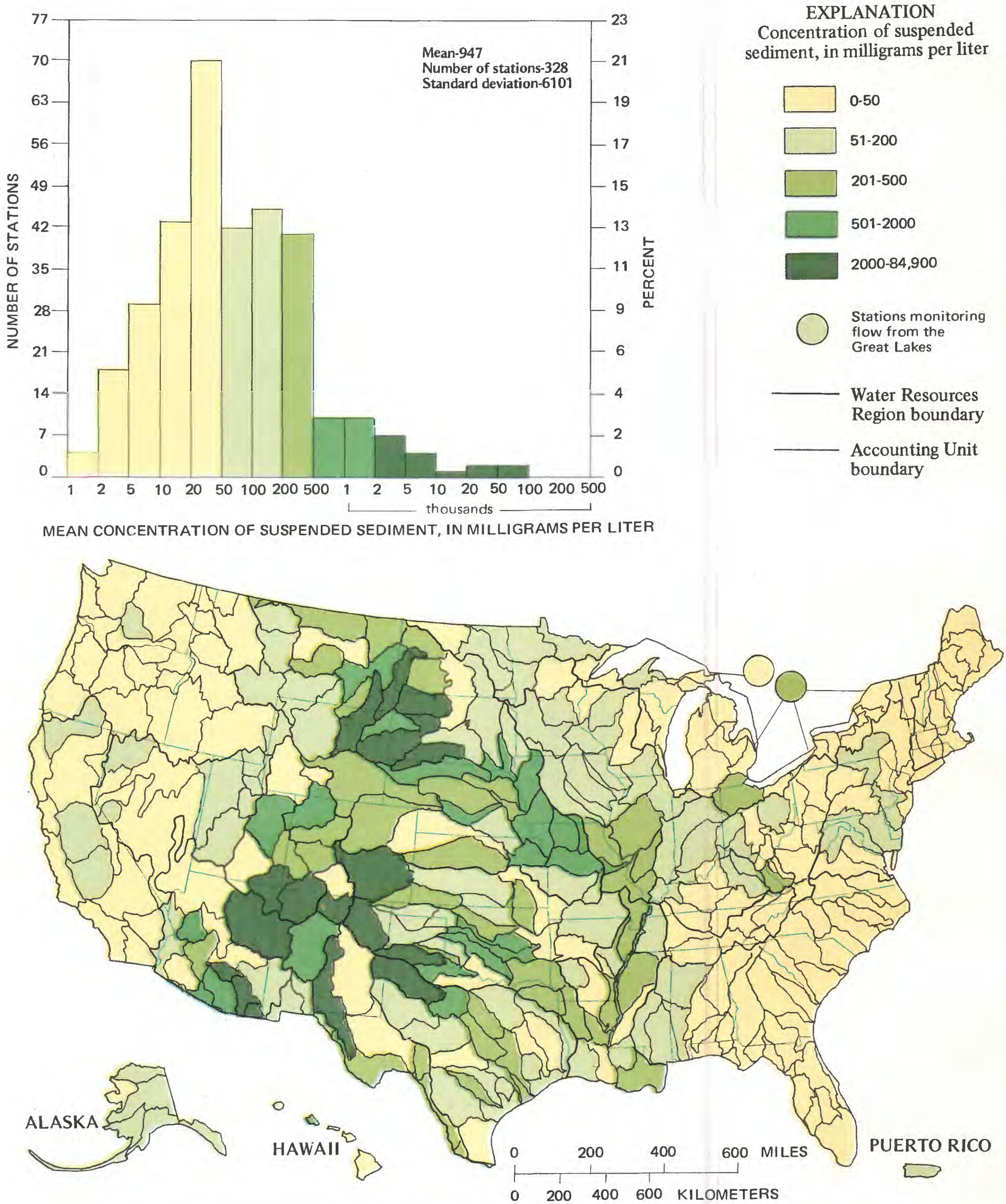
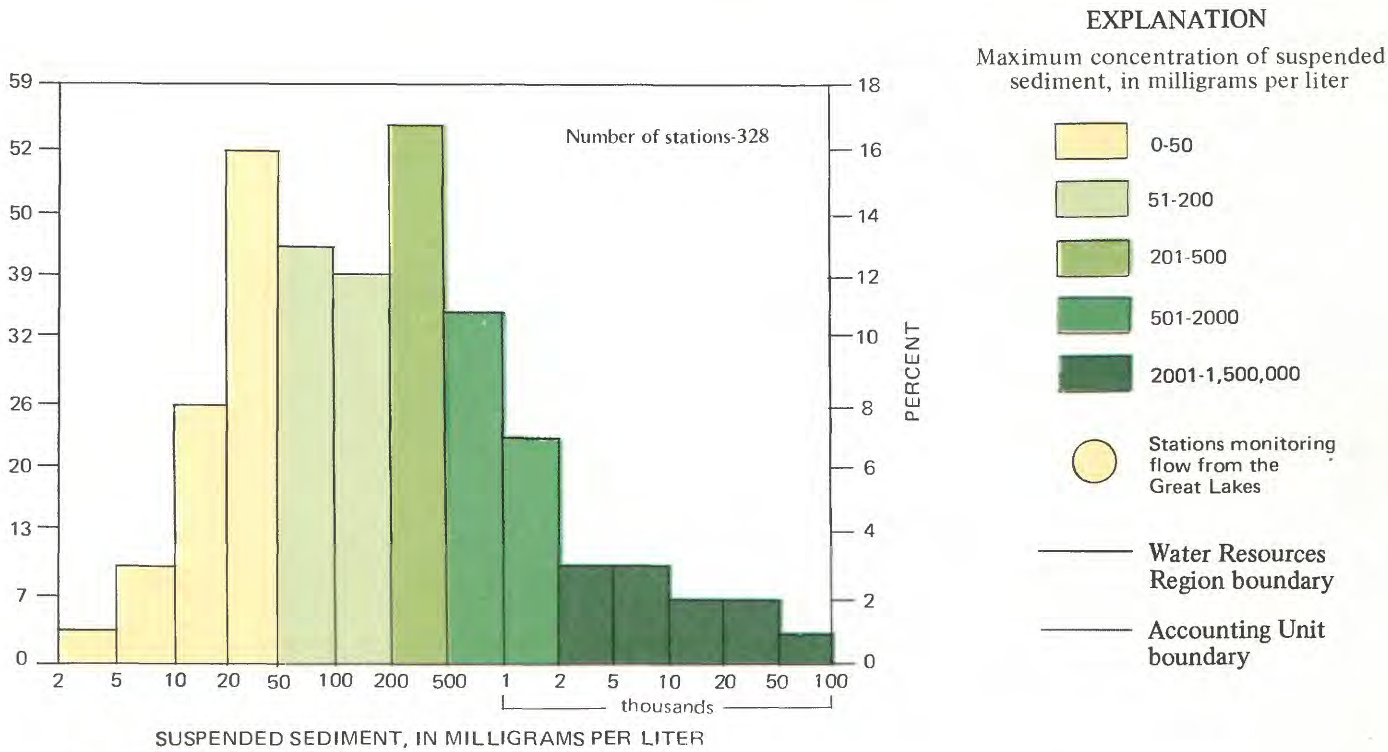


Figure 14. Mean concentration of suspended sediment at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.



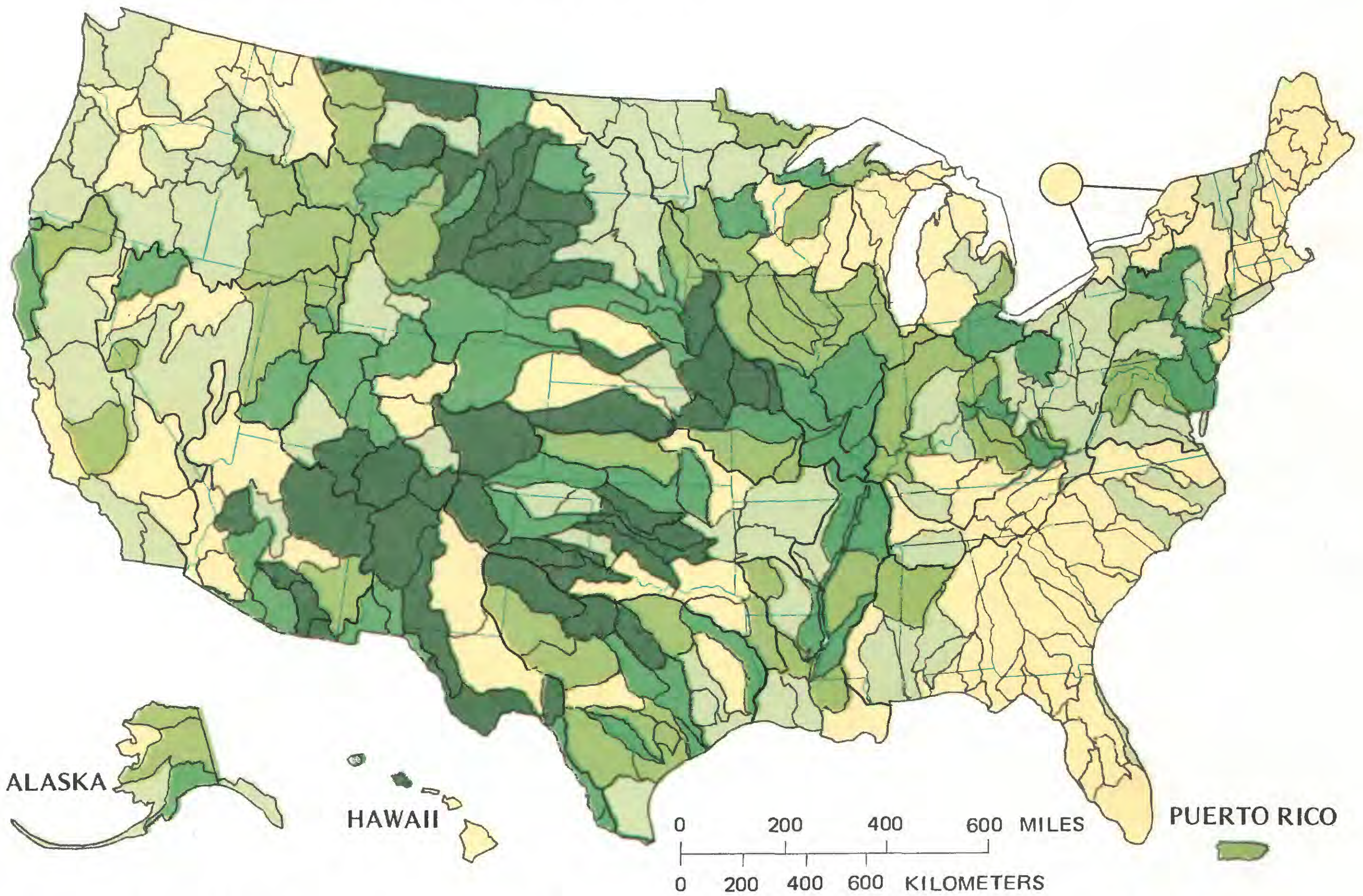


Figure 15. Maximum concentration of suspended sediment at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

organisms in the so-called coliform bacterial group, and more recently in the fecal streptococci bacterial group. The logic of the scheme is: (1) indicator bacteria show the presence of fecal contamination, and (2) contaminated waters are likely to contain pathogens in numbers proportional to the numbers of indicator bacteria.

At NASQAN stations, bacteria samples are collected at monthly intervals to determine 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 341 NASQAN stations during the 1976 water year are shown on the histogram and map on figure 16. The life span of enteric bacteria is limited outside the body of a warm-blooded animal, so bacterial data from stream 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 on figure 16 does indicate some regions affected by animal or human wastes. Lowest mean colony counts generally occurred in the South Atlantic-Gulf, Tennessee, 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.

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 than fecal coliform bacteria in animals. Humans have more fecal coliform bacteria than fecal streptococci bacteria. Commonly used guidelines in interpreting bacteria data are: (1) a ratio of fecal coliform/fecal streptococci bacteria of greater than 4 indicates predominantly human sources, (2) a ratio of fecal coliform/fecal streptococci bacteria

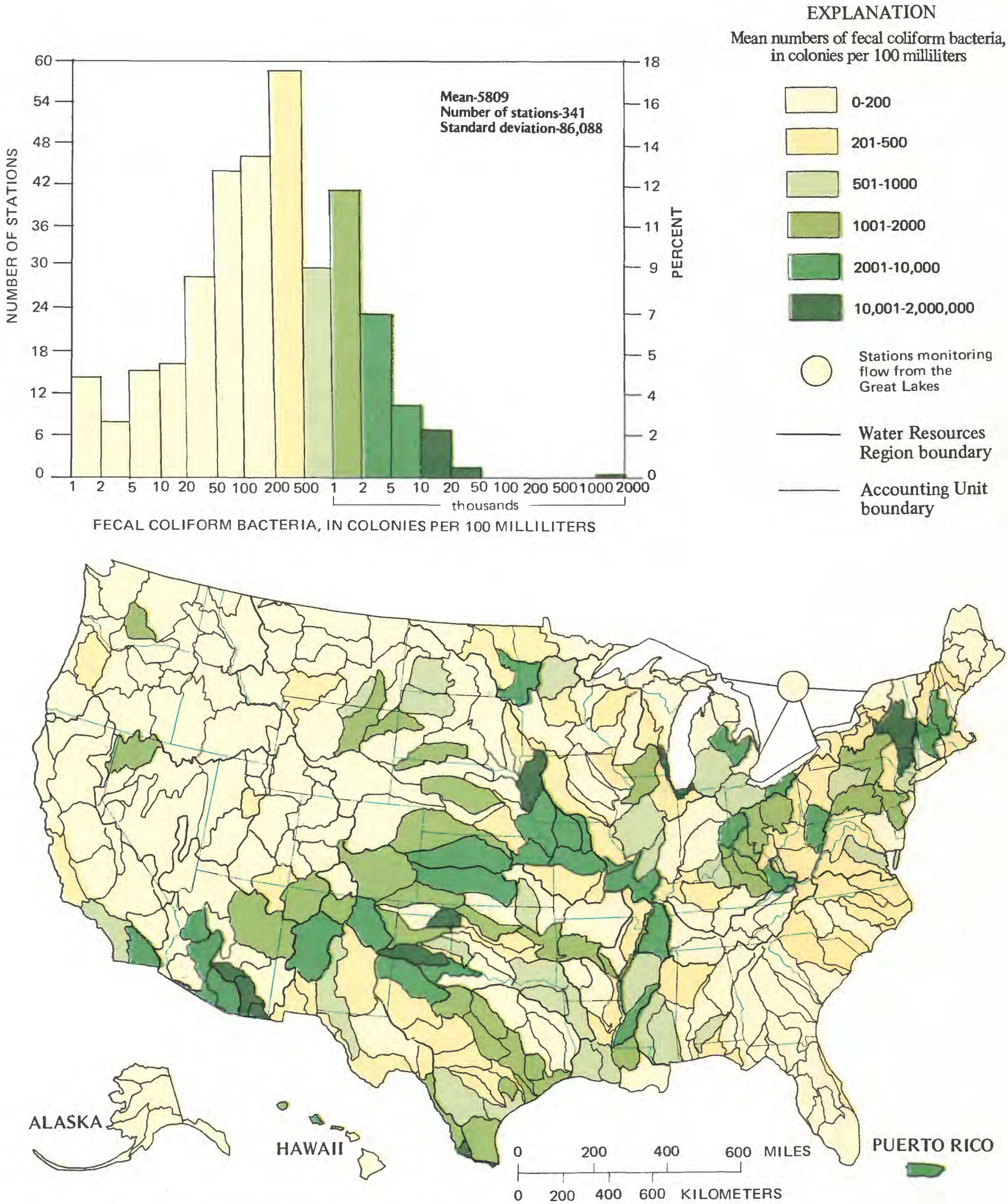


Figure 16. Mean numbers of fecal coliform bacteria sampled at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

of less than 1 indicates predominantly animal sources, and (3) a ratio in the range of 1 to 4 indicates 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 12 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 cannot 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 multicelled algae. They serve as food for higher forms of aquatic life, and in large numbers form nuisance "blooms" which can cause filter clogging, objectionable tastes and odors, and other problems in water-treatment plants.

Data on the concentrations 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 identification of the predominant forms to the genus level. Summaries of the numbers of phytoplankton at NASQAN stations are given on the data sheets of table 12, and national summaries are represented on the map and histogram of figure 17. 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 17 and the patterns for the principal nutrients, nitrogen and phosphorus, in figures 11, 12, and 13. 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 areas having large human and livestock population, intensive agriculture, and erodible soils.

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, periphyton at NASQAN stations were collected

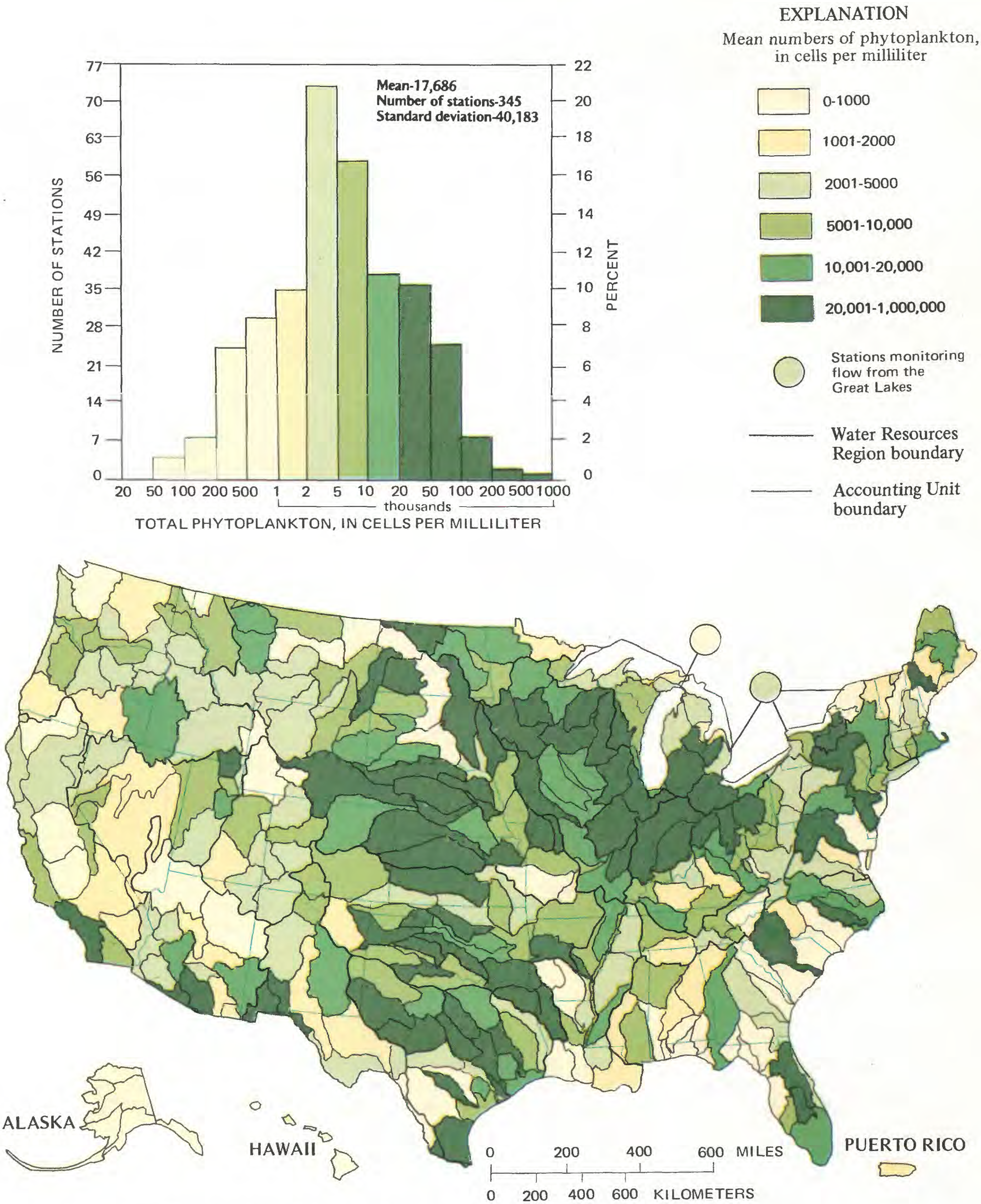


Figure 17. Mean numbers of phytoplankton sampled at NASQAN stations during 1976 water year. Map at bottom is colored to show mean data for stations representing flow from the accounting unit.

using artificial (plastic strip) substrates placed in the streams for exposure periods of from 2 to 4 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 the artificial substrates colonized by periphyton 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" represents the total organic matter, ash, and sediment present in the sample. Measurements of sample "ash weight" provide information on the amount of inorganic (mineral) content of the plants. The organic or weight of the periphyton is the difference between the dry weight and the ash weight, and represents the actual weight of the periphyton. Amounts of chlorophyll a and b (photosynthetic plant pigments) in the periphyton serve to indicate the biological productivity of the plant community.

Data summarizing the biomass and the chlorophyll content of periphyton collected at NASQAN stations during the 1976 water year are shown in the tables in the lower portion of each page of table 12. 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.

To facilitate interpretation of the periphyton data from the NASQAN stations, table 3 summarizes the data by Water Resources Region. Because of the small amount of data and the variability of measurements 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 New England, Alaska, and the Hawaii Regions, though data from the latter two regions were so scarce that valid comparisons with other regions probably cannot be made. Relatively high periphyton growths were measured in the Upper Mississippi, Missouri, Great Basin, and California Regions.

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 both unfiltered ("total") samples (water sediment mixtures) and on samples that have been filtered ("dissolved") through 0.45 micrometer pore-size membrane filters. In a few instances, dissolved concentrations reported for a particular sample exceed reported total concentrations because of the different precisions in the two determinations or because of non-representative sample-splitting prior to analyses.

Table 3. Ranges of periphyton biomass and chlorophyll measured at NASQAN stations during the 1976 water year, summarized by Water Resources Regions.

Region Number and name	Number of stations	Biomass dry wt. (g/m^2)	Biomass organic wt. (g/m^2)	Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)
01 New England	10/10[a/]	0.500-23.3	0.385-7.10	0.102-58.4	0.000-9.35
02 Mid-Atlantic	13/14	.200-65.7	.000-16.9	.000-110	.000-6.40
03 South Atlantic-Gulf	23/23	.000-116	.000-31.2	.000-120	.000-24.0
04 Great Lakes	26/26	.000-360	.000-30.9	.000-110	.000-10.8
05 Ohio	18/18	.000-130	.000-27.0	.000-101	.000-17.0
06 Tennessee	2/2	.000-32.0	.000-12.0	.000-140	.000-24.0
07 Upper Mississippi	17/17	.000-370	.000-49.9	.000-147	.000-19.3
08 Lower Mississippi	10/10	.200-671	.000-20.0	.200-82.0	.000-26.0
09 Souris-Red-Rainy	6/6	.000-61.8	.000-13.6	.000-97.5	.000-4.90
10 Missouri Basin	36/36	.000-157	.000-45.7	.000-114	.000-21.9
11 Arkansas-White-Red	10/10	.000-166	.000-26.0	.000-120	.000-9.80
12 Texas-Gulf	17/17	.154-192	.077-15.0	.000-38.0	.000-7.30
13 Rio Grande	8/8	.000-160	.000-10.0	.000-66.0	.000-2.24
14 Upper Colorado	8/8	.308-190	.154-10.0	.000-54.0	.000-.900
15 Lower Colorado	10/10	.200-100	.100-12.3	.200-110	.000-28.1
16 Great Basin	13/13	.000-280	.000-37.0	.000-193	.000-11.5
17 Pacific Northwest	23/22	.000-260	.000-20.0	.000-130	.000-11.0
18 California	10/10	.400-184	.100-62.9	.000-82.7	.000-11.9
19 Alaska	4/4	.846-5.60	.234-2.00	.260-1.20	.000-.080
20 Hawaii	6/6	.500-20.0	.200-7.15	1.10-83.1	.000-28.3
21 Caribbean	1/0	22.0	18.8	-	-

[a/] Number of stations where periphyton biomass analysis was made/Number of stations where chlorophyll was analyzed.

Data on dissolved concentrations of minor elements approximate what may be in water after it has passed through public-supply treatment plants which use sedimentation, filtration, and chlorination procedures and is generally the form used in establishing drinking water criteria. Water, passing through plants with more extensive treatment such as softening or filtering 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, and is generally the form used in establishing water quality criteria for maintenance of aquatic life. Under some conditions, such as change of pH or total ionic balance of the sample, some of the minor elements 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. Many state and local standards are more stringent than the federal standards listed in the table.

Water samples for analysis of minor elements are collected about four times per year at most NASQAN stations. Ranges in concentrations for each station are shown in the bottom part of each summary page in table 12. For most minor elements analyzed, not enough data were available to compute mean concentrations or to construct maps and histograms as was done for major inorganics constituents.

Tables 5 and 6 summarize the maximum and concentrations of total and dissolved minor elements by Water Resources Regions (see fig. 2). In some cases, table 6 shows higher values 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.

There is a problem in interpreting some of the data on minor element concentrations because of interferences in the analytical methods. Specifically, for cadmium, chromium, cobalt, lead, and mercury concentrations, it is often necessary to report values as "less than some concentration." The true value is not known, and in some cases it is impossible to interpret if the standards for these elements were exceeded.

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

(Concentration in micrograms per liter)

Source	Ar-senic (As)	Cad-mium (Cd)	Chro-mium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Man-ganese (Mn)	Mer-cury (Hg)	Sele-nium (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	200-1000	-	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.

Table 5. Ranges of concentrations of total minor elements measured at NASQAN stations during the 1976 water year, summarized by Water Resources Regions.

Region Number and Name	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Manganese (Mn)	Mercury (Hg)	Selenium (Se)	Zinc (Zn)
	Range of Concentrations (micrograms per liter)										
01 New England	0-1	0-8	0-20	0-2	0-30	60-1,700	0-140	10-90	0.5-1.3	0-3	0-50
02 Mid-Atlantic	0-38	0-20	0-50	0-40	0-100	40-36,000	0-160	0-2,900	.0-1.2	0-2	0-500
03 South Atlantic-Gulf	0-40	0-20	0-50	0-100	0-50	20-4,800	0-150	0-260	.0-1.4	0-1	0-300
04 Great Lakes	0-11	0-30	0-30	0-7	0-40	40-3,100	0-300	0-160	.0-1.9	0-2	0-420
05 Ohio	0-20	0-20	0-50	0-30	0-50	130-18,000	0-340	10-1,500	.0-.8	0-3	0-300
06 Tennessee	0-10	0-4	<5-30	0-3	3-50	100-3,100	6-40	10-250	.0-1.0	0-2	10-110
07 Upper Mississippi	0-15	0-10	0-110	0-60	0-80	240-23,000	0-320	20-1,500	.0-1.5	0-13	10-150
08 Lower Mississippi	0-15	0-20	0-70	0-50	0-1900	140-17,000	0-170	0-700	.0-.9	0-1	2-400
09 Souris-Red-Rainy	0-7	0-10	0-10	0-60	0-120	120-2,400	0-100	0-1,200	.0-.5	0-3	0-60
10 Missouri Basin	0-22,000	0-50	0-330	0-100	0-410	20-740,000	0-500	0-29,000	.0-9.3	0-22	0-1,100
11 Arkansas-White-Red	0-150	0-40	0-250	0-400	0-340	0-240,000	0-400	0-6,800	.0-4.0	0-29	4-1,400
12 Texas Gulf	0-44	0-3	0-160	0-40	0-160	0-120,000	0-70	10-1,500	.0-.8	0-9	10-640
13 Rio Grande	1-21	0-30	0-50	0-450	0-30	80-21,000	0-350	10-820	.0-1.7	0-2	10-110
14 Upper Colorado	0-15	0-20	0-250	0-330	2-500	10-280,000	0-800	0-14,000	.0-.3	0-21	0-1,700
15 Lower Colorado	2-750	0-150	0-1,200	0-1,600	0-4,300	0-660,000	100-2,900	0-57,000	.0-3.6	0-19	0-6,500
16 Great Basin	1-45	0-10	0-30	0-50	0-50	90-6,400	0-100	10-790	.0-1.7	0-3	0-120
17 Pacific Northwest	0-18	0-10	0-70	0-60	0-220	20-3,800	0-200	0-220	.0-4.2	0-1	0-190
18 California	0-35	0-60	0-80	0-330	0-90	30-6,100	0-200	10-1,100	.0-2.6	0-3	0-250
19 Alaska	0-15	2-10	0-40	2-50	10-50	40-26,000	20-100	10-540	.0-3.3	0-1	0-100
20 Hawaii	0-2	0-30	0-360	0-50	0-90	0-91,000	0-140	0-980	.0-.3	0-2	0-100
21 Caribbean	0-2	0-3	<10-60	0-20	6-50	50-24,000	2-30	0-720	.0-.2	0-1	10-60

Table 6. Ranges of concentrations of dissolved minor elements at NASQAN stations during the 1976 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	0-1	0-8	0-20	0-3	0-10	30-650	0-43	0-90	<0.5	0-3	0-90
02 Mid Atlantic	0-2	0-6	0-20	0-8	0-10	0-840	0-48	0-520	.0-.9	0-1	0-110
03 South Atlantic-Gulf	0-8	0-6	0-10	0-4	0-17	0-1,300	0-66	0-190	.0-1	0-4	0-150
04 Great Lakes	0-4	0-10	0-30	0-6	0-20	0-570	0-150	0-140	.0-.5	0-4	0-70
05 Ohio	0-3	0-10	0-10	0-6	0-20	0-460	0-39	0-560	.0-.7	0-2	0-240
06 Tennessee	0-1	0-1	0-10	0-2	0-5	0-240	0-16	0-90	.0-.6	0	0-50
07 Upper Mississippi	0-4	0-4	0-10	0-3	0-71	0-500	0-410	0-1,800	.0-.6	0-7	0-200
08 Lower Mississippi	0-5	0-7	0-10	0-2	0-26	0-520	0-31	0-380	.0-.5	0-1	0-60
09 Souris-Red-Rainy	0-10	0-8	0-10	0-3	0-140	0-560	0-84	0-710	.0-<.5	0-1	0-30
10 Missouri Basin	0-140	0-8	0-20	0-10	0-36	0-950	0-41	0-2,300	.0-2.3	0-22	0-60
11 Arkansas-White-Red	0-9	0-7	0-20	0-4	0-13	0-720	0-64	0-780	.0-2.3	0-22	0-610
12 Texas-Gulf	0-10	0-6	0-20	0-4	0-6	0-740	0-16	0-580	.0-.5	0-8	0-100
13 Rio Grande	0-24	0-2	0-30	0-2	0-5	0-530	0-3	0-760	.0-.7	0-2	0-30
14 Upper Colorado	0-4	0-3	0-10	0-3	0-9	0-740	0-5	0-70	.0-.3	0-21	0-290
15 Lower Colorado	1-16	0-10	0-50	0-4	0-15	0-220	0-45	0-1,400	.0-.3	0-14	0-670
16 Great Basin	0-40	0-3	0-10	0-2	0-20	0-840	0-33	0-770	.0-.6	0-2	0-250
17 Pacific Northwest	0-11	0-20	0-10	0-3	0-38	0-240	0-47	0-160	.0-2.1	0-1	0-130
18 California	0-31	0-100	0-30	0-3	1-33	0-1,700	0-58	0-740	.0-4.1	0-4	0-340
19 Alaska	0-1	0-2	0-10	0-2	0-10	20-220	0-20	0-200	.0-.5	0-1	0-30
20 Hawaii	0-1	0-30	0-10	0-4	0-5	0-200	0-32	0-100	.0-.3	0-2	0-20
21 Caribbean	0-2	0-5	0-10	0-9	0-19	0-260	0-18	0-440	.0-.1	0	0-40

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

Arsenic.--Mean concentrations of dissolved arsenic exceeded 5 µg/L at only about 10 percent of the stations. The highest single measured concentration of dissolved arsenic was 140 µg/L in a sample collected from the Belle Fourche River near Elm Springs, South Dakota (06438000), which was the only site where the drinking water standard of 50 µg/L was exceeded. The highest concentrations of dissolved arsenic generally were in the Missouri, Great Basin, Rio Grande, and parts of the Lower Colorado, and California Regions.

Total arsenic concentrations (table 5) were considerably higher than concentrations of dissolved arsenic (table 6) in about half of the Water Resources Regions. Maximum concentrations exceeded 50 µg/L in three regions, mostly in the central and western parts of the country. The highest measured concentration of total arsenic, 22,000 µg/L, was also in the Belle Fourche River near Elm Springs, South Dakota (06438000).

Cadmium.--The highest maximum concentrations of dissolved cadmium were measured at stations in the California and Hawaii Regions (table 6). A maximum dissolved concentration of 100 µg/L was measured in the New River at Calexico, California (10254970). The highest measured concentration of total cadmium (table 5) of 150 µg/L was measured at the San Pedro River at Winkelman, Arizona (09473500). Concentrations of total cadmium exceeding the drinking water standard of 10 µg/L were measured at stations in over half of the Water Resources Regions.

Chromium.--The drinking water standard for dissolved chromium (50 µg/L) was not exceeded in any of the Water Resources Regions. However, the standard for public water supply sources as well as for aquatic life of 50 µg/L (National Academy of Sciences and National Academy of Engineering, 1972) was exceeded for total chromium, in 11 Water Resources Regions. The highest total chromium concentration of 1,200 µg/L, measured at the San Pedro River at Winkelman, Arizona (09473500) exceeds the U.S. Environmental Protection Agency (1976a) criteria of 300 µg/l for aquatic life. Two additional sites in the Lower Colorado River Region (Gila River at Kelvin, Arizona 09474000; and Little Colorado River at Cameron, Arizona 09401200), had total chromium concentrations of 750 and 450 µg/L, respectively. In addition to those measured in the Lower Colorado Region, a concentration of 380 µg/L was measured at a site in the Missouri Region (Belle Fourche River near Elm Springs, South Dakota, 06438000) and a concentration of 360 µ g/L was measured at a site in the Hawaii Region (Waimea River at Waimea, 16031000).

Cobalt.--Data on cobalt showed that measured concentrations were less than most established standards and criteria. The maximum total cobalt concentrations, which exceeded the criteria of 500 µg/L for support of aquatic life, were measured at two sites in the Lower Colorado Region. A concentration of 1,600 µg/L was measured at the San Pedro River at Winkelman, Arizona (09473500), and a concentration of 600 µg/L was measured at the Little Colorado River at Cameron, Arizona (09401200). 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 of the 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 stations. Both the U.S. Council on Environmental Quality (1975) and Wentz (1974) suggest a limit of 10 µg/L for aquatic life protection. This limit was exceeded by dissolved copper in 13 of the Water Resources Regions, and by total copper in all Regions, with the highest total concentration of 4,300 µg/L measured at the San Pedro River at Winkelman, Arizona (09473500), and the second highest concentration of 3,800 µg/L measured at the Gila River at Kelvin, Arizona (09474000). In addition, the most stringent criterion of 200 µg/L for total copper in water used for irrigation was exceeded at six of the Water Resources Regions.

Iron.--The concentrations of dissolved and total iron measured at NASQAN stations frequently exceed water quality criteria. The public water supply standard of 300 µg/L was exceeded by dissolved iron concentrations in all but six of the Water Resources Regions. The highest dissolved iron concentration of 1,700 µg/L was measured at the Santa Ana River below Prado Dam, California (11074000). The criterion for total iron of 1,000 µg/L recommended for support of aquatic life (U.S. Environmental Protection Agency, 1976a) was exceeded in all of the Water Resources Regions. The highest concentration (740,000 µg/L) was measured at Belle Fourche River near Elm Springs, South Dakota (06438000). The next three highest concentrations were measured in the Lower Colorado Region; 660,000 µg/L at the San Pedro River at Winkelman, Arizona (09473500); 490,000 µg/L at the Little Colorado River at Cameron, Arizona (09401200); and 400,000 µg/L at the Gila River at Kelvin, Arizona (09474000).

Lead.--The standard of 50 µg/L for dissolved concentrations of lead in public water supplies was exceeded in six of the Water Resources Regions. The highest concentration of 410 µg/L was measured at the Mississippi River at Keokuk, Iowa (05474500), in the Upper Mississippi Region. Total lead concentrations exceeded the criterion of 30 µg/L recommended for support of aquatic life (U.S. Council on Environmental Quality, 1975) at all but one of the Water Resources Regions. The most stringent criterion of 5-10 µg/L recommended by Wentz (1974) for aquatic life maintenance was exceeded in all of the Water Resources Regions. The highest total lead concentration of 2,900 µg/L was again measured at the San Pedro River at Winkelman, Arizona (09473500).

Manganese.--Criteria for manganese in public water supplies (50 µg/L) are set because higher concentrations of manganese can cause discoloration of water and objectionable tastes in beverages. This criteria was exceeded by dissolved manganese concentrations in all of the Water Resources Regions. The highest concentration was 2,300 µg/L at the James River near Scotland, South Dakota (06478500), in the Missouri Region. Other high concentrations were measured in the Upper Mississippi and Lower Colorado River Regions. Criteria for support of aquatic life are much more lenient (100 to 1,000 µg/L), but even the highest criteria of 1,000 µg/L was exceeded by total manganese concentrations in 10 of the Water Resources Regions. The highest concentration of 57,000 µg/L was measured at a site in the Lower Colorado Region (San Pedro River at Winkelman, Arizona, 09473500). Other high concentrations were measured at two other sites in the Lower Colorado Region and at sites in the Missouri and Upper Colorado Regions. In general, lowest concentrations of dissolved and total manganese were measured in the New England, Tennessee, and the Pacific Northwest Regions.

Mercury.--NASQAN sites in four of the Water Resources Regions had dissolved mercury concentrations which exceeded the 2 µg/L criteria established for public water supply sources. The highest dissolved mercury concentration was 4.1 µg/L measured at the Mokelumne River at Woodbridge, California (11325500). Additional high concentrations were measured at sites in the Missouri, Arkansas-White-Red and Pacific Northwest Regions. 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 total mercury concentrations at NASQAN stations in most regions of the United States.

Selenium.--NASQAN stations in the Missouri, Arkansas-White-Red, and Upper and Lower Colorado Regions reported dissolved selenium concentrations greater than the public water supply standard of 10 µg/L. The highest concentration was 22 µg/L which was measured at the Belle Fourche River near Elm Springs, South Dakota (06438000), and the Arkansas River near Coolidge, Kansas (07137500). An aquatic life criterion of 1,000 µg/L total selenium has been proposed by Wentz (1974), which is higher than the concentrations measured at any of the NASQAN stations. The highest total selenium concentration of 29 µg/L was measured at the Salt Fork Red River near Wellington, Texas (07300000).

Zinc.--The public water supply standard of 5,000 µg/L for dissolved zinc was not exceeded by any measured values at NASQAN stations. The highest dissolved zinc concentration was 670 µg/L measured at the Little Colorado River at Cameron, Arizona (09401200). The much more stringent criteria of 30-70 µg/L of total zinc proposed by Wentz (1974) for support of aquatic life was exceeded in all but three of the Water Resources Regions.

However, mean concentrations of dissolved zinc were generally less than 50 µg/L. Specifically, about 92 percent of the sites sampled had concentrations less than 30 µg/L. Generally, dissolved zinc concentrations were highest in streams of the western half of the country, with highest concentrations in the Arkansas-White-Red and Upper and Lower Colorado Regions.

TOTAL ORGANIC CARBON

Total organic carbon (TOC) represents the amount of organic carbon 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 have low nutrient concentrations. Low concentrations 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.

Water 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 12 of this report. These data are summarized by Water Resources Regions in table 7.

Table 7. Ranges of concentrations of total organic carbon measured at NASQAN stations during the 1976 water year, summarized by Water Resources Regions.

Region number and name	No. of Stations	Concentration range (mg/L)
01 New England	12	2.5-120
02 Mid Atlantic	14	1.0-24
03 South Atlantic-Gulf	41	.0-52
04 Great Lakes	28	.8-65
05 Ohio	22	1.4-13
06 Tennessee	5	.6-12
07 Upper Mississippi	17	3.7-44
08 Lower Mississippi	19	.0-23
09 Souris-Red-Rainy	6	1.2-50
10 Missouri Basin	39	1.6-171
11 Arkansas-White-Red	25	.6-55
12 Texas-Gulf	18	1.6-54
13 Rio Grande	12	1.4-27
14 Upper Colorado	9	2.1-170
15 Lower Colorado	13	1.3-765
16 Great Basin	13	.8-24
16 Great Basin	13	.8-24
17 Pacific Northwest	26	.8-65
18 California	14	.2-69
19 Alaska	6	.4-16
20 Hawaii	6	.3-40
21 Caribbean	4	1-12

The TOC concentrations measured at NASQAN stations during the 1976 water year ranged from 0 to 765 mg/L. A report by Kehoe (1977) shows the average concentration of TOC in potable waters from rivers to be 11.8 mg/L. As shown in the summary in table 7, maximum concentrations of TOC exceeded this value in all of the Water Resources Regions. However, the average mean concentrations exceeded this value only in the Souris-Red-Rainy, Missouri, and Lower Colorado Regions. Concentrations greater than 50 mg/L were measured in 10 of the Water Resources Regions, with the highest concentration of 765 mg/L measured in the Little Colorado River at Cameron, Arizona (09401200). Concentrations of TOC of less than 1 mg/L were measured at stations in 10 regions, and the lowest values, in general, were at stations in the Tennessee, Pacific Northwest, Hawaii, Alaska, and Caribbean Regions.

PESTICIDES

The term "pesticides" includes all of the compounds used to control insects, weeds, fungus, or other pests. Pesticide residues 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 residues in a cooperative program with the U.S. Environmental Protection Agency (EPA), in which samples are collected by the USGS and analyzed by EPA. Additional pesticide samples are collected at NASQAN stations as part of local programs and 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, methyl 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 semiannually (November and May).

Table 8 summarizes the maximum concentrations of pesticide residues which were analyzed in samples of water-sediment mixtures during the 1976 water year. Table 9 summarizes the maximum concentrations of pesticide residues detected in bottom materials. Only those pesticides which were detected for at least one station are listed in tables 8 and 9. Recommended or mandatory pesticide limits in water that have been set for protection of aquatic life are listed at the bottom of table 8.

The Lower Mississippi, Arkansas-White-Red, Texas-Gulf, and California Regions have a greater occurrence and higher maximum concentrations of pesticide residues than the rest of the United States. The highest concentration of any pesticide in a water-sediment sample was 3.2 μg/L of atrazine in the Illinois River at Valley City, Illinois (05586100). No sample contained pesticide residues in concentrations exceeding the mandatory limits for domestic water supplies. Recommended limits for aquatic-life protection were exceeded for chlordane, DDT, dieldrin, endrin, ethion, heptachlor, and lindane.

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 from a water-sediment mixture collected from the stream at the same time. Most pesticide concentrations shown in table 9 are considerably higher than the values for the water-sediment mixtures. Highest concentrations were measured in bottom materials in the Hawaii Region, in the Kalihi Stream at Kalihi (16229300).

Table 8. Maximum concentrations of pesticide residues in water-sediment samples detected at NASQAN stations during the 1976 water year, summarized by Water Resources Regions.

Number of stations in region at which pesticide residue was detected/maximum concentrations in micrograms per liter
(-, indicates pesticide residue not detected at stations)

Region Number and Name	Number of pesticide stations	Aldrin	Atrazine	Chlor-dane	DDD	DDE	DDT	Diaz-inon	Diel-drin	Endrin	Ethion	Hepta-chlor	Hepta-chlor Epoxide	Lindane	Mala-thion	Methyl Parathion	2,4-D	2,4,5-T	Silvex
01 New England	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02 Mid Atlantic	9	-	-	-	-	-	-	-	1/.02	-	-	-	-	-	-	-	-	-	-
03 South Atlantic-Gulf	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04 Great Lakes	9	-	1/.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05 Ohio	14	-	2/.47	-	-	-	-	-	1/.01	-	-	-	-	-	-	-	1/.82	-	-
06 Tennessee	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07 Upper Mississippi	10	-	4/3.2	-	-	-	-	-	3/.01	-	-	-	-	-	-	-	-	-	-
08 Lower Mississippi	12	1/.05	4/2.5	-	-	1/.01	1/.05	7/.09	2/.01	1/.01	-	-	-	-	-	2/.04	4/.1	4/.85	1/.02
09 Souris-Red-Rainy	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Missouri Basin	20	-	4/2.9	-	-	-	-	-	1/.01	-	-	-	-	-	-	-	-	-	-
11 Arkansas-White-Red	10	1/.01	2/1.1	-	-	2/.02	1/.01	2/.06	1/.01	-	-	-	-	1/.01	-	-	3/1.6	1/.33	-
12 Texas-Gulf	13	-	1/1.5	-	-	-	-	5/.17	-	-	1/.03	1/.01	-	1/.01	1/.02	-	5/.68	5/.06	-
13 Rio Grande	6	-	-	-	-	-	-	1/.04	-		-	-	-	-	-	-	-	-	-
14 Upper Colorado	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15 Lower Colorado	5	-	-	-	-	-	-	-	-	-	-	1/.05	-	-	-	-	2/.8	1/.01	-
16 Great Basin	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 Pacific Northwest	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 California	6	3/.34	-	3/1.7	2/.2	3/.04	3/.34	2/8	1/.06	-	-	-	1/.01	2/.05	2/.65	1/.23	2/.52	-	2/2.2
19 Alaska	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 Hawaii	2	-	-	-	-	-	-	-	1/.18	-	-	-	-	-	-	-	-	-	-
21 Caribbean	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recommended maximum concentration for aquatic life protection (U.S. Environmental Protection Agency, 1976a)	-	-	-	.01	-	-	.001	-	.003	.004	.001	.001	-	.01	-	-	100	-	10
Maximum allowable concentration for domestic water supply (U.S. Environmental Protection Agency, 1975)	-	-	-	-	-	-	-	-	.2	-	-	-	-	4	-	-	100	-	10

Table 9. Maximum concentrations of pesticide residues in stream bottom materials detected at NASQAN stations during the 1976 water year, summarized by Water Resources Regions.

Number of Stations in region at which pesticide residue was detected / maximum concentrations in micrograms per kilogram.
(-, indicates pesticide residue not detected at stations)

Region Number and Name	Number of pesticide stations	Aldrin	Chlordane	Diazinon	DDD	DDE	DDT	Dieldrin	Endrin	Ethion	Heptachlor	Epoxide	Heptachlor Toxaphene
01 New England	4	-	1/3.0	-	2/5.3	1/1.4	2/2.7	-	-	-	-	-	-
02 Mid Atlantic	9	-	4/14	-	6/7.0	3/8.0	4/8.6	5/4.8	-	-	-	-	-
03 South Atlantic-Gulf	17	1/1.7	3/21	-	6/11	6/8.6	5/4.8	5/3.8	-	1/2.7	-	1/1.7	1/16
04 Great Lakes	8	-	-	-	1/1.3	1/.8	-	2/.2	-	-	-	-	-
05 Ohio	12	-	1/15	-	1/8.0	1/2.2	1/11	5/3.2	1/2.8	-	-	-	-
06 Tennessee	1	-	-	-	-	-	-	-	-	-	-	-	-
07 Upper Mississippi	7	1/.4	1/8.0	-	1/3.0	1/2.0	-	4/2.9	-	-	-	1/.1	-
08 Lower Mississippi	7	-	1/16	-	2/40	1/5.6	2/10	3/4.0	1/.2	-	-	-	1/17
09 Souris-Red-Rainy	2	-	-	-	-	-	-	-	-	-	-	-	-
10 Missouri Basin	19	-	1/8.0	-	1/.6	2/1.1	-	2/2.9	-	-	-	1/.3	-
11 Arkansas-White-Red	8	-	2/10	-	1/5.0	2/7.6	1/3.0	2/.4	-	-	1/4.8	-	1/12
12 Texas Gulf	13	-	4/8.0	-	6/1.1	7/7.3	5/4.9	5/.9	-	-	-	-	-
13 Rio Grande	7	-	-	-	1/.1	2/5.9	-	1/1.0	-	-	-	-	-
14 Upper Colorado	5	-	-	-	1/.5	1/1.3	-	1/.2	-	-	-	-	-
15 Lower Colorado	7	-	-	-	2/3.4	3/19	-	1/.5	-	-	-	-	-
16 Great Basin	6	-	-	1/.3	1/.7	2/.7	-	2/2.1	-	-	-	-	-
17 Pacific Northwest	9	-	1/3.0	-	3/6.7	4/23	4/20	3/1.1	-	-	-	-	-
18 California	5	-	2/17	-	1/.4	2/.4	2/2.2	2/1.7	-	-	-	-	-
19 Alaska	1	-	-	-	-	-	-	-	-	-	-	-	-
20 Hawaii	2	1/90	2/333	-	1/11	1/21	1/10	2/232	-	-	-	1/1.4	-
21 Caribbean	4	-	1/7	-	1/1.8	-	-	1/1.0	-	-	-	-	-

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.

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 55 NASQAN sations. Samples are collected twice a year; once during high flow, and once 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 (1976b) 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 radioactive substances analyzed from samples collected from the 55 NASQAN sites in the 1976 water year. Radioactive substances were generally higher west of the Miississippii River with the Missouri, Arkansas, Rio Grande, and Colorado Regions having the highest concentrations.

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-radioactivity in the dissolved phase, the weight-equivalent acitivity should not exceed 7.4 µg/L. The highest value, 130 µg/L, was in the South Platte River at Julesburg, Colorado (06764000). The dissolved radium-226 concentraion limit of 3 pCi/L for drinking water was exceeded at the Colorado River above Imperial Dam, Arizona (09420490), with a maximum of 13 µg/L.

Table 10. Ranges of concentrations of radioactive substances measured at NASQAN stations during the 1976 water year, summarized by Water Resources Regions.

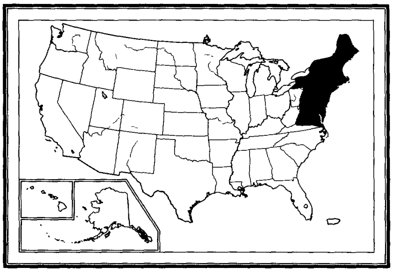
Region Number and Name	Number of Stations	Alpha, gross dissolved as U Natural µ g/L	Alpha, gross suspended as U Natural µ g/L	Radium-226 dissolved radon method pCi/L	Natural Uranium dissolved µg/L	Beta, gross dissolved as CS-137 pCi/L	Beta, gross suspended as CS-137 pCi/L	Beta, gross dissolved as strontium/ yttrium-90 pCi/L	Beta, gross suspended as strontium/ yttrium-90 pCi/L
01 New England	3	<0.4-1.9	<0.4-.4	<0.01-.02	0.03-.07	1.6-4.0	<0.4-.5	1.3-3.2	<0.4-.5
02 Mid Atlantic	4	<.6-8.3	<.4-23	<.01-.1	.01-1.2	<.4-4.9	<.4-12	<.4-3.9	<.4-9.4
03 South Atlantic-Gulf	9	<.5-3.8	<.4-5.2	<.02-.33	<.01-.09	2.4-5.9	<.4-2.9	1.9-4.7	<.4-2.3
04 Great Lakes	2	<.7 - 2.6	<.4-	.04-.05	.3-.4	2.0-5.1	<.4-.5	1.6-4.1	<.4-.5
05 Ohio	4	<.9- 3.3	<.4-56	.03-.12	<.01-.3	1.1-7.2	<.4-23	.9-5.7	<.4-19
06 Tennessee	2	<.8-6.4	<.4-1.3	<.01-.11	.01-.2	2.3-5.4	<.4-1.0	1.9-4.3	<.4-.9
07 Upper Mississippi	3	<.7-22	<.4-12	.01-.14	.05-.4	2.3-11	<.4-6.1	1.8-9.1	<.4-4.8
08 Lower Mississippi	2	<1.2-20	<.4-31	.04-.13	.01-2	3.9-6.7	<.6-16	3.2-5.4	<.5-12
09 Souris-Red-Rainy	2	<2.4-7.7	<.4-2.6	.05-.09	.6-1.9	9.7-21	.9-3.1	7.8-17	.8-2.8
10 Missouri Basin	7	4.7-130	<.4-3.6	.04-.08	.4-3	3.4-38	.6-13	2.8-32	.5-4.8
11 Arkansas-White-Red	3	<3.1-11	1.1-24	.07-.19	.3-2	4.3-24	1.0-13	3.4-19	.8-11
12 Texas-Gulf	2	<1-5.0	.6-4.5	.03-.12	.04-.9	3.5-7.8	.5-5.2	2.8-6.3	.4-4.1
13 Rio Grande	2	3.0-6.7	12-75	.04-.07	-	4.1-38	7.8-29	3.3-4.7	6.2-23
14 Upper Colorado	3	<1.6-14	7.9-43	<.01-.08	-	1.6-23	3.4-22	1.2-19	2.7-19
15 Lower Colorado	1	25-53	<.4-	.17-13	-	9.6-27	<.4-1.3	7.6-22	.4-1.2
16 Great Basin	0	-	-	-	-	-	-	-	-
17 Pacific Northwest	2	<.7-11	<.4-1.9	.02-.07	.02-	.8-5.3	<.4-1.2	.7-4.4	<.4-1.0
18 California	2	<.9- 1.1	<.4-1.9	.02-.05	.1-.2	2.7-3.2	<.4-3.3	2.2-2.6	<.4-2.6
19 Alaska	2	<2.2-3.0	<.7-21	.04-.09	<.01-.6	1.3-4	<.4-18	1.1-3.5	<.4-16
20 Hawaii	0	-	-	-	-	-	-	-	-
21 Caribbean	0	-	-	-	-	-	-	-	-

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 equilibrium mixture. The screening method in the EPA standards specifies the cesium-137 calibration standard. No NASQAN station had concentrations which exceeded the dissolved phase limit of 50 pCi/L. The highest concentration measured was 38 pCi/L at the South Platte River at Julesburg, Colorado (06764000), and the Rio Grande Conveyance Channel at San Marcial, New Mexico (08358300).

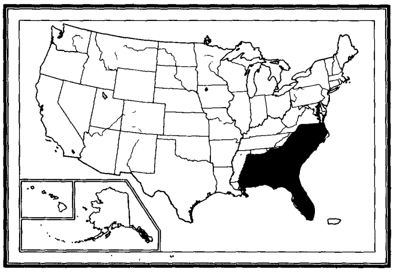
AREAL SUMMARIES

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, Midcontinent, 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 areas are biased toward larger rivers. General statements cannot fully describe details of water quality within these areas since there may be large variations in water quality between tributaries. However, the effects of these tributaries are represented by the NASQAN stations and in the areal summaries. 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.



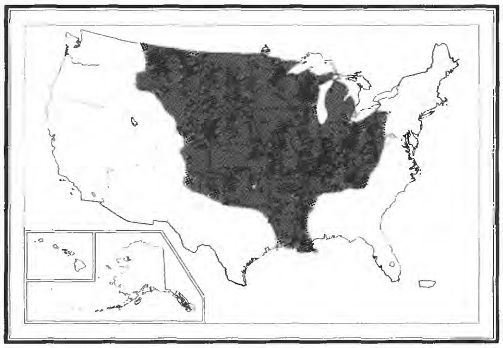
Northeast.-The northeastern part of the United States, as referred to in this section, includes the drainage to the northern part of the Atlantic coast, the lower St. Lawrence River, and the eastern part of the Great Lakes. River water there is cool (annual means generally less than 15°C), low in dissolved-solids 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 phytoplankton, 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 lead, manganese, and iron. These last two were measured at high levels at a number of stations and frequently exceed criteria for aquatic life.



Southeast.--Waters of streams in the south Atlantic drainage and the drainage to the eastern Gulf of Mexico generally have low dissolved solids concentration 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, compared to other areas in the country.

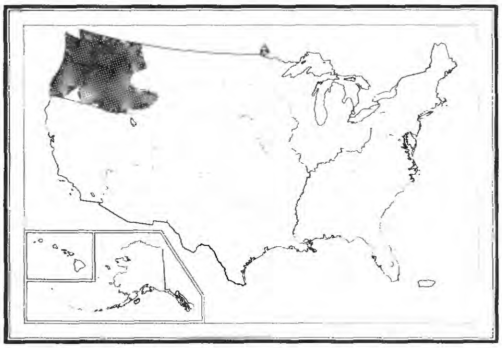
Midcontinent.--This large area of the central United States includes the basin of the Mississippi River, with its major tributaries, the Ohio, Missouri, and Arkansas, and several smaller tributaries, plus some drainage to the western Great Lakes and Canada. It is an area with generally more erodible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



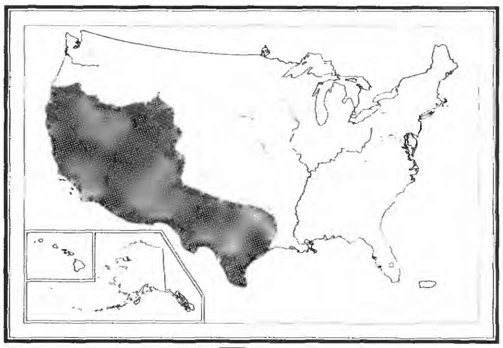
Because of more agricultural activity, different geologic characteristics and less rainfall, waters in the Midcontinent have higher concentrations of dissolved solids than do waters of the East. In some streams, these concentrations of inorganic materials exceed standards or criteria for public supply and other uses. The water is hard or very hard in many places, especially in parts of Kansas, New Mexico, and Texas. Fluoride concentrations are low to moderate with a number of streams having concentrations in the ideal range for the reduction of the incidence of tooth decay when used as drinking water. 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 area, and are relatively high in the southern half.

Data on the concentrations of minor elements vary greatly in the Midcontinent, but many 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 aquatic-life standards. The highest concentrations of dissolved and total arsenic and selenium; dissolved cobalt, copper, lead, and manganese; and total iron and mercury were found in streams in this area.

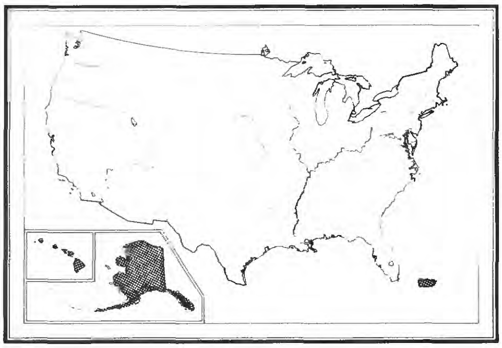
Northwest.--Streams of the relatively humid Northwest are somewhat like the rivers of the East. The dissolved solids concentrations are low, and the waters generally are soft to moderately hard. Concentrations of major nutrients range from low to high levels, while sediment concentrations, phytoplankton 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 mercury.



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 streams of this area 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 streams, but exceeds the drinking water standards at two sites in the lower Colorado basin. 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. Usually, the highest concentrations for dissolved and total cadmium and chromium; dissolved iron and mercury; and total cobalt, copper, lead, manganese, and zinc were found in streams in Arizona and Southern California.



Alaska, Hawaii, and Puerto Rico.--



Waters at NASQAN stations in Alaska, Hawaii, and Puerto Rico are generally low in dissolved solids and are soft. 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 chromium, manganese, and iron which are moderately high in some samples, especially in Hawaii.

REFERENCES

Briggs, J. C., and Ficke, J. F., 1978, Quality of rivers of the United States, 1975 water year--Based on the National Stream Quality Accounting Network (NASQAN): U.S. Geological Survey open-file report 78-200, 436 p.

Collings, M. R., 1969, Temperature analysis of a stream: U.S. Geological Survey Professional Paper 650-B, p. B174-B179.

Durfor, C. N., and Becker, Edith, 1964, Public water supplies of the 100 largest cities in the United States, 1962: U.S. Geological Survey Water-Supply Paper 1812, p. 23-27.

Ficke, J. F., and Hawkinson, R. O., 1975, The National Stream Quality Accounting Network (NASQAN)--Some questions and answers; U.S. Geological Survey Circular 719, 23 p.

Hawkinson, R. O., Ficke, J. F., and Saindon, L. G., 1977, Quality of rivers of the United States, 1974 water year--Based on the National Stream Quality Accounting Network (NASQAN): U.S. Geological Survey Open-File Report 77-151, 158 p.

Kehoe, T. J., 1977, Determining TOC in waters: Environmental Science and Technology, v. 11, no. 2, p. 137-139.

Krieger, R. A., Hatchett, J. L., and Poole, J. L., 1957, Preliminary survey of the saline-water resources of the United States: U.S. Geological Survey Water-Supply Paper 1374, 172 p.

National Academy of Sciences and National Academy of Engineering, 1972 [1974], Water quality criteria 1972: Washington, D.C., U.S. Government Printing Office, Ecological Research Series, EPA-R3-73-033-March 1973, 594 p.

Pickering, R. J., and Ficke, J. F., 1976, Design of nationwide water-quality-monitoring networks: American Water Works Association Journal, v. 68, no. 2, Feb. 1976, p. 82-85.

Rainwater, F. H., 1962, Stream composition of the conterminous United States: U.S. Geological Survey Hydrologic Investigations Atlas HA-61, 3 plates.

Steele, T. D., 1974, Harmonic analysis of stream temperatures: U.S. Geological Survey Computer Center Contribution, Program No. B260, PB-239 016/AS, 48 p.

Steele, T. D., Gilroy, E. J., and Hawkinson, R. O., 1974, An assessment of areal and temporal variations in streamflow quality using selected data from the National Stream Quality Accounting Network: U.S. Geological Survey Open-File Report 74-217, 210 p.

U.S. Council on Environmental Quality, 1975, Environmental quality, 1975--Sixth annual report of the Council on Environmental Quality: Washington D.C., U.S. Government Printing Office, 763 p.

______1976, Environmental quality, 1976--Seventh annual report of the Council on Environmental Quality: Washington, D.C., U.S. Government Printing Office, 378 p.

U.S. Environmental Protection Agency, 1971, Phosphate criteria: U.S. Environmental Protection Agency, Water Programs Office, Water Quality Standards Division, June 1971, 21 p.

______1975, National interim primary drinking water regulations: Federal Register, v. 40, no. 248, Dec. 24, 1975, p. 59566-59588.

______1976a, Quality criteria for water: U.S. Environmental Protection Agency, 256 p.

______1976b, Drinking water regulations, radionuclides: Federal Register, v. 41, no. 133, July 9, 1976, p. 28402-28409.

______1977, National secondary drinking water regulations: Federal Register, v. 42, no. 62, March 31, 1977, p. 17143-17147.

U.S. Water Resources Council, 1970, Water resources regions and subregions for the national assessment of water and related land resources: Washington, D.C., U.S. Water Resources Council, 188 p., 6 plates.

Ward, J. C., 1963, Annual variation of stream water temperature: American Society Civil·Engineers Proceeding Journal Sanitary Engineering Division, v. 89, no. SA6, p. 1-16.

Weatherburn, C. E., 1952, A first course in mathematical statistics: Cambridge, The University Press, 273 p.

Wentz, D. A., 1974, Effect of mine drainage on the quality of streams in Colorado, 1971-72: Denver, Colorado Water Conservation Board, Colorado Water-Resources Circular 21, 117 p., 3 plates.

TABLES 11 AND 12

(a) Table 11--a listing of NASQAN stations in numerical order by station number, supplementing the alphabetical listing in table 1.

(b) Table 12--a station-by-station summary of measurements of water-quality characteristics.

Table 12 includes one page per station, arranged in numerical order by USGS station number--the same order given in table 11. 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 12 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 12 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 12 for each station having at least 12 measurements during the year. The subsection of this report on stream temperature record (pages 16-18) explains the use of the temperature statistics.

Data on minor elements, periphyton, and organic carbon are collected only four times per year at most NASQAN stations. Consequently, the summary at the bottom of each page of table 12 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 1976." 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 11. National Stream Quality Accounting Network stations operated during the 1976 water year (by station number).

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
01059400	ANDROSCOGGIN RIVER AT BRUNSWICK	ME	4355	06958
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
02226010	ALTAMAHA RIVER NEAR GARDI	GA	3137	08146
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

Table 11. National Stream Quality Accounting Network stations operated during the 1976 water year (by station number)--Continued.

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
04057004	MANISTIQUE RIVER ABOVE MANISTIQUE	MI	4558	08615
04059000	ESCANABA RIVER AT CORNELL	MI	4555	08713
04059500	FORD RIVER NEAR HYDE	MI	4545	08712

Table 11. National Stream Quality Accounting Network stations operated during the 1976 water year (by station number)--Continued.

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

Table 11. National Stream Quality Accounting Network stations operated during the 1976 water year (by station number)--Continued.

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 RIVER NEAR SHELL BLUFF		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	PRAIRIE DOG TOWN FORK RED R NR WAYSIDE		TX	3450	10125

Table 11. National Stream Quality Accounting Network stations operated during the 1976 water year (by station number)--Continued.

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

Table 11. National Stream Quality Accounting Network stations operated during the 1976 water year (by station number)--Continued.

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

Table 11. National Stream Quality Accounting Network stations operated during the 1976 water year (by station number)--Continued.

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 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	6.95	7.31	0.0	19.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	88.6	23.0	39	115					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	11	6.94	0.34	6.5	7.6	11	0.0014	6.8088	0.099*	0.35
PHOSPHORUS, TOTAL	11	0.086	0.063	0.03	0.24	11	0.00127	-0.02652	0.468*	0.058
NITRITE + NITRATE, TOTAL	11	0.289	0.160	0.10	0.64	11	0.00468	-0.12558	0.675	0.124
NITROGEN, KJELDAHL, TOTAL	11	0.532	0.347	0.25	1.50	11	0.00418	0.16125	0.278*	0.351
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	6765.0	10901.6	42	30500	11	170.392	-8337.914	0.360*	10720.7
SEDIMENT SUSPENDED	11	14.3	8.9	3	29					
SEDIMENT, CLAY-SILT (PERCENT)	11	86.2	19.7	44	100					
COLIFORM, FECAL (COL/100 ML)	11	96.4	77.0	5	250					
STREPTOCOCCI, FECAL (COL/100 ML)	11	166.5	126.0	45	450					
SILICA, DISSOLVED	4	4.85	0.87	3.6	5.6					
CALCIUM, DISSOLVED	4	11.25	2.22	8.0	13.0					
MAGNESIUM, DISSOLVED	4	1.87	0.39	1.3	2.2					
SODIUM, DISSOLVED	4	1.60	0.58	1.1	2.2					
POTASSIUM, DISSOLVED	4	0.47	0.15	0.4	0.7					
BICARBONATE, ION	4	30.5	6.2	24	39					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	9.15	2.14	7.4	12.0					
CHLORIDE, DISSOLVED	4	2.60	1.02	1.4	3.9					
DISSOLVED SOLIDS, SUM OF CONST	4	47.3	8.4	35	54					
DISSOLVED SOLIDS, ROE 180 DEG C	4	65.3	16.9	46	87					
HARDNESS, TOTAL	4	35.8	7.4	25	42					
HARDNESS, NONCARBONATE	4	11.0	6.0	6	18					
TURBIDITY (JTU)	4	1.5	0.6	1	2					
FLUORIDE, DISSOLVED	4	0.12	0.10	0.0	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 340

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	130	122	112	108	100	89	63	54	43

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	7.83	10.41	2.64	89	2.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	10	10
COBALT (CO), UG/L	4	0	1	4	0	3
COPPER (CU), UG/L	4	0	0	4	0	10
IRON (FE), UG/L	4	150	460	4	70	180
LEAD (PB), UG/L	4	6	66	4	3	8
MANGANESE (MN), UG/L	4	20	80	4	10	90
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	0	10	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	11.70				
BIOMASS, ASH WT., G/SQ M	1	8.23				
CHLOROPHYLL A, MG/SQ M	1	58.400				
CHLOROPHYLL B, MG/SQ M	1	1.200				
ORGANIC CARBON, MG/L	4	7.100	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	9.05	8.16	0.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	73.4	21.5	37	110					
STREAMFLOW (CUBIC FT/SEC)	22	3430.9	2492.3	1090	9660	22	-91.337	10131.711	-0.788	1573.3
PH (STANDARD UNITS)	22	6.58	0.21	6.2	7.1	22	0.0003	6.5541	0.033*	0.21
PHOSPHORUS, TOTAL	11	0.043	0.013	0.03	0.07	11	0.00028	0.02320	0.485*	0.012
NITRITE + NITRATE, TOTAL	11	0.017	0.025	0.00	0.08	11	-0.00044	0.04778	-0.409*	0.024
NITROGEN, KJELDAHL, TOTAL	11	0.395	0.097	0.28	0.60	11	0.00103	0.32230	0.250*	0.099
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1369.8	1031.9	24	2800	11	5.409	991.200	0.123*	1079.4
SEDIMENT SUSPENDED	10	13.5	8.9	5	34					
SEDIMENT, CLAY-SILT (PERCENT)	10	83.9	24.8	27	100					
COLIFORM, FECAL (COL/100 ML)	21	70.2	165.2	4	780					
STREPTOCOCCI, FECAL (COL/100 ML)	22	30.0	29.1	1	120					
SILICA, DISSOLVED	4	2.62	0.84	1.8	3.4					
CALCIUM, DISSOLVED	4	5.10	1.39	3.5	6.9					
MAGNESIUM, DISSOLVED	4	1.05	0.60	0.5	1.9					
SODIUM, DISSOLVED	4	6.92	3.54	2.5	11.0					
POTASSIUM, DISSOLVED	4	0.52	0.15	0.3	0.6					
BICARBONATE, ION	4	19.5	9.0	14	33					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	7.17	2.20	4.4	9.6					
CHLORIDE, DISSOLVED	4	8.17	3.92	4.0	12.0					
DISSOLVED SOLIDS, SUM OF CONST	4	41.8	14.1	25	53					
DISSOLVED SOLIDS, ROE 180 DEG C	4	55.0	16.9	34	74					
HARDNESS, TOTAL	4	17.3	5.6	11	25					
HARDNESS, NONCARBONATE	4	2.0	2.3	0	4					
TURBIDITY (JTU)	22	2.7	1.8	1	6	22	0.009	2.050	0.104*	1.8
FLUORIDE, DISSOLVED	4	0.17	0.17	0.0	0.4					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 159

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	107	101	97	90	82	68	63	42

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
147	10.49	11.19	2.71	97	1.46

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

01021050 -- ST. CROIX RIVER AT MILLTOWN, MAINE

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	1
CADMIUM (CD), UG/L	5	0	1	4	0	1
CHROMIUM (CR), UG/L	7	1	10	4	10	20
COBALT (CO), UG/L	7	0	2	4	0	3
COPPER (CU), UG/L	7	0	2	4	0	10
IRON (FE), UG/L	7	60	480	4	70	200
LEAD (PB), UG/L	7	4	39	4	3	8
MANGANESE (MN), UG/L	7	30	90	4	30	80
MERCURY (HG), UG/L	4	<0.5	0.7	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	6	0	20	5	0	90
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.46	4.38			
BIOMASS, ASH WT., G/SQ M	2	0.69	2.38			
CHLOROPHYLL A, MG/SQ M	2	1.000	1.300			
CHLOROPHYLL B, MG/SQ M	2	0.200	0.400			
ORGANIC CARBON, MG/L	19	5.300	120.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	8.88	8.28	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	58.8	14.2	36	68					
STREAMFLOW (CUBIC FT/SEC)	12	15757.5	10940.7	8100	39300	12	-571.639	49388.902	-0.741	7706.9
PH (STANDARD UNITS)	12	6.67	0.37	6.3	7.8	12	0.0155	5.7639	0.594	0.31
PHOSPHORUS, TOTAL	12	0.032	0.008	0.02	0.05	12	0.00035	0.01110	0.594	0.007
NITRITE + NITRATE, TOTAL	12	0.033	0.038	0.00	0.13	12	-0.00003	0.03502	-0.011*	0.040
NITROGEN, KJELDAHL, TOTAL	12	0.340	0.053	0.27	0.43	12	-0.00002	0.34133	-0.006*	0.056
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10107.5	31472.4	100	110000	12	760.998	-34664.559	0.343*	31007.4
SEDIMENT SUSPENDED	12	7.5	5.1	2	21					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.7	13.9	61	100					
COLIFORM, FECAL (COL/100 ML)	12	122.4	145.6	34	560					
STREPTOCOCCI, FECAL (COL/100 ML)	12	98.7	103.9	10	340					
SILICA, DISSOLVED	4	4.02	0.59	3.4	4.7					
CALCIUM, DISSOLVED	4	5.47	1.02	4.9	7.0					
MAGNESIUM, DISSOLVED	4	1.07	0.51	0.5	1.6					
SODIUM, DISSOLVED	4	2.77	1.35	1.3	4.5					
POTASSIUM, DISSOLVED	4	0.50	0.14	0.3	0.6					
BICARBONATE, ION	4	14.8	2.2	12	17					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	9.30	2.19	6.4	11.0					
CHLORIDE, DISSOLVED	4	2.60	0.96	1.3	3.5					
DISSOLVED SOLIDS, SUM OF CONST	4	33.3	6.6	25	41					
DISSOLVED SOLIDS, ROE 180 DEG C	4	50.3	5.0	45	55					
HARDNESS, TOTAL	4	18.3	4.0	15	24					
HARDNESS, NONCARBONATE	4	6.0	3.4	4	11					
TURBIDITY (JTU)	4	3.5	4.4	1	10					
FLUORIDE, DISSOLVED	4	0.12	0.10	0.0	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE										
	SAMPLE SIZE = 297									
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%
	92	88	78	68	65	61	57	51	47	41

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
345	9.16	11.72	2.58	94	1.99

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	10	4	<10	<10
COBALT (CO), UG/L	4	0	0	4	0	2
COPPER (CU), UG/L	4	0	0	4	0	10
IRON (FE), UG/L	4	150	240	4	70	110
LEAD (PB), UG/L	4	14	31	4	1	14
MANGANESE (MN), UG/L	4	20	40	4	10	40
MERCURY (HG), UG/L	4	<0.5	1.3	4	0.5	0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	10	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	2.00				
BIOMASS, ASH WT., G/SQ M	1	1.00				
CHLOROPHYLL A, MG/SQ M	1	0.500				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	11.000	14.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	8.55	7.53	0.0	19.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	37.6	3.5	32	42					
STREAMFLOW (CUBIC FT/SEC)	11	4776.7	4105.3	682	15200	11	-434.342	39941.934	-0.803	2577.8
PH (STANDARD UNITS)	11	6.64	0.08	6.5	6.7	11	-0.0012	6.6629	-0.054*	0.09
PHOSPHORUS, TOTAL	11	0.019	0.008	0.01	0.04	11	-0.00099	0.05645	-0.421*	0.008
NITRITE + NITRATE, TOTAL	11	0.105	0.042	0.07	0.19	11	0.00732	-0.17007	0.611	0.035
NITROGEN, KJELDAHL, TOTAL	11	0.225	0.033	0.18	0.28	11	-0.00296	0.33671	-0.319*	0.033
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1083.5	2291.9	62	7900	11	251.280	-8373.816	0.387*	2227.7
SEDIMENT SUSPENDED	11	5.8	5.0	1	18					
SEDIMENT, CLAY-SILT (PERCENT)	11	96.3	11.1	63	100					
COLIFORM, FECAL (COL/100 ML)	11	1.4	0.5	<1	2					
STREPTOCOCCI, FECAL (COL/100 ML)	11	2.0	1.4	<1	5					
SILICA, DISSOLVED	4	3.82	0.73	2.8	4.5					
CALCIUM, DISSOLVED	4	5.77	3.55	3.5	11.0					
MAGNESIUM, DISSOLVED	4	0.87	0.47	0.2	1.2					
SODIUM, DISSOLVED	4	1.00	0.24	0.8	1.3					
POTASSIUM, DISSOLVED	4	0.30	0.14	0.1	0.4					
BICARBONATE, ION	4	13.5	3.9	8	17					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	4.80	1.74	2.5	6.7					
CHLORIDE, DISSOLVED	4	1.20	0.32	0.9	1.6					
DISSOLVED SOLIDS, SUM OF CONST	4	24.8	5.1	19	30					
DISSOLVED SOLIDS, ROE 180 DEG C	4	33.8	3.5	30	38					
HARDNESS, TOTAL	4	17.8	9.9	10	32					
HARDNESS, NONCARBONATE	4	7.3	8.8	0	20					
TURBIDITY (JTU)	4	1.0	0.0	1	1					
FLUORIDE, DISSOLVED	4	0.10	0.00	0.1	0.1					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 337

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%
	45	44	43	42	41	39	37	32	30	27

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
337	8.82	10.34	2.41	97	1.28

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	6	4	0	2
CHROMIUM (CR), UG/L	4	10	10	4	<0	<10
COBALT (CO), UG/L	4	0	0	4	0	2
COPPER (CU), UG/L	4	0	0	4	0	0
IRON (FE), UG/L	4	90	170	4	30	90
LEAD (PB), UG/L	4	3	68	4	2	43
MANGANESE (MN), UG/L	4	10	20	4	0	10
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	0	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.85	5.08			
BIOMASS, ASH WT., G/SQ M	2	2.77	3.00			
CHLOROPHYLL A, MG/SQ M	2	0.700	3.000			
CHLOROPHYLL B, MG/SQ M	2	0.100	0.500			
ORGANIC CARBON, MG/L	4	5.100	7.600			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 01059400 NAME: ANDROSCOGGIN RIVER AT BRUNSWICK, ME.

LAT 43D55M03S LONG 069D58M25S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.21	8.68	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	91.1	27.0	55	125					
STREAMFLOW (CUBIC FT/SEC)	12	8115.8	6864.7	3900	28200	12	-126.677	19653.984	-0.499*	6239.1
PH (STANDARD UNITS)	12	6.74	0.12	6.5	6.9	12	0.0026	6.5012	0.613	0.10
PHOSPHORUS, TOTAL	12	0.062	0.016	0.04	0.10	12	0.00040	0.02489	0.689	0.012
NITRITE + NITRATE, TOTAL	12	0.155	0.070	0.06	0.27	12	0.00134	0.03335	0.516*	0.063
NITROGEN, KJELDAHL, TOTAL	12	0.603	0.272	0.30	1.40	12	0.00538	0.11315	0.534*	0.241
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	78891.6	206393.1	900	730000	12	-1993.784	260492.063	-0.261*	208947.3
SEDIMENT SUSPENDED	12	13.4	10.6	3	43					
SEDIMENT, CLAY-SILT (PERCENT)	12	87.5	15.7	64	100					
COLIFORM, FECAL (COL/100 ML)	12	282.3	313.4	27	1200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	172.3	140.9	40	550					
SILICA, DISSOLVED	4	5.65	0.61	4.8	6.1					
CALCIUM, DISSOLVED	4	5.82	1.00	4.5	6.7					
MAGNESIUM, DISSOLVED	4	0.80	0.42	0.3	1.3					
SODIUM, DISSOLVED	4	7.80	2.84	6.0	12.0					
POTASSIUM, DISSOLVED	4	0.80	0.18	0.6	1.0					
BICARBONATE, ION	4	15.3	2.9	11	17					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	8.70	1.65	7.1	11.0					
CHLORIDE, DISSOLVED	4	8.95	4.70	6.4	16.0					
DISSOLVED SOLIDS, SUM OF CONST	4	46.5	11.1	39	63					
DISSOLVED SOLIDS, ROE 180 DEG C	4	63.3	10.7	53	77					
HARDNESS, TOTAL	4	18.0	3.6	15	22					
HARDNESS, NONCARBONATE	4	5.5	3.1	1	8					
TURBIDITY (JTU)	4	4.3	2.2	2	7					
FLUORIDE, DISSOLVED	4	0.12	0.05	0.1	0.2					

*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%
	138	127	123	118	112	102	83	57	53	46

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
318	9.66	11.84	2.64	96	1.84

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

01059400 -- ANDROSCOGGIN RIVER AT BRUNSWICK, 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	1
CADMIUM (CD), UG/L	4	0	3	4	0	3
CHROMIUM (CR), UG/L	4	<10	10	4	< 0	10
COBALT (CO), UG/L	4	0	1	4	0	2
COPPER (CU), UG/L	4	0	0	4	0	0
IRON (FE), UG/L	4	370	450	4	70	210
LEAD (PB), UG/L	4	8	60	4	3	36
MANGANESE (MN), UG/L	4	40	60	4	20	50
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	30	4	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.38	5.92			
BIOMASS, ASH WT., G/SQ M	2	0.62	3.46			
CHLOROPHYLL A, MG/SQ M	2	1.100	20.800			
CHLOROPHYLL B, MG/SQ M	2	0.000	2.500			
ORGANIC CARBON, MG/L	4	8.000	15.000			

Table 12. 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: 10/01/75 - 09/30/76

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, A	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.67	8.12	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	37.7	7.7	30	57					
STREAMFLOW (CUBIC FT/SEC)	12	3117.3	2063.8	648	7180	12	-176.727	4649.359	-0.671	1604.6
PH (STANDARD UNITS)	12	6.59	0.16	6.3	6.6	12	0.0121	6.1374	0.577	0.14
PHOSPHORUS, TOTAL	12	0.026	0.014	0.01	0.05	12	0.00004	0.02450	0.019*	0.015
NITRITE + NITRATE, TOTAL	12	0.113	0.032	0.08	0.16	12	-0.00018	0.11994	-0.042*	0.034
NITROGEN, KJELDAHL, TOTAL	12	0.214	0.110	0.06	0.40	12	0.00237	0.12484	0.167*	0.114
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	979.9	1366.0	48	4200	12	37.692	-439.804	0.214*	1401.7
SEDIMENT SUSPENDED	12	8.3	11.1	1	40					
SEDIMENT, CLAY-SILT (PERCENT)	12	94.8	12.5	61	100					
COLIFORM, FECAL (COL/100 ML)	12	18.3	18.5	2	70					
STREPTOCOCCI, FECAL (COL/100 ML)	12	10.9	7.9	1	30					
SILICA, DISSOLVED	4	6.45	0.75	5.6	7.3					
CALCIUM, DISSOLVED	4	2.70	0.45	2.1	3.1					
MAGNESIUM, DISSOLVED	4	0.50	0.37	0.0	0.9					
SODIUM, DISSOLVED	4	2.62	0.61	2.2	3.5					
POTASSIUM, DISSOLVED	4	0.47	0.10	0.4	0.6					
BICARBONATE, ION	4	10.8	5.0	4	15					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	4.85	0.89	3.7	5.6					
CHLORIDE, DISSOLVED	4	3.40	0.77	2.8	4.4					
DISSOLVED SOLIDS, SUM OF CONST	4	26.8	4.0	21	30					
DISSOLVED SOLIDS, ROE 180 DEG C	4	34.3	6.1	27	42					
HARDNESS, TOTAL	4	8.8	2.5	5	10					
HARDNESS, NONCARBONATE	4	1.0	1.2	0	2					
TURBIDITY (JTU)	4	1.3	0.5	1	2					
FLUORIDE, DISSOLVED	4	0.30	0.08	0.2	0.4					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 334

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	44	43	42	40	39	36	32	26	26	24

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.48	21.68	2.25	37	20.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	<10	<10
COBALT (CO), UG/L	4	0	0	4	0	2
COPPER (CU), UG/L	4	0	0	4	0	10
IRON (FE), UG/L	4	140	380	4	60	170
LEAD (PB), UG/L	4	11	140	4	5	11
MANGANESE (MN), UG/L	4	10	20	4	10	20
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	3
ZINC (ZN), UG/L	4	0	10	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.15	2.69			
BIOMASS, ASH WT., G/SQ M	3	0.92	2.08			
CHLOROPHYLL A, MG/SQ M	3	1.600	2.800			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.200			
ORGANIC CARBON, MG/L	4	3.500	7.600			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, P	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.29	9.17	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	91.3	16.5	54	115					
STREAMFLOW (CUBIC FT/SEC)	13	10113.8	7349.0	3400	31300	12	-274.881	35314.563	-0.590	6467.6
PH (STANDARD UNITS)	12	7.12	0.56	6.4	7.8	12	-0.0124	8.2581	-0.367*	0.54
PHOSPHORUS, TOTAL	12	0.097	0.029	0.06	0.15	12	0.00091	0.01465	0.520*	0.026
NITRITE + NITRATE, TOTAL	11	0.240	0.070	0.11	0.37	11	0.00152	0.10438	0.344*	0.070
NITROGEN, KJELDAHL, TOTAL	11	0.646	0.204	0.33	0.93	11	0.00893	-0.15289	0.700	0.154
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3264.5	3978.5	450	14000	11	58.666	-2079.408	0.254*	4055.8
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	2136.3	3166.2	8	11000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	300.7	275.0	4	750					
SILICA, DISSOLVED	2	5.65	1.34	4.7	6.6					
CALCIUM, DISSOLVED	2	4.00	1.41	3.0	5.0					
MAGNESIUM, DISSOLVED	2	0.75	0.07	0.7	0.8					
SODIUM, DISSOLVED	2	6.75	2.62	4.9	8.6					
POTASSIUM, DISSOLVED	2	0.85	0.07	0.8	0.9					
BICARBONATE, ION	2	11.5	6.4	7	16					
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	2	5.80	0.42	5.5	6.1					
CHLORIDE, DISSOLVED	2	9.90	2.97	7.8	12.0					
DISSOLVED SOLIDS, SUM OF CONST	2	40.0	11.3	32	48					
DISSOLVED SOLIDS, ROE 180 DEG C	2	50.0	19.6	36	64					
HARDNESS, TOTAL	2	13.0	2.8	11	15					
HARDNESS, NONCARBONATE	2	3.5	2.1	2	5					
TURBIDITY (JTU)	9	1.9	1.1	1	4		-0.002	2.035	-0.027*	1.1
FLUORIDE, DISSOLVED	2	0.10	0.00	0.1	0.1					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.14	12.37	2.77	98	1.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	0	1	2	0	1
CADMIUM (CD), UG/L	3	0	1	2	0	1
CHROMIUM (CR), UG/L	3	5	20	2	10	10
COBALT (CO), UG/L	3	0	<1	2	0	0
COPPER (CU), UG/L	3	0	14	2	0	10
IRON (FE), UG/L	3	300	1700	2	150	650
LEAD (PB), UG/L	3	5	8	2	2	4
MANGANESE (MN), UG/L	3	50	60	2	30	50
MERCURY (HG), UG/L	2	0.5	0.5	2	<0.5	<0.5
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	3	10	30	2	20	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	3.200	5.600			

Table 12. 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: 10/01/75 - 09/30/76

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. B	CONSTANT. K	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE. WATER (DEG C)	13	11.46	8.43	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	182.9	21.8	151	225					
STREAMFLOW (CUBIC FT/SEC)	13	348.4	239.9	47	888	13	-7.738	1763.828	-0.704	178.0
PH (STANDARD UNITS)	13	7.11	0.53	6.4	7.9	13	0.0052	6.1573	0.216*	0.54
PHOSPHORUS. TOTAL	12	0.237	0.123	0.06	0.40	12	0.00342	-0.48418	0.715	0.090
NITRITE + NITRATE. TOTAL	12	0.409	0.200	0.03	0.67	12	-0.00593	1.50109	-0.666	0.156
NITROGEN, KJELDAHL, TOTAL	12	0.717	0.351	0.28	1.50	12	0.00979	-1.08295	0.625	0.287
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	11016.4	23091.1	150	79000	11	1032.547	-172870.878	0.864	12257.0
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	394.1	1123.0	0	4100					
STREPTOCOCCI, FECAL (COL/100 ML)	13	59.2	107.1	1	350					
SILICA, DISSOLVED	2	8.55	0.49	8.2	8.9					
CALCIUM, DISSOLVED	2	10.00	2.83	8.0	12.0					
MAGNESIUM, DISSOLVED	2	3.05	0.21	2.9	3.2					
SODIUM, DISSOLVED	2	17.50	2.12	16.0	19.0					
POTASSIUM, DISSOLVED	2	1.90	0.57	1.5	2.3					
BICARBONATE, ION	2	19.0	4.2	16	22					
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	2	17.00	0.00	17.0	17.0					
CHLORIDE, DISSOLVED	2	29.50	3.54	27.0	32.0					
DISSOLVED SOLIDS, SUM OF CONST	2	97.5	12.0	89	106					
DISSOLVED SOLIDS, ROE 180 DEG C	2	122.5	12.0	114	131					
HARDNESS, TOTAL	2	37.5	6.4	33	42					
HARDNESS, NONCARBONATE	2	22.0	2.8	20	24					
TURBIDITY (JTU)	2	3.0	1.4	2	4					
FLUORIDE, DISSOLVED	2	0.20	0.14	0.1	0.3					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 315

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%
	244	237	227	209	197	185	173	150	136	114

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
316	13.48	11.01	2.78	45	7.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	0	0	2	0	0
CADMIUM (CD), UG/L	2	0	1	2	0	1
CHROMIUM (CR), UG/L	2	< 10	10	2	0	0
COBALT (CO), UG/L	2	0	1	2	0	1
COPPER (CU), UG/L	2	0	0	2	0	0
IRON (FE), UG/L	2	390	510	2	230	340
LEAD (PB), UG/L	2	2	16	2	2	7
MANGANESE (MN), UG/L	2	20	50	2	20	50
MERCURY (HG), UG/L	2	<0.5	<0.5	2	<0.5	< 0.5
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	10	20	2	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	23.30				
BIOMASS, ASH WT., G/SQ M	1	16.20				
CHLOROPHYLL A, MG/SQ M	1	28.400				
CHLOROPHYLL B, MG/SQ M	1	1.900				
ORGANIC CARBON, MG/L	0					

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	11.68	8.33	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	114.3	15.4	97	138					
STREAMFLOW (CUBIC FT/SEC)	11	12165.5	4733.6	6910	24200	11	-199.996	35019.504	-0.652	3783.9
PH (STANDARD UNITS)	11	6.65	0.60	6.0	7.5	11	-0.0319	10.2964	-0.816	0.37
PHOSPHORUS, TOTAL	10	0.033	0.011	0.02	0.05	10	0.00026	0.00323	0.373*	0.010
NITRITE + NITRATE, TOTAL	10	0.219	0.104	0.04	0.41	10	-0.00212	0.46394	-0.313*	0.105
NITROGEN, KJELDAHL, TOTAL	10	0.321	0.187	0.18	0.75	10	0.00361	-0.09737	0.297*	0.189
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	606.0	715.9	64	2400	9	29.264	-2730.116	0.619*	601.3
SEDIMENT SUSPENDED	8	27.1	46.2	2	138					
SEDIMENT, CLAY-SILT (PERCENT)	8	82.6	21.3	44	100					
COLIFORM, FECAL (COL/100 ML)	9	246.7	372.3	10	1200					
STREPTOCOCCI, FECAL (COL/100 ML)	10	198.6	224.8	17	650					
SILICA, DISSOLVED	4	4.55	1.23	3.3	6.0					
CALCIUM, DISSOLVED	4	13.50	1.29	12.0	15.0					
MAGNESIUM, DISSOLVED	4	1.42	0.26	1.2	1.8					
SODIUM, DISSOLVED	4	5.30	0.36	4.8	5.6					
POTASSIUM, DISSOLVED	4	1.02	0.13	0.9	1.2					
BICARBONATE, ION	4	40.3	9.5	34	54					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	8.62	2.62	6.4	12.0					
CHLORIDE, DISSOLVED	4	6.55	1.89	4.3	8.7					
DISSOLVED SOLIDS, SUM OF CONST	4	61.0	5.6	54	66					
DISSOLVED SOLIDS, ROE 180 DEG C	4	70.8	8.4	61	80					
HARDNESS, TOTAL	4	39.8	3.9	36	45					
HARDNESS, NONCARBONATE	4	6.8	5.1	1	12					
TURBIDITY (JTU)	4	1.3	0.5	1	2					
FLUORIDE, DISSOLVED	4	0.07	0.05	0.0	0.1					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 304

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%
	144	134	131	125	121	113	105	95	92	86

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
288	10.62	11.59	2.69	97	1.45

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	1	5	0	0
CADMIUM (CD), UG/L	5	1	8	4	0	6
CHROMIUM (CR), UG/L	5	<10	20	5	<10	10
COBALT (CO), UG/L	5	0	1	4	0	2
COPPER (CU), UG/L	5	0	20	5	0	10
IRON (FE), UG/L	5	230	620	5	60	100
LEAD (PB), UG/L	5	4	20	4	0	3
MANGANESE (MN), UG/L	5	20	60	5	10	30
MERCURY (HG), UG/L	5	<0.5	0.8	5	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	0	4	0	0
ZINC (ZN), UG/L	5	20	50	5	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	2	2.800	4.700			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.46	9.12	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	104.6	22.2	68	142					
STREAMFLOW (CUBIC FT/SEC)	12	18555.0	8915.0	6430	33900	12	-280.935	47936.096	-0.698	6693.1
PH (STANDARD UNITS)	11	6.95	0.24	6.6	7.3	11	0.0065	6.2872	0.528*	0.22
PHOSPHORUS, TOTAL	12	0.082	0.032	0.05	0.13	12	0.00091	-0.01224	0.623	0.026
NITRITE + NITRATE, TOTAL	12	0.347	0.088	0.25	0.50	12	0.00086	0.25712	0.218*	0.090
NITROGEN, KJELDAHL, TOTAL	12	0.409	0.154	0.23	0.65	12	0.00451	-0.06265	0.650	0.123
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	4322.7	7058.6	110	21000	11	79.950	-4202.832	0.249*	7205.4
SEDIMENT SUSPENDED	9	13.0	11.2	4	36					
SEDIMENT, CLAY-SILT (PERCENT)	8	93.6	5.8	86	100					
COLIFORM, FECAL (COL/100 ML)	12	6859.2	9472.5	350	26000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	571.7	319.3	170	1200					
SILICA, DISSOLVED	12	5.71	0.79	4.6	7.0	12	-0.0020	5.9205	-0.057*	0.83
CALCIUM, DISSOLVED	12	10.25	1.71	8.0	13.0	12	0.0402	6.0432	0.521*	1.53
MAGNESIUM, DISSOLVED	12	1.56	0.43	0.5	2.2	12	0.0051	1.0221	0.263*	0.44
SODIUM, DISSOLVED	6	6.58	1.08	4.9	7.8	6	-0.0058	7.2549	-0.051*	1.21
POTASSIUM, DISSOLVED	6	1.22	0.26	0.9	1.5	6	0.0137	-0.3680	0.496*	0.26
BICARBONATE, ION	12	30.8	9.1	19	44	12	0.204	9.377	0.497*	8.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	10.10	1.50	7.4	12.0	12	0.0066	9.4126	0.097*	1.56
CHLORIDE, DISSOLVED	12	8.55	2.13	5.8	12.0	12	0.0577	2.5172	0.600	1.79
DISSOLVED SOLIDS, SUM OF CONST	6	63.0	8.5	51	75	6	0.305	27.754	0.341*	9.0
DISSOLVED SOLIDS, RDE 180 DEG C	12	62.7	11.0	43	82	12	0.382	22.674	0.768	7.4
HARDNESS, TOTAL	12	32.0	5.5	23	42	12	0.119	19.549	0.476*	5.1
HARDNESS, NONCARBONATE	12	6.8	4.9	0	18	12	-0.044	11.400	-0.198*	5.0
TURBIDITY (JTU)	12	3.8	0.9	2	6	12	-0.007	4.547	-0.161*	1.0
FLUORIDE, DISSOLVED	6	0.10	0.00	0.1	0.1	6	-0.0000	0.1000	0.000*	0.00

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 314

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%
	149	144	139	130	122	98	89	78	75	64

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
323	12.08	12.39	2.68	96	1.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	1	2	4	1	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	30	12	0	10
IRON (FE), UG/L	4	360	640	12	60	150
LEAD (PB), UG/L	4	4	16	4	2	9
MANGANESE (MN), UG/L	4	40	60	12	10	50
MERCURY (HG), UG/L	4	< 0.5	< 0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	3	4	0	0
ZINC (ZN), UG/L	4	10	30	12	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	6.23				
BIOMASS, ASH WT., G/SQ M	1	5.54				
CHLOROPHYLL A, MG/SQ M	1	16.100				
CHLOROPHYLL B, MG/SQ M	1	2.000				
ORGANIC CARBON, MG/L	12	2.900	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.67	7.91	1.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	209.3	29.0	175	275					
STREAMFLOW (CUBIC FT/SEC)	12	4734.9	2753.2	99	10800	12	-63.945	18115.504	-0.674	2132.5
PH (STANDARD UNITS)	12	7.71	0.35	7.3	8.4	12	0.0043	6.8106	0.356*	0.34
PHOSPHORUS, TOTAL	12	0.061	0.010	0.05	0.08	12	0.00005	0.05073	0.141*	0.010
NITRITE + NITRATE, TOTAL	12	0.392	0.142	0.22	0.70	12	-0.00025	0.44459	-0.051*	0.149
NITROGEN, KJELDAHL, TOTAL	12	0.414	0.196	0.20	0.65	12	0.00130	0.14134	0.193*	0.201
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7162.1	8729.5	65	25000	12	130.139	-20069.598	0.435*	6253.6
SEDIMENT SUSPENDED	12	9.1	6.4	1	16					
SEDIMENT, CLAY-SILT (PERCENT)	8	92.6	9.6	77	100					
COLIFORM, FECAL (COL/100 ML)	12	34.1	47.3	1	160					
STREPTOCOCCI, FECAL (COL/100 ML)	12	57.1	131.8	1	460					
SILICA, DISSOLVED	12	4.55	1.33	1.9	6.1	12	-0.0194	8.6190	-0.425*	1.26
CALCIUM, DISSOLVED	12	21.25	3.60	17.0	28.0	12	0.0720	6.1867	0.581	3.07
MAGNESIUM, DISSOLVED	12	7.71	1.53	5.7	10.0	12	0.0379	-0.2318	0.719	1.12
SODIUM, DISSOLVED	10	6.96	1.85	5.0	10.0	10	0.0510	-3.7946	0.620	1.12
POTASSIUM, DISSOLVED	10	1.39	0.27	1.1	1.8	10	0.0046	0.4279	0.505*	0.25
BICARBONATE, ION	12	90.3	17.6	68	127	12	0.376	11.579	0.622	14.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	12.32	1.27	9.8	14.0	12	0.0086	10.5143	0.197*	1.30
CHLORIDE, DISSOLVED	12	9.63	1.85	5.6	13.0	12	0.0246	4.4803	0.367*	1.79
DISSOLVED SOLIDS, SUM OF CONST	10	107.9	16.7	88	136	10	0.422	18.902	0.751	11.7
DISSOLVED SOLIDS, ROE 180 DEG C	8	122.5	21.0	99	157	8	0.300	59.050	0.507*	19.6
HARDNESS, TOTAL	12	84.4	14.6	66	110	12	0.318	17.812	0.632	11.9
HARDNESS, NONCARBONATE	12	10.8	3.8	3	17	12	0.031	4.187	0.239*	3.9
TURBIDITY (JTU)	12	2.4	1.0	1	4	12	-0.003	2.987	-0.079*	1.0
FLUORIDE, DISSOLVED	10	0.13	0.08	0.0	0.3	10	-0.0006	0.2644	-0.230*	0.08

*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%
	242	236	234	224	219	210	195	169	185	173

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
220	11.64	11.72	2.49	92	2.28

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

01205500 -- HOUSATONIC R AT STEVENSON, CT

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	4	0	0
CADMIUM (CD), UG/L	4	1	1	4	1	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	30	12	0	10
IRON (FE), UG/L	4	180	360	12	30	80
LEAD (PB), UG/L	4	3	9	4	3	3
MANGANESE (MN), UG/L	4	30	60	12	0	30
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	0	10	12	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.50	3.92			
BIOMASS, ASH WT., G/SQ M	4	0.12	1.23			
CHLOROPHYLL A, MG/SQ M	4	0.100	33.100			
CHLOROPHYLL B, MG/SQ M	4	0.000	9.400			
ORGANIC CARBON, MG/L	11	2.500	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	13.21	7.83	1.0	24.2					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	95.5	13.2	65	120					
STREAMFLOW (CUBIC FT/SEC)	16	47.5	11.9	28	70	15	-0.342	79.453	-0.379*	11.5
PH (STANDARD UNITS)	15	6.25	0.60	5.2	7.0	15	-0.0159	7.7752	-0.350*	0.58
PHOSPHORUS, TOTAL	15	0.111	0.032	0.08	0.19	15	-0.00000	0.11175	-0.002*	0.033
NITRITE + NITRATE, TOTAL	15	0.266	0.150	0.04	0.56	15	-0.00153	0.41210	-0.134*	0.154
NITROGEN, KJELDAHL, TOTAL	15	0.479	0.101	0.35	0.68	15	-0.00103	0.57736	-0.134*	0.103
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2875.0	3405.6	380	13000	12	58.274	-2583.346	0.216*	3486.1
SEDIMENT SUSPENDED	12	15.4	20.1	4	75					
SEDIMENT, CLAY-SILT (PERCENT)	12	71.6	23.5	3	91					
COLIFORM, FECAL (COL/100 ML)	12	99.5	115.0	<1	400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	174.5	322.2	4	1100					
SILICA, DISSOLVED	15	5.09	1.67	2.3	7.8	15	-0.0140	6.4353	-0.099*	1.93
CALCIUM, DISSOLVED	15	6.53	1.18	5.2	10.0	15	0.0009	6.4453	0.010*	1.22
MAGNESIUM, DISSOLVED	15	2.09	0.23	1.5	2.4	15	0.0018	1.9182	0.107*	0.23
SODIUM, DISSOLVED	15	6.59	0.46	5.8	7.3	15	0.0193	4.7445	0.553	0.40
POTASSIUM, DISSOLVED	15	1.46	0.28	1.1	2.1	15	0.0094	0.5596	0.448*	0.26
BICARBONATE, ION	15	17.4	2.3	14	21	15	-0.023	19.608	-0.135*	2.3
CARBONATE, ION	15	0.0	0.0	0	0	15	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	15	11.42	1.58	7.3	14.0	15	-0.0545	16.6259	-0.454*	1.46
CHLORIDE, DISSOLVED	15	10.98	0.96	8.9	13.0	15	0.0052	10.4866	0.071*	0.99
DISSOLVED SOLIDS, SUM OF CONST	15	53.1	3.1	49	59	15	-0.019	54.943	-0.080*	3.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	61.7	9.4	44	78	12	0.123	50.190	0.166*	9.7
HARDNESS, TOTAL	15	24.9	3.2	20	33	15	0.003	24.677	0.011*	3.3
HARDNESS, NONCARBONATE	15	10.6	3.1	6	19	15	0.031	7.646	0.131*	3.2
TURBIDITY (JTU)	12	1.6	0.5	1	2	12	-0.004	1.955	-0.092*	0.5
FLUORIDE, DISSOLVED	15	0.08	0.06	0.0	0.2	15	0.0004	0.0384	0.102*	0.06

*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%
	122	114	106	101	99	95	90	83	80	76

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
356	23.59	10.23	5.30	7	26.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

01304500 -- PECONIC RIVER AT RIVERHEAD NY

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	0	3	0	0
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	0	4	0	0
IRON (FE), UG/L	8	220	3500	4	190	560
LEAD (PB), UG/L	4	3	7	3	2	4
MANGANESE (MN), UG/L	8	30	100	4	50	80
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	0	3	0	0
ZINC (ZN), UG/L	4	0	10	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	3.85				
BIOMASS, ASH WT., G/SQ M	1	1.54				
CHLOROPHYLL A, MG/SQ M	1	2.200				
CHLOROPHYLL B, MG/SQ M	1	0.100				
ORGANIC CARBON, MG/L	4	3.500	5.500			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 01358000 NAME: HUDSON RIVER AT GREEN ISLAND NY

LAT 42D45M08S LONG 073D41M22S
DRAINAGE AREA: 8090 SQ MI (20953 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, F	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	12.64	8.14	1.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	160.5	23.2	104	182					
STREAMFLOW (CUBIC FT/SEC)	11	19863.6	13774.4	4450	48500	11	-509.204	101567.688	-0.856	7508.1
PH (STANDARD UNITS)	10	7.40	0.53	6.6	8.1	10	0.0090	5.9706	0.407*	0.51
PHOSPHORUS, TOTAL	10	0.062	0.018	0.04	0.10	10	-0.00007	0.07295	-0.095*	0.018
NITRITE + NITRATE, TOTAL	10	0.460	0.099	0.32	0.67	10	-0.00060	0.55544	-0.147*	0.104
NITROGEN, KJELDAHL, TOTAL	10	0.574	0.122	0.40	0.75	10	-0.00042	0.64168	-0.085*	0.129
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	16580.0	47599.6	570	160000	11	424.982	-51610.313	0.207*	49090.0
SEDIMENT SUSPENDED	11	19.5	10.8	5	36					
SEDIMENT, CLAY-SILT (PERCENT)	11	87.6	7.1	76	99					
COLIFORM, FECAL (COL/100 ML)	10	14683.0	33739.1	360	110000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	432.0	366.0	50	1400					
SILICA, DISSOLVED	11	4.62	0.61	3.3	5.5	11	0.0009	4.4803	0.033*	0.64
CALCIUM, DISSOLVED	11	19.27	3.20	13.0	25.0	11	0.1268	-1.0698	0.918	1.33
MAGNESIUM, DISSOLVED	11	3.75	0.64	2.3	4.5	11	0.0241	-0.1194	0.870	0.33
SODIUM, DISSOLVED	11	4.55	1.20	2.8	6.2	11	0.0355	-1.1466	0.684	0.92
POTASSIUM, DISSOLVED	11	0.86	0.21	0.6	1.3	11	0.0055	-0.0218	0.605	0.18
BICARBONATE, ION	11	59.0	10.1	35	70	11	0.408	-6.520	0.932	3.9
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	14.18	2.23	11.0	18.0	11	0.0705	2.8650	0.733	1.60
CHLORIDE, DISSOLVED	11	6.92	1.95	3.6	9.6	11	0.0690	-4.1597	0.819	1.18
DISSOLVED SOLIDS, SUM OF CONST	11	83.5	12.8	57	99	11	0.535	-2.321	0.969	3.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	99.1	16.4	72	127	11	0.476	22.659	0.671	12.9
HARDNESS, TOTAL	11	63.6	10.2	42	80	11	0.418	-3.465	0.946	3.5
HARDNESS, NONCARBONATE	11	15.4	3.7	11	24	11	0.084	1.859	0.531*	3.3
TURBIDITY (JTU)	11	9.4	5.2	1	15	11	-0.126	29.652	-0.559*	4.6
FLUORIDE, DISSOLVED	11	0.15	0.07	0.1	0.3	11	0.0015	-0.0932	0.501*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
246	11.26	12.20	2.62	92	1.90

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

01358000 — HUDSON RIVER AT GREEN ISLAND NY

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	0
CADMIUM (CD), UG/L	5	0	1	5	0	1
CHROMIUM (CR), UG/L	5	0	10	5	0	10
COBALT (CO), UG/L	5	0	2	5	0	0
COPPER (CU), UG/L	5	10	10	5	0	10
IRON (FE), UG/L	5	390	1200	5	40	310
LEAD (PB), UG/L	5	8	12	5	1	4
MANGANESE (MN), UG/L	5	40	60	5	10	40
MERCURY (HG), UG/L	5	< 0.5	< 0.5	5	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	2	5	0	1
ZINC (ZN), UG/L	5	10	70	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	0.20	5.84			
BIOMASS, ASH WT., G/SQ M	5	0.20	5.53			
CHLOROPHYLL A, MG/SQ M	6	0.000	2.600			
CHLOROPHYLL B, MG/SQ M	6	0.000	1.000			
ORGANIC CARBON, MG/L	5	3.900	10.000			

Table 12. Summary of measurements at each station--Continued.

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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.25	8.47	0.9	24.9					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	419.7	229.7	181	937					
STREAMFLOW (CUBIC FT/SEC)	13	1020.8	1165.2	160	4300	12	-3.362	2504.263	-0.651	949.1
PH (STANDARD UNITS)	12	6.90	0.49	6.0	7.4	12	0.0009	6.5267	0.418*	0.46
PHOSPHORUS, TOTAL	12	0.260	0.095	0.14	0.43	12	0.00037	0.10500	0.896	0.044
NITRITE + NITRATE, TOTAL	12	1.332	0.295	0.79	1.80	12	-0.00110	1.79446	-0.857	0.159
NITROGEN, KJELDAHL, TOTAL	12	3.354	2.548	0.77	8.00	12	0.01036	-0.99566	0.934	0.953
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	9949.1	7914.8	490	22000	11	23.335	292.613	0.706	5895.4
SEDIMENT SUSPENDED	11	33.7	58.7	3	205					
SEDIMENT, CLAY-SILT (PERCENT)	11	92.9	8.3	80	100					
COLIFORM, FECAL (COL/100 ML)	12	783.2	1106.9	44	4000					
STREPTOCOCCI, FECAL (COL/100 ML)	13	690.3	1082.7	24	3700					
SILICA, DISSOLVED	12	9.38	1.48	7.2	12.0	12	-0.0025	10.4301	-0.387*	1.43
CALCIUM, DISSOLVED	11	26.36	16.95	11.0	70.0	11	0.0779	-3.9752	0.987	2.89
MAGNESIUM, DISSOLVED	11	7.11	2.05	4.8	12.0	11	0.0091	3.5622	0.955	0.64
SODIUM, DISSOLVED	11	29.45	21.73	11.0	87.0	11	0.0999	-9.4882	0.988	3.55
POTASSIUM, DISSOLVED	11	3.98	1.59	1.8	7.5	11	0.0070	1.2415	0.948	0.53
BICARBONATE, ION	12	40.9	17.0	18	74	12	0.028	29.307	0.374*	16.5
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	74.75	55.77	26.0	190.0	12	0.2363	-25.2692	0.982	11.16
CHLORIDE, DISSOLVED	12	37.25	19.88	18.0	85.0	12	0.0486	16.8587	0.562*	17.25
DISSOLVED SOLIDS, SUM OF CONST	11	195.8	98.8	92	437	11	0.459	17.166	0.997	8.1
DISSOLVED SOLIDS, ROE 180 DEC C	12	248.6	142.4	122	580	12	0.616	-9.779	0.995	17.4
HARDNESS, TOTAL	11	94.4	49.3	47	220	11	0.226	6.373	0.984	9.4
HARDNESS, NONCARBONATE	11	59.1	41.5	28	160	11	0.184	-12.554	0.951	13.6
TURBIDITY (JTU)	12	11.7	20.5	3	75	12	-0.036	26.666	-0.400*	19.8
FLUORIDE, DISSOLVED	12	0.17	0.08	0.1	0.3	12	-0.0001	0.2041	-0.211*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 289

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%
	986	868	703	404	326	257	225	187	170	149

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
348	18.19	14.22	2.90	25	17.45

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	12	3	0	1
CADMIUM (CD), UG/L	4	0	4	3	1	3
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	3	3	0	1
COPPER (CU), UG/L	4	10	20	3	0	10
IRON (FE), UG/L	4	290	4300	3	80	230
LEAD (PB), UG/L	4	2	31	3	4	23
MANGANESE (MN), UG/L	4	60	250	3	60	160
MERCURV (HG), UG/L	4	< 0.5	< 0.5	3	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	3	0	1
ZINC (ZN), UG/L	4	10	40	3	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	5.88	38.00			
BIOMASS, ASH WT., G/SQ M	3	2.96	34.00			
CHLOROPHYLL A, MG/SQ M	3	2.900	27.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	3.300			
ORGANIC CARBON, MG/L	12	3.500	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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	14.14	6.63	2.4	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	69.9	8.2	61	89					
STREAMFLOW (CUBIC FT/SEC)	14	178.5	77.5	75	327	12	-0.543	222.892	-0.057*	81.3
PH (STANDARD UNITS)	13	5.15	0.66	4.1	6.4	12	0.0060	4.7029	0.073*	0.71
PHOSPHORUS, TOTAL	12	0.054	0.019	0.03	0.09	12	-0.00024	0.07094	-0.104*	0.020
NITRITE + NITRATE, TOTAL	12	0.397	0.111	0.18	0.52	12	-0.00448	0.71065	-0.331*	0.109
NITROGEN, KJELDAHL, TOTAL	12	0.457	0.280	0.27	1.30	12	-0.00956	1.12477	-0.279*	0.282
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	392.4	409.1	75	1200	12	14.226	-602.212	0.264*	411.4
SEDIMENT SUSPENDED	11	6.5	4.8	1	14					
SEDIMENT, CLAY-SILT (PERCENT)	11	81.0	20.3	44	100					
COLIFORM, FECAL (COL/100 ML)	11	156.2	321.9	1	1100					
STREPTOCOCCI, FECAL (COL/100 ML)	11	255.5	506.4	2	1700					
SILICA, DISSOLVED	12	4.15	1.06	2.3	5.3	12	0.0788	-1.3593	0.605	0.89
CALCIUM, DISSOLVED	12	2.89	0.81	2.0	5.0	12	0.0613	-1.3909	0.619	0.66
MAGNESIUM, DISSOLVED	12	1.12	0.27	0.4	1.3	12	-0.0027	1.3135	-0.080*	0.29
SODIUM, DISSOLVED	12	4.67	0.62	3.5	6.1	12	0.0379	2.0176	0.503*	0.56
POTASSIUM, DISSOLVED	12	1.13	0.19	0.9	1.5	12	0.0039	0.8631	0.164*	0.20
BICARBONATE, ION	9	2.9	3.1	0	9	9	0.214	-11.714	0.589*	2.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.92	1.70	5.8	12.0	12	0.1316	0.7268	0.632	1.38
CHLORIDE, DISSOLVED	12	7.98	2.00	6.3	14.0	12	0.1738	-4.1681	0.708	1.48
DISSOLVED SOLIDS, SUM OF CONST	9	33.0	6.3	28	49	9	0.673	-12.818	0.894	3.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	48.3	11.1	29	67	12	0.545	10.239	0.399*	10.7
HARDNESS, TOTAL	12	11.9	2.3	9	18	12	0.150	1.431	0.529*	2.1
HARDNESS, NONCARBONATE	9	9.6	1.7	7	12	9	0.040	6.849	0.200*	1.7
TURBIDITY (JTU)	12	2.7	1.2	1	5	12	0.088	-3.502	0.624	0.9
FLUORIDE, DISSOLVED	12	0.12	0.06	0.1	0.3	12	0.0017	0.0081	0.220*	0.06

*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%
	97	89	85	78	73	67	64	60	58	55

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
358	13.59	10.26	2.79	59	6.04

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	2	4	0	0
CADMIUM (CD), UG/L	5	0	3	4	1	3
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	5	0	1	4	1	2
COPPER (CU), UG/L	5	0	10	4	0	10
IRON (FE), UG/L	5	470	1500	4	360	840
LEAD (PB), UG/L	5	6	14	4	3	14
MANGANESE (MN), UG/L	5	30	40	4	30	40
MERCURY (HG), UG/L	5	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	1	4	0	1
ZINC (ZN), UG/L	4	10	30	4	20	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.80	65.70			
BIOMASS, ASH WT., G/SQ M	4	0.70	48.80			
CHLOROPHYLL A, MG/SQ M	4	1.200	11.900			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.600			
ORGANIC CARBON, MG/L	12	4.800	36.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	14.43	9.44	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	158.0	41.2	90	230					
STREAMFLOW (CUBIC FT/SEC)	23	12912.2	8215.1	3460	30300	22	-159.320	38514.379	-0.807	4921.1
PH (STANDARD UNITS)	13	7.58	0.89	6.4	9.1	12	0.0161	4.7236	0.718	0.58
PHOSPHORUS, TOTAL	22	0.113	0.056	0.05	0.27	22	0.00043	0.04410	0.321*	0.054
NITRITE + NITRATE, TOTAL	12	0.852	0.213	0.35	1.10	12	0.00138	0.61792	0.230*	0.218
NITROGEN, KJELDAHL, TOTAL	12	0.434	0.177	0.24	0.80	12	0.00304	-0.07978	0.610	0.147
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7771.7	8294.5	670	24000	12	137.743	-15483.949	0.588	7037.4
SEDIMENT SUSPENDED	11	16.8	17.9	1	66					
SEDIMENT, CLAY-SILT (PERCENT)	10	90.7	9.9	72	100					
COLIFORM, FECAL (COL/100 ML)	10	303.4	554.2	2	1800					
STREPTOCOCCI, FECAL (COL/100 ML)	11	123.6	134.8	6	340					
SILICA, DISSOLVED	12	3.67	1.58	0.3	5.5	12	-0.0155	6.2814	-0.348*	1.55
CALCIUM, DISSOLVED	22	14.23	5.28	7.0	33.0	22	0.0486	6.5422	0.380*	5.01
MAGNESIUM, DISSOLVED	21	4.81	1.98	0.5	9.5	21	0.0147	2.4940	0.313*	1.93
SODIUM, DISSOLVED	12	6.04	1.73	3.9	9.6	12	0.0339	0.3193	0.694	1.31
POTASSIUM, DISSOLVED	12	1.29	0.29	0.9	1.8	12	0.0075	0.0192	0.928	0.11
BICARBONATE, ION	12	40.8	10.8	24	55	12	0.184	9.656	0.601	9.1
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	22	19.86	4.69	10.0	32.0	22	0.0956	4.7632	0.806	2.97
CHLORIDE, DISSOLVED	22	9.65	2.87	6.3	18.0	22	0.0467	2.2659	0.671	2.18
DISSOLVED SOLIDS, SUM OF CONST	12	79.3	15.5	52	100	12	0.358	18.926	0.818	9.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	87.8	22.7	44	112	12	0.612	-15.469	0.954	7.2
HARDNESS, TOTAL	21	55.6	13.7	27	84	21	0.183	26.784	0.563	11.6
HARDNESS, NONCARBONATE	12	20.6	6.8	7	32	12	0.145	-3.916	0.752	4.7
TURBIDITY (JTU)	22	3.4	3.2	1	15	22	0.007	2.379	0.084*	3.3
FLUORIDE, DISSOLVED	12	0.10	0.04	0.0	0.2	12	-0.0003	0.1527	-0.259*	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 232

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%
	226	217	203	190	177	159	138	121	114	104

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
319	26.31	24.17	2.63	30	27.31

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	12	0	<3	4	0	1
CHROMIUM (CR), UG/L	12	<10	20	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	12	0	50	4	0	0
IRON (FE), UG/L	14	60	680	4	30	80
LEAD (PB), UG/L	12	3	70	4	2	6
MANGANESE (MN), UG/L	12	10	150	4	0	50
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	12	10	90	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.35	12.00			
BIOMASS, ASH WT., G/SQ M	4	0.30	4.90			
CHLOROPHYLL A, MG/SQ M	4	1.600	47.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	6.400			
ORGANIC CARBON, MG/L	12	1.800	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.88	9.65	2.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	371.5	111.0	160	510					
STREAMFLOW (CUBIC FT/SEC)	13	5546.7	11304.6	547	42700	13	-45.692	22522.883	-0.448*	10553.4
PH (STANDARD UNITS)	11	7.48	0.84	5.4	8.7	11	0.0052	5.3828	0.574*	0.72
PHOSPHORUS, TOTAL	12	0.243	0.109	0.00	0.45	12	0.00059	0.01616	0.589	0.093
NITRITE + NITRATE, TOTAL	8	2.462	0.437	2.00	3.10	8	0.00299	1.15178	0.443*	0.423
NITROGEN, KJELDAHL, TOTAL	8	1.045	0.554	0.43	2.00	8	0.00313	-0.32577	0.366*	0.557
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	28427.8	31319.8	310	80000	9	31.554	15455.723	0.099*	33316.6
SEDIMENT SUSPENDED	9	83.7	198.6	7	613					
SEDIMENT, CLAY-SILT (PERCENT)	9	86.6	12.8	67	100					
COLIFORM, FECAL (COL/100 ML)	8	1221.4	1593.6	41	4600					
STREPTOCOCCI, FECAL (COL/100 ML)	8	1011.1	1853.9	18	5400					
SILICA, DISSOLVED	10	7.03	2.52	0.8	10.0	10	-0.0194	15.0920	-0.604*	2.13
CALCIUM, DISSOLVED	11	34.31	9.53	14.4	47.0	11	0.0690	6.5156	0.627	7.82
MAGNESIUM, DISSOLVED	11	14.79	5.38	9.2	28.5	11	-0.0191	22.4876	-0.308*	5.40
SODIUM, DISSOLVED	10	19.00	6.09	10.0	27.0	10	0.0359	4.0704	0.463*	5.73
POTASSIUM, DISSOLVED	10	3.53	1.40	2.3	7.2	10	0.0012	3.0422	0.066*	1.48
BICARBONATE, ION	10	83.2	18.4	52	113	10	0.127	30.269	0.543*	16.4
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	70.92	19.09	46.0	100.0	12	0.0780	41.0892	0.442*	17.96
CHLORIDE, DISSOLVED	12	24.00	7.99	12.0	37.0	12	0.0480	5.6572	0.650	6.37
DISSOLVED SOLIDS, SUM OF CONST	10	220.3	48.8	157	288	10	0.236	121.989	0.381*	47.8
DISSOLVED SOLIDS, ROE 180 DEG C	10	250.3	60.3	165	347	10	0.184	173.841	0.240*	62.1
HARDNESS, TOTAL	12	143.8	31.7	96	190	12	0.152	85.809	0.518*	28.4
HARDNESS, NONCARBONATE	10	77.5	16.3	60	100	10	0.036	62.346	0.176*	17.0
TURBIDITY (JTU)	12	7.5	12.7	1	47	12	-0.072	34.918	-0.613	10.5
FLUORIDE, DISSOLVED	10	0.18	0.06	0.1	0.3	10	0.0002	0.0924	0.262*	0.06

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 281

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	552	486	474	448	430	399	370	334	293	234

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
325	15.13	11.32	2.74	95	1.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	1	30	5	0	2
CADMIUM (CD), UG/L	7	0	<3	5	1	2
CHROMIUM (CR), UG/L	7	10	30	5	<10	10
COBALT (CO), UG/L	5	1	40	5	0	5
COPPER (CU), UG/L	7	0	100	5	0	10
IRON (FE), UG/L	7	180	21000	5	20	190
LEAD (PB), UG/L	7	7	160	5	2	8
MANGANESE (MN), UG/L	7	130	2900	5	0	520
MERCURY (HG), UG/L	5	<0.5	1.2	5	<0.5	0.9
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	7	40	500	5	10	110
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.50	13.00			
BIOMASS, ASH WT., G/SQ M	2	1.80	12.00			
CHLOROPHYLL A, MG/SQ M	3	0.200	1.700			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.200			
ORGANIC CARBON, MG/L	5	3.200	24.000			

Table 12. Summary of measurements at each station--Continued.

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

LAT 38D59M50S LONG 075D47M10S
DRAINAGE AREA: 113 SG MI (293 SC KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	12.83	6.10	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	131.1	24.7	93	164					
STREAMFLOW (CUBIC FT/SEC)	15	87.5	73.7	9	241	15	-2.620	431.072	-0.879	36.5
PH (STANDARD UNITS)	15	6.97	0.33	6.2	7.7	15	0.0026	6.6354	0.190*	0.34
PHOSPHORUS, TOTAL	13	0.067	0.013	0.05	0.09	13	-0.00013	0.08428	-0.257*	0.013
NITRITE + NITRATE, TOTAL	13	1.112	0.284	0.54	1.60	13	0.00429	0.54112	0.392*	0.273
NITROGEN, KJELDAHL, TOTAL	13	0.474	0.347	0.20	1.50	13	-0.00533	1.18445	-0.398*	0.333
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	810.5	2107.6	38	7800	13	23.676	-2343.877	0.291*	2105.8
SEDIMENT SUSPENDED	13	110.0	375.6	1	1360					
SEDIMENT, CLAY-SILT (PERCENT)	13	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	13	59.6	42.4	8	160					
STREPTOCOCCI, FECAL (COL/100 ML)	13	193.2	233.7	7	800					
SILICA, DISSOLVED	13	17.08	2.33	14.0	21.0	13	-0.0071	18.0222	-0.079*	2.42
CALCIUM, DISSOLVED	13	10.68	2.49	7.5	15.0	13	0.0913	-1.4823	0.949	0.82
MAGNESIUM, DISSOLVED	13	3.01	0.63	1.7	3.9	13	0.0204	0.2877	0.843	0.35
SODIUM, DISSOLVED	13	6.65	1.45	4.5	9.3	13	0.0522	-0.3101	0.932	0.55
POTASSIUM, DISSOLVED	13	2.06	0.32	1.6	2.5	13	0.0036	1.5839	0.288*	0.32
BICARBONATE, ION	13	25.2	10.8	7	42	13	0.393	-27.214	0.946	3.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	15.92	1.80	13.0	19.0	13	0.0278	12.2195	0.400*	1.72
CHLORIDE, DISSOLVED	13	11.92	2.53	9.1	17.0	13	0.0875	0.2602	0.896	1.17
DISSOLVED SOLIDS, SUM OF CONST	13	79.9	13.0	60	100	13	0.475	16.626	0.951	4.2
DISSOLVED SOLIDS, ROE 180 DEG C	13	95.5	9.3	83	115	13	0.217	66.547	0.606	7.7
HARDNESS, TOTAL	13	39.1	8.5	26	54	13	0.311	-2.294	0.952	2.7
HARDNESS, NONCARBONATE	13	18.4	1.7	15	22	13	-0.013	20.138	-0.200*	1.7
TURBIDITY (JTU)	13	5.1	2.5	1	10	13	-0.045	11.010	-0.456*	2.4
FLUORIDE, DISSOLVED	13	0.12	0.06	0.0	0.2	13	-0.0008	0.2235	-0.379*	0.05

*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%
	154	152	151	146	140	132	114	98	92	68

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
331	14.43	9.64	2.84	84	2.92

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

01491000 -- CHOPTANK RIVER NEAR GREENSBORO, MD.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	6	0	1	6	0	1
CADMIUM (CD), UG/L	6	0	1	6	0	1
CHROMIUM (CR), UG/L	6	0	10	6	0	<10
COBALT (CO), UG/L	6	0	3	6	1	3
COPPER (CU), UG/L	6	0	10	6	0	10
IRON (FE), UG/L	6	760	1100	6	100	520
LEAD (PB), UG/L	6	2	4	6	1	4
MANGANESE (MN), UG/L	6	20	90	6	20	80
MERCURY (HG), UG/L	6	<0.5	<5.0	6	<0.5	<5.0
SELENIUM (SE), UG/L	6	0	2	6	0	1
ZINC (ZN), UG/L	6	0	10	6	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.40	20.00			
BIOMASS, ASH WT., G/SQ M	3	1.38	15.00			
CHLOROPHYLL A, MG/SQ M	2	1.700	47.000			
CHLOROPHYLL B, MG/SQ M	2	0.100	0.300			
ORGANIC CARBON, MG/L	6	3.100	6.100			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	13.78	7.15	2.5	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	220.2	49.0	135	300					
STREAMFLOW (CUBIC FT/SEC)	23	23088.7	22425.0	4300	68000	23	-322.463	94100.625	-0.705	16286.9
PH (STANDARD UNITS)	23	7.19	0.38	6.5	8.0	23	0.0046	6.1645	0.591	0.31
PHOSPHORUS, TOTAL	23	0.109	0.119	0.03	0.60	23	-0.00115	0.36321	-0.474	0.107
NITRITE + NITRATE, TOTAL	23	0.653	0.191	0.34	1.00	23	-0.00024	0.70713	-0.063*	0.195
NITROGEN, KJELDAHL, TOTAL	23	0.516	0.340	0.20	1.60	23	-0.00196	0.94643	-0.282*	0.334
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	39797.0	74163.6	660	240000	10	884.984	-150032.125	0.582*	63995.4
SEDIMENT SUSPENDED	14	115.5	234.7	5	860					
SEDIMENT, CLAY-SILT (PERCENT)	14	94.4	5.1	83	99					
COLIFORM, FECAL (COL/100 ML)	22	1278.2	1927.7	50	8800					
STREPTOCOCCI, FECAL (COL/100 ML)	10	835.2	1289.9	34	3800					
SILICA, DISSOLVED	4	2.27	1.99	0.4	4.5					
CALCIUM, DISSOLVED	4	25.25	7.93	16.0	35.0					
MAGNESIUM, DISSOLVED	4	7.30	3.40	4.0	12.0					
SODIUM, DISSOLVED	4	7.32	2.90	4.1	11.0					
POTASSIUM, DISSOLVED	4	1.70	0.50	1.2	2.3					
BICARBONATE, ION	4	58.8	13.6	41	72					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	46.25	22.81	24.0	78.0					
CHLORIDE, DISSOLVED	4	10.40	2.74	7.9	14.0					
DISSOLVED SOLIDS, SUM OF CONST	4	130.0	44.6	82	189					
DISSOLVED SOLIDS, ROE 180 DEG C	23	132.6	37.3	84	233	23	0.582	4.299	0.766	24.5
HARDNESS, TOTAL	4	93.8	35.2	56	140					
HARDNESS, NONCARBONATE	4	45.0	23.4	23	78					
TURBIDITY (JTU)	23	38.7	123.6	1	600	23	-0.945	246.864	-0.375*	117.3
FLUORIDE, DISSOLVED	4	0.12	0.05	0.1	0.2					

*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%
	299	273	263	240	225	204	183	153	139	125

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
300	13.27	11.39	2.64	92	2.30

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	23	0	26	4	0	0
CADMIUM (CD), UG/L	23	0	1	4	0	3
CHROMIUM (CR), UG/L	23	0	20	4	<10	20
COBALT (CO), UG/L	4	2	4	4	0	2
COPPER (CU), UG/L	23	0	30	4	0	10
IRON (FE), UG/L	23	330	36000	4	10	740
LEAD (PB), UG/L	23	0	44	4	2	8
MANGANESE (MN), UG/L	23	80	1000	4	110	210
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	23	10	130	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	8.31				
BIOMASS, ASH WT., G/SQ M	1	7.31				
CHLOROPHYLL A, MG/SQ M	2	1.700	8.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.200			
ORGANIC CARBON, MG/L	22	2.100	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.00	7.53	3.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	186.4	44.5	120	280					
STREAMFLOW (CUBIC FT/SEC)	12	21291.7	29578.9	2120	84700	11	-318.875	75144.813	-0.604	19747.7
PH (STANDARD UNITS)	11	6.83	0.52	6.2	7.9	11	0.0101	4.9540	0.857	0.28
PHOSPHORUS, TOTAL	11	0.091	0.212	0.01	0.73	11	-0.00223	0.50697	-0.468*	0.196
NITRITE + NITRATE, TOTAL	11	0.507	0.110	0.35	0.69	11	0.00033	0.44620	0.132*	0.115
NITROGEN, KJELDAHL, TOTAL	11	0.507	0.658	0.00	2.30	11	0.00072	0.37326	0.049*	0.693
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2652.7	3063.0	240	10000	11	-8.258	4191.664	-0.120*	3205.4
SEDIMENT SUSPENDED	12	48.5	94.2	1	275					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.3	7.4	81	100					
COLIFORM, FECAL (COL/100 ML)	10	565.3	1181.2	29	3900					
STREPTOCOCCI, FECAL (COL/100 ML)	10	4111.7	11913.6	25	38000					
SILICA, DISSOLVED	4	3.87	1.94	1.0	5.1					
CALCIUM, DISSOLVED	4	16.75	6.29	12.0	26.0					
MAGNESIUM, DISSOLVED	4	6.05	2.34	4.5	9.5					
SODIUM, DISSOLVED	4	9.02	10.72	2.8	25.0					
POTASSIUM, DISSOLVED	4	1.25	0.26	1.0	1.6					
BICARBONATE, ION	4	24.0	17.8	10	50					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	45.75	10.53	34.0	59.0					
CHLORIDE, DISSOLVED	4	5.67	1.77	4.2	8.0					
DISSOLVED SOLIDS, SUM OF CONST	4	100.5	26.3	73	135					
DISSOLVED SOLIDS, RDE 180 DEG C	4	103.0	35.1	79	155					
HARDNESS, TOTAL	4	65.8	23.3	49	100					
HARDNESS, NONCARBONATE	4	47.0	12.7	32	63					
TURBIDITY (JTU)	4	2.3	1.5	1	4					
FLUORIDE, DISSOLVED	4	0.12	0.05	0.1	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 296

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%
	299	252	226	193	179	160	139	121	116	102

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
310	12.09	10.44	2.76	92	2.01

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	3	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	2
CHROMIUM (CR), UG/L	4	10	20	4	<10	10
COBALT (CO), UG/L	4	0	9	4	1	8
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	4	120	480	4	0	60
LEAD (PB), UG/L	4	0	9	4	2	6
MANGANESE (MN), UG/L	4	80	460	4	40	460
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	10	30	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	17.10	31.20			
BIOMASS, ASH WT., G/SQ M	4	14.50	21.20			
CHLOROPHYLL A, MG/SQ M	4	8.900	28.100			
CHLOROPHYLL B, MG/SQ M	4	0.100	2.600			
ORGANIC CARBON, MG/L	4	0.900	9.900			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	30	15.03	7.71	0.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	30	227.8	62.2	90	390					
STREAMFLOW (CUBIC FT/SEC)	25	44830.0	47034.1	7750	234000	24	-334.456	119516.625	-0.649	20407.0
PH (STANDARD UNITS)	30	7.91	0.64	6.6	9.0	29	0.0038	7.0567	0.359	0.58
PHOSPHORUS, TOTAL	30	0.090	0.045	0.03	0.22	30	-0.00029	0.15486	-0.395	0.042
NITRITE + NITRATE, TOTAL	23	0.823	0.279	0.17	1.40	23	-0.00085	1.03283	-0.157*	0.282
NITROGEN, KJELDAHL, TOTAL	23	0.412	0.184	0.08	0.90	23	-0.00023	0.46906	-0.065*	0.188
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	17445.5	23578.7	900	73000	11	292.462	-53941.922	0.758	16197.8
SEDIMENT SUSPENDED	14	31.6	29.2	4	95					
SEDIMENT, CLAY-SILT (PERCENT)	14	95.4	4.0	87	100					
COLIFORM, FECAL (COL/100 ML)	22	1046.7	1478.1	80	6900					
STREPTOCOCCI, FECAL (COL/100 ML)	10	478.1	527.7	56	1500					
SILICA, DISSOLVED	4	2.87	1.59	0.6	4.1					
CALCIUM, DISSOLVED	11	22.47	7.37	12.8	37.0	11	0.0806	6.7145	0.852	4.06
MAGNESIUM, DISSOLVED	11	6.76	3.57	1.3	13.5	11	0.0135	4.1274	0.295*	3.59
SODIUM, DISSOLVED	4	6.20	2.58	4.6	10.0					
POTASSIUM, DISSOLVED	4	1.60	0.34	1.4	2.1					
BICARBONATE, ION	4	66.8	20.6	46	95					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	11	34.18	10.43	20.0	61.0	11	0.1087	12.9379	0.811	6.42
CHLORIDE, DISSOLVED	11	8.92	2.58	6.0	15.0	11	0.0295	3.1457	0.892	1.23
DISSOLVED SOLIDS, SUM OF CONST	4	127.3	39.6	95	185					
DISSOLVED SOLIDS, ROE 180 DEG C	23	141.0	34.6	94	234	23	0.486	20.412	0.726	24.4
HARDNESS, TOTAL	11	83.2	23.5	53	140	11	0.255	33.275	0.845	13.3
HARDNESS, NONCARBONATE	4	40.5	16.0	30	64					
TURBIDITY (JTU)	30	10.4	15.6	1	75	30	-0.131	40.196	-0.522	13.5
FLUORIDE, DISSOLVED	4	0.12	0.05	0.1	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 305

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%
	284	265	250	209	191	173	156	126	118	105

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
309	13.53	11.73	2.71	95	1.83

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

01570500 -- SUSQUEHANNA RIVER AT HARRISBURG, PA.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	22	0	38	4	0	1
CADMIUM (CD), UG/L	24	0	<3	4	0	1
CHROMIUM (CR), UG/L	24	0	30	4	<10	10
COBALT (CO), UG/L	4	2	18	4	0	3
COPPER (CU), UG/L	24	0	30	4	0	0
IRON (FE), UG/L	29	70	7070	4	0	140
LEAD (PB), UG/L	24	0	< 50	4	0	5
MANGANESE (MN), UG/L	26	<10	490	4	0	160
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	24	0	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.00	23.40			
BIOMASS, ASH WT., G/SQ M	3	0.80	12.90			
CHLOROPHYLL A, MG/SQ M	3	0.300	14.900			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.800			
ORGANIC CARBON, MG/L	23	1.300	17.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	17.18	9.00	0.5	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	268.5	48.8	195	380					
STREAMFLOW (CUBIC FT/SEC)	13	12520.0	18988.4	1730	73800	13	-270.265	90480.875	-0.694	14269.8
PH (STANDARD UNITS)	13	8.32	0.46	7.7	9.0	13	0.0029	7.4605	0.311*	0.46
PHOSPHORUS, TOTAL	13	0.099	0.066	0.04	0.29	13	-0.00054	0.25538	-0.402*	0.063
NITRITE + NITRATE, TOTAL	13	0.682	0.541	0.01	1.70	13	-0.00583	1.78645	-0.345*	0.530
NITROGEN, KJELDAHL, TOTAL	13	0.589	0.325	0.20	1.20	13	0.00249	-0.12900	0.374*	0.315
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	31079.2	36111.5	250	120000	12	48.661	17291.910	0.064*	37797.1
SEDIMENT SUSPENDED	4	78.5	92.5	17	216					
SEDIMENT, CLAY-SILT (PERCENT)	4	90.6	3.9	87	95					
COLIFORM, FECAL (COL/100 ML)	13	411.1	1177.0	1	4300					
STREPTOCOCCI, FECAL (COL/100 ML)	13	1239.6	2765.6	4	10000					
SILICA, DISSOLVED	12	3.64	2.47	0.5	7.1	12	-0.0165	8.3163	-0.315*	2.45
CALCIUM, DISSOLVED	12	31.58	5.47	23.0	43.0	12	0.0916	5.6240	0.790	3.51
MAGNESIUM, DISSOLVED	12	7.11	1.79	3.1	9.5	12	0.0252	-0.0366	0.664	1.41
SODIUM, DISSOLVED	12	10.49	4.51	4.6	21.0	12	0.0818	-12.6787	0.856	2.44
POTASSIUM, DISSOLVED	12	2.40	0.61	1.6	3.8	12	0.0015	1.9890	0.112*	0.63
BICARBONATE, ION	12	96.7	16.4	70	130	12	0.280	17.360	0.606	10.2
CARBONATE, ION	1	0.0	0.0	0						
SULFATE, DISSOLVED	12	37.17	11.03	25.0	65.0	12	0.1884	-16.1996	0.806	6.85
CHLORIDE, DISSOLVED	12	10.78	3.38	6.3	17.0	12	0.0584	-5.7554	0.814	2.06
DISSOLVED SOLIDS, SUM OF CONST	12	151.1	27.3	108	209	12	0.566	-9.208	0.978	5.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	162.4	24.8	126	220	12	0.501	20.576	0.952	8.0
HARDNESS, TOTAL	12	109.0	20.3	78	150	12	0.348	10.393	0.807	12.6
HARDNESS, NONCARBONATE	12	28.9	7.9	11	39	12	0.102	0.043	0.612	6.5
TURBIDITY (JTU)	12	12.6	21.9	1	80	12	-0.285	93.395	-0.615	18.1
FLUORIDE, DISSOLVED	12	0.13	0.07	0.0	0.2	12	0.0002	0.0735	0.153*	0.07

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 354

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%
	375	344	288	266	258	239	212	179	166	140

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
333	15.69	11.81	2.80	94	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	2	4	0	0
CADMIUM (CD), UG/L	5	0	1	4	0	1
CHROMIUM (CR), UG/L	5	0	10	4	0	10
COBALT (CO), UG/L	5	0	2	4	0	1
COPPER (CU), UG/L	5	0	0	4	0	0
IRON (FE), UG/L	5	150	980	4	0	50
LEAD (PB), UG/L	5	3	11	4	2	6
MANGANESE (MN), UG/L	5	10	180	4	0	10
MERCURY (HG), UG/L	5	< 0.5	< 0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	0	4	0	0
ZINC (ZN), UG/L	5	0	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	13.00	62.00			
BIOMASS, ASH WT., G/SQ M	3	11.00	54.00			
CHLOROPHYLL A, MG/SQ M	3	10.000	110.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	6.300			
ORGANIC CARBON, MG/L	4	4.000	19.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 01673000   NAME: PAMUNKEY RIVER NR HANOVER VA

LAT 37D46M03S LONG 077D19M57S
DRAINAGE AREA: 1061 SQ MI (2800 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	13.20	6.98	4.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	20	76.7	18.4	50	112					
STREAMFLOW (CUBIC FT/SEC)	12	1082.3	745.3	127	2380	12	-20.227	2673.425	-0.437*	703.2
PH (STANDARD UNITS)	12	6.64	0.64	5.2	7.6	12	-0.0134	7.6957	-0.334*	0.64
PHOSPHORUS, TOTAL	12	0.035	0.015	0.02	0.07	12	0.00025	0.01566	0.262*	0.015
NITRITE + NITRATE, TOTAL	12	0.179	0.051	0.08	0.24	12	-0.00200	0.33622	-0.629	0.042
NITROGEN, KJELDAHL, TOTAL	12	0.310	0.099	0.17	0.52	12	-0.00143	0.42275	-0.234*	0.101
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1551.8	987.0	280	3100	11	-35.216	4215.453	-0.456*	925.8
SEDIMENT SUSPENDED	12	18.3	16.5	3	61					
SEDIMENT, CLAY-SILT (PERCENT)	10	94.0	6.3	79	100					
COLIFORM, FECAL (COL/100 ML)	11	733.5	2016.2	27	6800					
STREPTOCOCCI, FECAL (COL/100 ML)	11	474.4	1077.2	48	3700					
SILICA, DISSOLVED	12	11.91	1.99	7.9	15.0	12	0.0286	9.8304	0.258*	2.02
CALCIUM, DISSOLVED	12	5.28	0.77	4.0	6.7	12	0.0193	3.8782	0.454*	0.72
MAGNESIUM, DISSOLVED	12	2.05	0.47	1.7	3.1	12	0.0139	1.0430	0.529*	0.42
SODIUM, DISSOLVED	12	4.07	0.75	3.2	6.0	12	0.0156	2.9339	0.374*	0.73
POTASSIUM, DISSOLVED	12	2.03	0.37	1.6	2.8	12	0.0092	1.3620	0.446*	0.35
BICARBONATE, ION	12	24.0	5.8	14	31	12	0.104	16.417	0.324*	5.8
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	12	6.14	1.06	4.8	7.9	12	-0.0095	6.8314	-0.161*	1.10
CHLORIDE, DISSOLVED	12	3.94	0.76	3.3	6.2	12	-0.0012	4.0259	-0.028*	0.79
DISSOLVED SOLIDS, SUM OF CONST	12	48.8	5.3	39	57	12	0.133	39.144	0.452*	5.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	51.3	9.3	27	62	12	0.108	43.402	0.210*	9.5
HARDNESS, TOTAL	12	21.8	3.6	17	30	12	0.112	13.596	0.562*	3.1
HARDNESS, NONCARBONATE	12	2.8	2.3	0	6	12	0.019	1.405	0.145*	2.4
TURBIDITY (JTU)	4	9.0	7.6	3	20					
FLUORIDE, DISSOLVED	12	0.14	0.08	0.0	0.3	12	0.0029	-0.0676	0.654	0.06

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 130

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%
	116	112	106	100	77	65	60	49	45	42

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
130	15.50	11.71	2.66	91	1.86

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	0	4	0	0
CADMIUM (CD), UG/L	4	0	15	4	0	6
CHROMIUM (CR), UG/L	4	<10	30	4	0	7
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	2	6	4	0	2
IRON (FE), UG/L	4	610	1800	12	150	360
LEAD (PB), UG/L	4	2	130	4	0	48
MANGANESE (MN), UG/L	4	50	140	4	0	10
MERCURY (HG), UG/L	4	0.1	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIOMASS, ASH WT., G/SQ M	0					
CHLOROPHYLL A, MG/SQ M	1	0.700				
CHLOROPHYLL B, MG/SQ M	1	0.300				
ORGANIC CARBON, MG/L	4	4.600	7.800			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	34	14.40	7.89	2.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	34	127.9	41.8	43	220					
STREAMFLOW (CUBIC FT/SEC)	27	6584.1	5965.2	875	30570	27	-24.900	9719.625	-0.177*	5987.6
PH (STANDARD UNITS)	27	6.49	0.64	5.5	8.2	27	-0.0020	6.7360	-0.131*	0.65
PHOSPHORUS, TOTAL	26	0.083	0.044	0.02	0.20	26	0.00004	0.07779	0.044*	0.044
NITRITE + NITRATE, TOTAL	26	0.320	0.107	0.10	0.48	26	-0.00106	0.45493	-0.426	0.099
NITROGEN, KJELDAHL, TOTAL	26	0.310	0.162	0.04	0.69	26	-0.00042	0.36356	-0.112*	0.164
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2250.9	4708.8	130	16000	11	-20.775	4672.391	-0.210*	4852.4
SEDIMENT SUSPENDED	26	32.5	43.8	3	172					
SEDIMENT, CLAY-SILT (PERCENT)	12	96.4	5.9	81	100					
COLIFORM, FECAL (COL/100 ML)	27	281.3	414.0	10	1980					
STREPTOCOCCI, FECAL (COL/100 ML)	26	735.8	1556.8	16	>5800					
SILICA, DISSOLVED	11	10.15	1.87	7.2	12.0	11	0.0097	8.8442	0.203*	1.93
CALCIUM, DISSOLVED	11	14.57	3.09	9.3	19.0	11	0.0724	4.8614	0.915	1.31
MAGNESIUM, DISSOLVED	11	3.56	0.95	2.0	5.1	11	0.0207	0.7795	0.850	0.53
SODIUM, DISSOLVED	11	5.90	2.49	3.2	12.0	11	0.0502	-0.8294	0.788	1.62
POTASSIUM, DISSOLVED	11	1.72	0.41	1.2	2.7	11	0.0059	0.9254	0.564*	0.36
BICARBONATE, ION	11	50.6	12.2	29	68	11	0.268	14.679	0.857	6.6
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	11	9.57	2.14	7.4	15.0	11	0.0330	5.1436	0.602	1.60
CHLORIDE, DISSOLVED	11	7.05	3.78	3.1	17.0	11	0.0670	-1.9471	0.692	2.88
DISSOLVED SOLIDS, SUM OF CONST	11	79.0	16.5	54	106	11	0.386	27.241	0.911	7.2
DISSOLVED SOLIDS, RDE 180 DEG C	32	87.3	31.3	42	184	32	0.609	9.024	0.834	17.6
HARDNESS, TOTAL	11	50.9	11.2	31	68	11	0.265	15.370	0.924	4.5
HARDNESS, NONCARBONATE	11	9.7	3.8	5	18	11	0.047	3.410	0.484*	3.5
TURBIDITY (JTU)	25	7.3	10.2	1	50	25	-0.006	8.056	-0.026*	10.4
FLUORIDE, DISSOLVED	11	0.19	0.11	0.1	0.5	11	-0.0018	0.4334	-0.621	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 134

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	190	172	157	140	125	110	86	75	70

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
134	14.77	12.16	2.78	92	1.99

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	3	4	0	2
CHROMIUM (CR), UG/L	4	<10	50	4	0	6
COBALT (CO), UG/L	4	0	0	4	0	1
COPPER (CU), UG/L	4	2	8	4	0	2
IRON (FE), UG/L	4	390	5300	12	80	150
LEAD (PB), UG/L	4	2	37	4	0	13
MANGANESE (MN), UG/L	4	10	180	4	0	10
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	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	29.00				
BIOMASS, ASH WT., G/SQ M	1	25.50				
CHLOROPHYLL A, MG/SQ M	2	3.600	5.000			
CHLOROPHYLL B, MG/SQ M	2	0.100	0.600			
ORGANIC CARBON, MG/L	28	1.000	18.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.79	8.29	4.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	110.2	52.4	68	260					
STREAMFLOW (CUBIC FT/SEC)	12	666.3	571.0	8	1590	12	-6.843	1420.220	-0.628	465.9
PH (STANDARD UNITS)	12	6.55	0.60	5.2	7.6	12	-0.0007	6.6280	-0.062*	0.63
PHOSPHORUS, TOTAL	12	0.044	0.018	0.02	0.08	12	-0.00008	0.05265	-0.227*	0.018
NITRITE + NITRATE, TOTAL	12	0.224	0.195	0.00	0.52	12	-0.00160	0.39995	-0.430*	0.184
NITROGEN, KJELDAHL, TOTAL	12	0.523	0.162	0.25	0.70	12	-0.00084	0.61630	-0.273*	0.163
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2769.7	5731.4	0	19000	11	41.553	-1933.289	0.391*	5561.5
SEDIMENT SUSPENDED	11	10.1	3.9	4	17					
SEDIMENT, CLAY-SILT (PERCENT)	10	94.5	9.2	74	100					
COLIFORM, FECAL (COL/100 ML)	12	246.7	274.4	<9	770					
STREPTOCOCCI, FECAL (COL/100 ML)	12	728.8	1926.6	<3	6800					
SILICA, DISSOLVED	4	8.22	4.82	4.0	15.0					
CALCIUM, DISSOLVED	4	15.95	14.22	6.4	37.0					
MAGNESIUM, DISSOLVED	4	1.80	1.01	1.1	3.3					
SODIUM, DISSOLVED	4	4.12	0.81	3.4	5.2					
POTASSIUM, DISSOLVED	4	2.15	0.41	1.8	2.6					
BICARBONATE, ION	4	16.8	5.4	10	23					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	29.25	39.20	6.4	88.0					
CHLORIDE, DISSOLVED	4	8.60	0.08	8.5	8.7					
DISSOLVED SOLIDS, SUM OF CONST	4	79.3	59.5	44	168					
DISSOLVED SOLIDS, ROE 180 DEG C	4	94.0	53.6	60	173					
HARDNESS, TOTAL	4	48.3	41.6	21	110					
HARDNESS, NONCARBONATE	4	33.5	39.7	11	93					
TURBIDITY (JTU)	4	9.3	4.3	6	15					
FLUORIDE, DISSOLVED	4	0.17	0.05	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	15.67	11.45	2.72	97	1.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	23	4	0	3
CHROMIUM (CR), UG/L	4	<10	50	4	0	7
COBALT (CO), UG/L	4	0	0	4	0	4
COPPER (CU), UG/L	4	2	3	4	0	2
IRON (FE), UG/L	4	490	1500	4	110	850
LEAD (PB), UG/L	4	2	140	4	0	14
MANGANESE (MN), UG/L	4	20	260	4	10	190
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	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.40	7.38			
BIOMASS, ASH WT., G/SQ M	2	0.20	5.38			
CHLOROPHYLL A, MG/SQ M	2	0.300	1.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.100			
ORGANIC CARBON, MG/L	4	7.300	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, K	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	18.00	7.63	3.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	100.4	21.1	60	140					
STREAMFLOW (CUBIC FT/SEC)	33	7810.0	5759.4	1830	19600	21	-41.514	11732.070	-0.163*	5431.4
PH (STANDARD UNITS)	21	6.67	0.45	5.9	7.5	21	-0.0032	6.9879	-0.147*	0.46
PHOSPHORUS, TOTAL	13	0.043	0.029	0.02	0.13	13	-0.00065	0.10535	-0.327*	0.029
NITRITE + NITRATE, TOTAL	13	0.123	0.091	0.01	0.26	13	-0.00372	0.47961	-0.601	0.076
NITROGEN, KJELDAHL, TOTAL	13	0.374	0.149	0.16	0.75	13	0.00171	0.21028	0.168*	0.154
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	16618.2	12808.3	2500	47000	11	368.705	-20084.703	0.356*	12615.7
SEDIMENT SUSPENDED	23	16.7	5.7	8	30					
SEDIMENT, CLAY-SILT (PERCENT)	23	89.7	10.4	59	100					
COLIFORM, FECAL (COL/100 ML)	18	357.4	731.2	<10	3200					
STREPTOCOCCI, FECAL (COL/100 ML)	9	174.2	111.3	60	350					
SILICA, DISSOLVED	11	7.56	2.55	3.8	11.0	11	-0.0803	15.5555	-0.390*	2.47
CALCIUM, DISSOLVED	11	7.08	1.30	4.5	9.5	11	0.0542	1.6838	0.517*	1.17
MAGNESIUM, DISSOLVED	11	2.39	0.30	1.9	2.8	11	0.0124	1.1582	0.503*	0.28
SODIUM, DISSOLVED	11	7.93	2.03	5.6	12.0	11	0.1565	-7.6500	0.952	0.66
POTASSIUM, DISSOLVED	11	2.06	0.18	1.7	2.3	11	0.0039	1.6787	0.265*	0.18
BICARBONATE, ION	11	35.5	4.6	30	45	11	0.349	0.710	0.932	1.8
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	8.19	1.92	6.4	13.0	11	0.1443	-6.1711	0.929	0.75
CHLORIDE, DISSOLVED	11	5.57	0.58	4.8	6.5	11	0.0321	2.3821	0.682	0.45
DISSOLVED SOLIDS, SUM OF CONST	11	58.5	7.4	49	74	11	0.486	10.053	0.817	4.5
DISSOLVED SOLIDS, ROE 180 DEG C	11	71.8	12.1	58	90	11	0.557	16.340	0.569*	10.5
HARDNESS, TOTAL	11	27.5	3.7	21	35	11	0.177	9.878	0.587*	3.2
HARDNESS, NONCARBONATE	11	0.8	1.3	0	3	11	-0.008	1.658	-0.083*	1.3
TURBIDITY (JTU)	21	11.8	9.1	1	30	21	0.074	4.378	0.172*	9.2
FLUORIDE, DISSOLVED	11	0.23	0.11	0.1	0.4	11	-0.0017	0.4005	-0.195*	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%
	133	122	120	112	107	97	90	84	82	80

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	17.40	9.48	2.70	93	1.83

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	<10	3	0	0
CADMIUM (CD), UG/L	5	0	<50	3	0	0
CHROMIUM (CR), UG/L	5	0	<50	3	0	0
COBALT (CO), UG/L	5	0	<100	3	0	0
COPPER (CU), UG/L	5	2	<40	3	2	2
IRON (FE), UG/L	5	130	700	3	30	130
LEAD (PB), UG/L	5	0	<100	3	0	11
MANGANESE (MN), UG/L	5	<50	100	3	0	10
MERCURY (HG), UG/L	5	0.0	0.5	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	5	10	<50	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.77	3.50			
BIOMASS, ASH WT., G/SQ M	2	1.62	3.10			
CHLOROPHYLL A, MG/SQ M	2	0.000	1.300			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	2	3.500	4.600			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, A	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	17.76	7.14	4.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	89.2	23.6	50	130					
STREAMFLOW (CUBIC FT/SEC)	30	1556.8	1993.2	166	11000	22	-54.395	6449.238	-0.569	1902.8
PH (STANDARD UNITS)	22	6.39	0.85	4.8	9.1	22	0.0159	4.9717	0.440	0.78
PHOSPHORUS, TOTAL	13	0.122	0.042	0.03	0.18	13	0.00080	0.05456	0.388*	0.040
NITRITE + NITRATE, TOTAL	13	0.284	0.131	0.06	0.47	13	0.00003	0.28146	0.004*	0.137
NITROGEN, KJELDAHL, TOTAL	13	0.591	0.139	0.43	0.83	13	0.00151	0.46370	0.219*	0.142
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	11517.5	17147.0	180	50000	12	548.666	-35576.285	0.646	13720.9
SEDIMENT SUSPENDED	21	28.0	16.4	6	73					
SEDIMENT, CLAY-SILT (PERCENT)	21	92.2	7.0	66	100					
COLIFORM, FECAL (COL/100 ML)	20	365.8	489.5	<10	1700					
STREPTOCOCCI, FECAL (COL/100 ML)	11	442.7	536.1	72	1800					
SILICA, DISSOLVED	12	11.72	3.27	6.2	18.0	12	-0.0164	13.1294	-0.101*	3.41
CALCIUM, DISSOLVED	12	5.67	0.99	3.7	7.6	12	0.0414	2.1120	0.842	0.56
MAGNESIUM, DISSOLVED	12	1.62	0.29	1.1	2.0	12	0.0098	0.7729	0.696	0.22
SODIUM, DISSOLVED	12	7.52	2.72	3.5	14.0	12	0.1326	-3.8606	0.986	0.46
POTASSIUM, DISSOLVED	12	2.22	0.42	1.6	3.1	12	0.0013	2.1051	0.062*	0.44
BICARBONATE, ION	12	24.8	9.2	9	40	12	0.432	-12.329	0.953	2.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.67	2.12	5.3	12.0	12	0.0053	7.2110	0.051*	2.22
CHLORIDE, DISSOLVED	12	6.51	1.74	3.3	9.9	12	0.0659	0.8492	0.765	1.18
DISSOLVED SOLIDS, SUM OF CONST	12	55.3	9.7	36	73	12	0.451	16.607	0.944	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	71.1	10.7	59	84	12	0.376	38.828	0.708	7.9
HARDNESS, TOTAL	12	20.9	3.5	14	27	12	0.141	8.799	0.814	2.1
HARDNESS, NONCARBONATE	12	2.2	3.0	0	9	12	-0.105	11.184	-0.712	2.2
TURBIDITY (JTU)	21	22.0	16.5	2	60	21	-0.242	43.071	-0.326*	16.0
FLUORIDE, DISSOLVED	12	0.23	0.09	0.1	0.4	12	0.0015	0.1021	0.348*	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%
	160	142	130	113	104	95	82	71	67	53

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	18.13	9.95	2.85	90	2.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	0	20	4	0	1
CADMIUM (CD), UG/L	5	0	<50	4	0	0
CHROMIUM (CR), UG/L	5	<10	<50	4	0	6
COBALT (CO), UG/L	5	0	<100	4	0	2
COPPER (CU), UG/L	5	2	<40	4	2	5
IRON (FE), UG/L	5	600	2300	4	290	620
LEAD (PB), UG/L	5	4	<100	4	0	6
MANGANESE (MN), UG/L	5	40	160	4	10	50
MERCURY (HG), UG/L	5	0.0	<0.5	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	5	10	<50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	8.23	10.00			
BIOMASS, ASH WT., G/SQ M	2	6.69	8.00			
CHLOROPHYLL A, MG/SQ M	2	6.900	18.000			
CHLOROPHYLL B, MG/SQ M	2	1.800	2.500			
ORGANIC CARBON, MG/L	4	4.500	10.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, K	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	18.76	7.34	5.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	93.8	19.6	58	142					
STREAMFLOW (CUBIC FT/SEC)	25	2171.8	2513.2	265	9560	12	-89.531	10381.328	-0.722	1764.0
PH (STANDARD UNITS)	12	6.61	0.33	6.0	7.4	12	0.0067	5.9773	0.398*	0.32
PHOSPHORUS, TOTAL	12	0.236	0.060	0.13	0.36	12	0.00141	0.10339	0.459*	0.056
NITRITE + NITRATE, TOTAL	12	0.515	0.325	0.00	0.90	12	-0.00848	1.31012	-0.513*	0.292
NITROGEN, KJELDAHL, TOTAL	12	0.822	0.279	0.45	1.20	12	0.00746	0.12237	0.525*	0.249
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	42986.7	61774.6	180	220000	12	2798.367	-219360.250	0.889	29644.2
SEDIMENT SUSPENDED	18	28.6	7.5	17	44					
SEDIMENT, CLAY-SILT (PERCENT)	18	96.2	3.3	86	100					
COLIFORM, FECAL (COL/100 ML)	16	284.3	234.6	70	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	374.8	302.4	64	910					
SILICA, DISSOLVED	12	9.27	2.66	3.1	12.0	12	-0.0503	13.9784	-0.372*	2.59
CALCIUM, DISSOLVED	12	5.31	1.22	3.2	7.2	12	0.0523	0.4061	0.842	0.69
MAGNESIUM, DISSOLVED	12	1.51	0.30	1.1	2.2	12	0.0137	0.2270	0.895	0.14
SODIUM, DISSOLVED	12	8.63	2.25	4.7	14.0	12	0.1108	-1.7564	0.968	0.59
POTASSIUM, DISSOLVED	12	2.61	0.52	2.0	3.5	12	0.0184	0.8802	0.856	0.39
BICARBONATE, ION	12	20.1	7.0	8	38	12	0.332	-11.067	0.927	2.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.67	1.92	7.9	14.0	12	0.0531	4.6854	0.543*	1.69
CHLORIDE, DISSOLVED	12	8.89	1.65	6.2	13.0	12	0.0772	1.6501	0.918	0.69
DISSOLVED SOLIDS, SUM OF CONST	12	56.3	9.0	38	77	12	0.438	15.157	0.951	2.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	72.7	10.7	56	91	12	0.402	34.952	0.741	7.5
HARDNESS, TOTAL	12	19.6	4.0	13	27	12	0.180	2.711	0.891	1.9
HARDNESS, NONCARBONATE	12	3.3	2.1	0	6	12	-0.039	6.905	-0.365*	2.0
TURBIDITY (JTU)	12	11.9	7.3	2	30	12	-0.263	36.564	-0.703	5.5
FLUORIDE, DISSOLVED	12	0.25	0.10	0.2	0.5	12	0.0006	0.1755	0.155*	0.10

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	153	143	130	112	102	89	82	69	65	61

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.93	9.08	2.84	89	2.27

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	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	4	0	2	4	0	0
COPPER (CU), UG/L	4	3	5	4	3	5
IRON (FE), UG/L	4	950	1600	4	140	450
LEAD (PB), UG/L	4	4	12	4	0	5
MANGANESE (MN), UG/L	4	50	220	4	10	10
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	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.90	26.90			
BIOMASS, ASH WT., G/SQ M	2	1.80	5.08			
CHLOROPHYLL A, MG/SQ M	2	0.900	18.700			
CHLOROPHYLL B, MG/SQ M	2	0.200	2.300			
ORGANIC CARBON, MG/L	4	4.100	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	16.98	6.05	7.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	82.1	27.4	10	130					
STREAMFLOW (CUBIC FT/SEC)	28	4414.5	3878.9	603	15800	22	-54.187	8440.762	-0.425	3235.2
PH (STANDARD UNITS)	21	6.43	0.31	5.7	7.1	21	0.0022	6.2372	0.166*	0.31
PHOSPHORUS, TOTAL	14	0.195	0.062	0.10	0.31	14	0.00370	-0.11558	0.799	0.039
NITRITE + NITRATE, TOTAL	14	0.551	0.098	0.32	0.68	14	0.00249	0.34128	0.339*	0.096
NITROGEN, KJELDAHL, TOTAL	14	0.596	0.122	0.40	0.76	14	0.00042	0.56035	0.046*	0.126
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	474.5	890.4	5	3200	12	-10.291	1354.367	-0.159*	922.0
SEDIMENT SUSPENDED	18	28.5	22.3	12	93					
SEDIMENT, CLAY-SILT (PERCENT)	18	92.8	9.4	62	100					
COLIFORM, FECAL (COL/100 ML)	19	166.0	236.4	<10	790					
STREPTOCOCCI, FECAL (COL/100 ML)	10	247.2	550.7	6	1800					
SILICA, DISSOLVED	12	7.84	2.19	4.6	11.0	12	-0.1172	17.8647	-0.737	1.56
CALCIUM, DISSOLVED	12	3.02	1.46	0.1	5.4	12	-0.0397	6.4129	-0.375*	1.42
MAGNESIUM, DISSOLVED	12	1.43	0.26	0.8	1.8	12	0.0075	0.7942	0.390*	0.25
SODIUM, DISSOLVED	12	9.77	2.99	6.5	16.0	12	0.2031	-7.5890	0.934	1.12
POTASSIUM, DISSOLVED	12	1.96	0.47	1.4	3.0	12	0.0120	0.9361	0.352*	0.46
BICARBONATE, ION	12	18.2	3.9	13	26	12	0.115	8.293	0.407*	3.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	8.50	1.55	5.5	11.0	12	0.0632	3.0963	0.561*	1.35
CHLORIDE, DISSOLVED	12	8.70	2.11	6.5	12.0	12	0.1353	-2.8651	0.881	1.05
DISSOLVED SOLIDS, SUM OF CONST	12	50.7	5.3	41	58	12	0.341	21.538	0.889	2.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	63.8	11.1	40	84	12	0.246	42.776	0.306*	11.1
HARDNESS, TOTAL	12	13.4	4.0	6	20	12	-0.070	19.418	-0.241*	4.1
HARDNESS, NONCARBONATE	12	0.8	1.6	0	5	12	-0.050	5.031	-0.430*	1.5
TURBIDITY (JTU)	12	13.3	12.0	6	45	12	-0.259	35.456	-0.297*	12.0
FLUORIDE, DISSOLVED	12	0.20	0.09	0.1	0.4	12	0.0021	0.0238	0.333*	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%
	158	141	109	99	92	83	72	65	62	60

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	17.17	10.49	2.80	93	2.04

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	30	4	0	1
CADMIUM (CD), UG/L	5	0	<50	4	0	0
CHROMIUM (CR), UG/L	6	<10	<50	4	0	0
COBALT (CO), UG/L	6	0	<100	4	0	3
COPPER (CU), UG/L	6	3	<40	4	0	4
IRON (FE), UG/L	6	810	2200	4	360	450
LEAD (PB), UG/L	6	0	<100	4	0	9
MANGANESE (MN), UG/L	6	50	150	4	10	60
MERCURY (HG), UG/L	4	0.1	<0.5	4	0.0	0.2
SELENIUM (SE), UG/L	2	0	0	4	0	0
ZINC (ZN), UG/L	6	10	<50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.00	0.60			
BIOMASS, ASH WT., G/SQ M	3	0.00	0.50			
CHLOROPHYLL A, MG/SQ M	3	0.000	0.100			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.000			
ORGANIC CARBON, MG/L	4	2.000	9.800			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	19.74	6.74	4.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	80.2	17.5	15	100					
STREAMFLOW (CUBIC FT/SEC)	21	7495.8	3082.0	309	11400	21	-19.746	9082.207	-0.112*	3142.2
PH (STANDARD UNITS)	21	6.69	0.30	6.0	7.2	21	-0.0075	7.2849	-0.432*	0.28
PHOSPHORUS, TOTAL	14	0.068	0.021	0.03	0.11	14	0.00045	0.02983	0.182*	0.021
NITRITE + NITRATE, TOTAL	14	0.434	0.103	0.26	0.68	14	0.00344	0.14173	0.282*	0.103
NITROGEN, KJELDAHL, TOTAL	14	0.551	0.603	0.10	2.60	14	0.00473	0.14990	0.066*	0.626
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1167.8	1495.7	7	4200	12	30.615	-1482.930	0.158*	1549.0
SEDIMENT SUSPENDED	12	21.9	8.8	7	37					
SEDIMENT, CLAY-SILT (PERCENT)	12	98.9	1.7	95	100					
COLIFORM, FECAL (COL/100 ML)	19	217.6	749.5	<1	3300					
STREPTOCOCCI, FECAL (COL/100 ML)	11	171.8	411.3	4	1400					
SILICA, DISSOLVED	12	11.14	1.28	9.3	13.0	12	-0.0441	14.9604	-0.265*	1.30
CALCIUM, DISSOLVED	12	4.42	0.84	2.9	5.5	12	-0.0720	10.6517	-0.661	0.66
MAGNESIUM, DISSOLVED	12	1.77	0.23	1.3	2.1	12	-0.0060	2.2952	-0.205*	0.23
SODIUM, DISSOLVED	12	8.10	1.55	5.4	11.0	12	0.1722	-6.8062	0.856	0.84
POTASSIUM, DISSOLVED	12	2.26	0.38	1.7	2.7	12	-0.0032	2.5376	-0.066*	0.40
BICARBONATE, ION	12	25.3	2.1	22	29	12	0.098	16.730	0.370*	2.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.32	0.57	5.4	7.4	12	0.0403	2.8350	0.544*	0.50
CHLORIDE, DISSOLVED	12	6.77	1.26	5.3	9.2	12	0.1456	-5.8319	0.889	0.61
DISSOLVED SOLIDS, SUM OF CONST	12	53.7	3.1	50	59	12	0.273	30.018	0.670	2.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	60.1	5.3	53	70	12	-0.168	74.615	-0.242*	5.4
HARDNESS, TOTAL	12	18.4	2.5	14	22	12	-0.214	36.971	-0.660	2.0
HARDNESS, NONCARBONATE	12	0.5	1.2	0	4	12	-0.103	9.451	-0.641	1.0
TURBIDITY (JTU)	12	15.4	6.8	6	25	12	-0.413	51.210	-0.468*	6.3
FLUORIDE, DISSOLVED	12	0.22	0.08	0.1	0.4	12	-0.0045	0.6034	-0.412*	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%
	103	96	94	87	85	82	77	73	71	69

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	18.73	9.29	2.63	94	1.72

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

02129000 -- PEE DEE R NR ROCKINGHAM, NC

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	7	0	40	5	0	1
CADMIUM (CD), UG/L	5	0	0	5	0	0
CHROMIUM (CR), UG/L	8	10	50	6	0	1
COBALT (CO), UG/L	7	0	100	5	0	0
COPPER (CU), UG/L	8	0	50	6	0	4
IRON (FE), UG/L	8	500	1800	6	70	130
LEAD (PB), UG/L	8	0	100	6	0	4
MANGANESE (MN), UG/L	6	40	170	5	0	60
MERCURY (HG), UG/L	7	0.0	1.2	5	0.0	0.2
SELENIUM (SE), UG/L	5	0	0	5	0	0
ZINC (ZN), UG/L	8	10	<50	6	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.80	14.00			
BIOMASS, ASH WT., G/SQ M	3	2.30	12.00			
CHLOROPHYLL A, MG/SQ M	3	1.200	1.900			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.200			
ORGANIC CARBON, MG/L	5	4.100	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.63	6.51	5.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	65.5	11.9	45	86					
STREAMFLOW (CUBIC FT/SEC)	12	1205.9	836.2	281	2940	12	-62.048	5270.055	-0.682	413.9
PH (STANDARD UNITS)	12	6.86	0.25	6.5	7.2	12	0.0188	5.6289	0.878	0.13
PHOSPHORUS, TOTAL	12	0.038	0.009	0.02	0.05	12	0.00015	0.02821	0.196*	0.010
NITRITE + NITRATE, TOTAL	12	0.186	0.115	0.05	0.34	12	0.00321	-0.02442	0.331*	0.114
NITROGEN, KJELDAHL, TOTAL	12	0.360	0.124	0.09	0.55	12	-0.00429	0.64130	-0.411*	0.119
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	143.3	145.3	0	420	12	9.627	-487.351	0.787	94.0
SEDIMENT SUSPENDED	12	8.3	3.6	2	15					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	131.1	110.9	73	480					
STREPTOCOCCI, FECAL (COL/100 ML)	12	408.7	668.5	84	2500					
SILICA, DISSOLVED	12	7.38	0.99	6.0	8.9	12	0.0068	6.9365	0.082*	1.03
CALCIUM, DISSOLVED	12	2.68	0.67	1.4	3.9	12	-0.0211	4.0666	-0.376*	0.65
MAGNESIUM, DISSOLVED	12	0.80	0.36	0.1	1.4	12	0.0170	-0.3134	0.562*	0.31
SODIUM, DISSOLVED	12	7.50	2.39	4.0	12.0	12	0.1940	-5.2076	0.964	0.67
POTASSIUM, DISSOLVED	12	1.15	0.16	1.0	1.5	12	0.0006	1.1121	0.042*	0.17
BICARBONATE, ION	12	13.6	5.2	6	20	12	0.347	-9.171	0.800	3.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.35	0.53	4.2	6.2	12	0.0072	4.8777	0.163*	0.54
CHLORIDE, DISSOLVED	12	7.67	1.16	5.0	9.0	12	0.0759	2.6984	0.775	0.77
DISSOLVED SOLIDS, SUM OF CONST	12	39.5	5.6	30	47	12	0.444	10.398	0.940	2.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	50.8	11.8	26	66	12	0.731	2.859	0.737	8.4
HARDNESS, TOTAL	12	10.1	2.2	8	14	12	0.023	8.586	0.126*	2.2
HARDNESS, NONCARBONATE	12	1.1	2.1	0	6	12	-0.070	5.659	-0.402*	2.0
TURBIDITY (JTU)	12	7.6	2.7	5	15	12	-0.128	15.955	-0.553*	2.4
FLUORIDE, DISSOLVED	12	0.13	0.08	0.0	0.3	12	-0.0005	0.1629	-0.069*	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%
	99	86	80	75	72	68	62	55	51	48

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	17.04	8.04	2.83	84	2.48

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	< 10	20	4	D	1
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	2	5	4	3	5
IRON (FE), UG/L	4	960	1200	4	250	450
LEAD (PB), UG/L	3	4	12	4	4	10
MANGANESE (MN), UG/L	4	30	50	4	20	40
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	10	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	3	5.000	9.600			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.13	6.49	6.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	70.3	13.6	49	94					
STREAMFLOW (CUBIC FT/SEC)	12	1165.8	1310.6	191	4700	12	-76.109	6512.426	-0.789	844.6
PH (STANDARD UNITS)	12	6.62	0.35	6.0	7.2	12	0.0190	5.2921	0.742	0.24
PHOSPHORUS, TOTAL	12	0.107	0.056	0.03	0.21	12	0.00372	-0.15400	0.904	0.025
NITRITE + NITRATE, TOTAL	12	0.070	0.048	0.01	0.18	12	0.00084	0.01118	0.235*	0.049
NITROGEN, KJELDAHL, TOTAL	12	0.529	0.137	0.31	0.74	12	0.00132	0.43637	0.131*	0.142
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	199.3	247.9	7	930	12	2.460	26.406	0.135*	257.7
SEDIMENT SUSPENDED	12	3.8	2.4	1	8					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	274.0	510.7	43	1813					
STREPTOCOCCI, FECAL (COL/100 ML)	12	344.8	441.7	76	1680					
SILICA, DISSOLVED	12	6.74	2.76	2.0	10.0	12	0.0880	0.5593	0.433*	2.61
CALCIUM, DISSOLVED	12	3.63	0.62	2.5	4.6	12	0.0125	2.7578	0.273*	0.63
MAGNESIUM, DISSOLVED	12	0.87	0.41	0.1	1.5	12	0.0228	-0.7296	0.750	0.29
SODIUM, DISSOLVED	12	7.25	2.07	4.0	11.0	12	0.1458	-2.9901	0.958	0.62
POTASSIUM, DISSOLVED	12	1.59	0.48	1.0	2.4	12	0.0262	-0.2465	0.747	0.33
BICARBONATE, ION	12	13.3	5.3	7	26	12	0.341	-10.611	0.869	2.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.59	1.79	4.2	11.0	12	0.0130	5.6810	0.098*	1.87
CHLORIDE, DISSOLVED	12	6.78	1.22	6.7	11.0	12	0.0650	4.2179	0.721	0.89
DISSOLVED SOLIDS, SUM OF CONST	12	42.4	7.9	32	56	12	0.530	5.159	0.905	3.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	64.5	10.9	49	79	12	0.362	39.050	0.450*	10.2
HARDNESS, TOTAL	12	12.8	2.6	9	17	12	0.138	3.070	0.721	1.9
HARDNESS, NONCARBONATE	12	2.3	2.7	0	8	12	-0.079	7.778	-0.401*	2.6
TURBIDITY (JTU)	12	3.4	2.0	2	9	12	-0.067	8.131	-0.451*	1.9
FLUORIDE, DISSOLVED	12	0.25	0.12	0.1	0.6	12	-0.0003	0.2690	-0.030*	0.13

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 328

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%
	118	104	95	82	78	74	70	58	55	53

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
329	16.72	8.28	2.76	85	2.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1
CADMIUM (CD), UG/L	3	0	1	4	0	3
CHROMIUM (CR), UG/L	4	<10	10	4	0	2
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	1
IRON (FE), UG/L	4	510	650	4	260	400
LEAD (PB), UG/L	4	4	12	4	3	10
MANGANESE (MN), UG/L	4	10	30	4	0	30
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	3	10	20	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	8.800	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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	STANDARO DEVIATION	RANGE		SAMPLE SIZE	REGRESSION COEFICIENT, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.25	6.91	9.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	80.3	4.6	75	89					
STREAMFLOW (CUBIC FT/SEC)	1	25900.0	0.0	25900						
PH (STANDARD UNITS)	12	7.38	0.57	6.8	9.0	12	-0.0274	9.5853	-0.222*	0.58
PHOSPHORUS, TOTAL	12	0.029	0.017	0.01	0.06	12	-0.00028	0.05200	-0.076*	0.018
NITRITE + NITRATE, TOTAL	12	0.103	0.101	0.00	0.30	12	-0.00244	0.29957	-0.112*	0.105
NITROGEN, KJELDAHL, TOTAL	12	0.367	0.085	0.20	0.51	12	0.00666	-0.16845	0.361*	0.083
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	26537.2	28094.9	46	82000	12	2464.909	-171477.125	0.405*	26938.1
SEDIMENT SUSPENOED	12	8.8	4.4	4	20					
SEOIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	255.2	864.4	0	3000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	41.0	29.9	2	104					
SILICA, DISSOLVED	12	8.32	2.38	3.9	11.0	12	0.1642	-4.8702	0.316*	2.37
CALCIUM, DISSOLVED	12	4.49	0.66	3.6	5.9	12	-0.0114	5.4041	-0.080*	0.69
MAGNESIUM, DISSOLVED	12	1.37	0.45	0.2	1.9	12	0.0040	1.0474	0.041*	0.47
SOOIUM, DISSOLVED	12	7.19	0.79	5.6	8.5	12	0.1241	-2.7805	0.724	0.57
POTASSIUM, DISSOLVED	12	1.70	0.30	0.9	2.1	12	-0.0128	2.7271	-0.196*	0.31
BICARBONATE, ION	12	21.8	3.9	14	31	12	0.337	-5.294	0.398*	3.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, OISSOLVEO	12	6.65	0.75	5.7	8.2	12	0.0575	2.0285	0.356*	0.73
CHLORIDE, DISSOLVED	12	6.23	0.88	4.4	7.8	12	0.1200	-3.4072	0.628	0.72
DISSOLVED SOLIDS, SUM OF CONST	12	46.8	5.8	34	56	12	0.595	-0.979	0.474*	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	52.4	10.6	28	72	12	0.845	-15.479	0.367*	10.4
HARDNESS, TOTAL	12	16.8	3.1	10	21	12	-0.013	17.777	-0.019*	3.2
HARDNESS, NONCARBONATE	12	0.7	1.2	0	3	12	-0.054	5.003	-0.203*	1.3
TURBIDITY (JTU)	12	7.4	5.7	2	20	12	-0.186	22.365	-0.150*	6.0
FLUORIDE, OISSOLVED	10	0.20	0.13	0.0	0.5	10	-0.0034	0.4744	-0.131*	0.14

*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%
	92	88	87	85	83	80	77	73	72	65

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	19.26	9.38	2.73	93	1.84

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	D	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	<10	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	1	2	4	0	2
IRON (FE), UG/L	4	190	480	4	10	50
LEAD (PB), UG/L	4	8	150	4	0	4
MANGANESE (MN), UG/L	4	10	60	4	0	0
MERCURY (HG), UG/L	4	0.1	0.4	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	50	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	3.400	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.71	6.88	7.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	61.5	6.9	66	89					
STREAMFLOW (CUBIC FT/SEC)	12	679.4	274.1	500	1530	12	10.032	-138.165	0.252*	278.2
PH (STANDARD UNITS)	12	7.30	0.40	6.8	8.2	12	-0.0031	7.5509	-0.052*	0.42
PHOSPHORUS, TOTAL	12	0.027	0.012	0.01	0.05	12	-0.00048	0.06578	-0.268*	0.012
NITRITE + NITRATE, TOTAL	12	0.091	0.059	0.00	0.18	12	-0.00174	0.23241	-0.202*	0.061
NITROGEN, KJELDAHL, TOTAL	12	0.328	0.066	0.18	0.42	12	-0.00175	0.47070	-0.182*	0.068
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	38516.7	66312.1	2700	240000	12	3861.006	-276155.250	0.401*	63720.1
SEDIMENT SUSPENDED	12	6.3	3.2	3	12					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	27.3	62.5	0	218					
STREPTOCOCCI, FECAL (COL/100 ML)	12	246.4	680.0	> 1	2400					
SILICA, DISSOLVED	4	8.32	2.88	4.5	11.0					
CALCIUM, DISSOLVED	4	4.57	0.53	4.0	5.2					
MAGNESIUM, DISSOLVED	4	1.47	0.49	1.0	1.9					
SODIUM, DISSOLVED	4	7.45	0.50	6.8	8.0					
POTASSIUM, DISSOLVED	4	1.77	0.22	1.6	2.1					
BICARBONATE, ION	4	24.8	1.3	23	26					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	6.70	0.47	6.1	7.2					
CHLORIDE, DISSOLVED	4	6.60	0.28	6.2	6.8					
DISSOLVED SOLIDS, SUM OF CONST	4	49.5	4.2	44	54					
DISSOLVED SOLIDS, ROE 180 DEG C	4	55.5	9.7	49	70					
HARDNESS, TOTAL	4	17.8	3.0	14	21					
HARDNESS, NONCARBONATE	4	0.0	0.0	0	0					
TURBIDITY (JTU)	4	4.5	1.9	2	6					
FLUORIDE, DISSOLVED	3	0.33	0.23	0.2	0.6					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.76	8.87	2.59	90	2.36

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	0	0
CHROMIUM (CR), UG/L	4	< 10	10	4	0	1
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	1	4	0	2
IRON (FE), UG/L	4	220	720	4	20	80
LEAD (PB), UG/L	4	5	8	4	3	8
MANGANESE (MN), UG/L	4	20	70	4	0	30
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	10	20	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	7.92	48.80			
BIOMASS, ASH WT., G/SQ M	4	6.08	42.40			
CHLOROPHYLL A, MG/SQ M	4	6.700	34.000			
CHLOROPHYLL B, MG/SQ M	4	0.600	3.600			
ORGANIC CARBON, MG/L	4	2.200	5.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	18.67	6.35	8.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	58.7	4.9	52	68					
STREAMFLOW (CUBIC FT/SEC)	12	2606.3	1765.5	1100	7170	12	52.244	-456.627	0.145*	1832.2
PH (STANDARD UNITS)	12	6.82	0.19	6.5	7.1	12	0.0002	6.8027	0.006*	0.20
PHOSPHORUS, TOTAL	12	0.065	0.023	0.03	0.11	12	0.00259	-0.08687	0.546*	0.020
NITRITE + NITRATE, TOTAL	12	0.141	0.063	0.06	0.26	12	-0.00520	0.44607	-0.404*	0.060
NITROGEN, KJELDAHL, TOTAL	12	0.369	0.115	0.23	0.66	12	0.00383	0.14434	0.162*	0.120
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	432.2	552.4	10	1700	12	-72.668	4695.320	-0.643	443.9
SEDIMENT SUSPENDED	12	4.5	1.9	2	8					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	121.1	136.2	7	525					
STREPTOCOCCI, FECAL (COL/100 ML)	12	227.9	270.2	47	1050					
SILICA, DISSOLVED	4	6.80	2.67	3.6	10.0					
CALCIUM, DISSOLVED	4	4.50	2.10	1.6	6.4					
MAGNESIUM, DISSOLVED	4	0.60	0.50	0.1	1.3					
SODIUM, DISSOLVED	4	7.42	1.92	5.0	9.7					
POTASSIUM, DISSOLVED	4	1.17	0.55	0.9	2.0					
BICARBONATE, ION	4	16.0	3.7	14	22					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	6.07	0.39	5.7	6.5					
CHLORIDE, DISSOLVED	4	6.40	0.65	5.7	7.0					
DISSOLVED SOLIDS, SUM OF CONST	4	42.5	4.7	38	49					
DISSOLVED SOLIDS, ROE 180 DEG C	4	54.0	7.6	46	64					
HARDNESS, TOTAL	4	13.5	5.3	6	18					
HARDNESS, NONCARBONATE	4	2.0	2.4	0	5					
TURBIDITY (JTU)	4	4.5	1.0	3	5					
FLUORIDE, DISSOLVED	4	0.20	0.14	0.1	0.4					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	18.75	8.07	2.52	87	2.56

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	0	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	2	5	4	0	4
IRON (FE), UG/L	4	430	850	4	90	510
LEAD (PB), UG/L	4	4	14	4	2	6
MANGANESE (MN), UG/L	4	10	40	4	0	20
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	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	4	5.400	6.100			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.56	6.02	6.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	75.8	9.9	60	90					
STREAMFLOW (CUBIC FT/SEC)	12	117.3	120.3	19	449	12	-7.880	714.188	-0.646	96.1
PH (STANDARD UNITS)	12	6.81	0.24	6.5	7.2	12	0.0084	6.1730	0.347*	0.24
PHOSPHORUS, TOTAL	12	0.087	0.028	0.04	0.14	12	-0.00006	0.09368	-0.028*	0.030
NITRITE + NITRATE, TOTAL	12	0.066	0.069	0.01	0.20	12	-0.00076	0.12373	-0.109*	0.072
NITROGEN, KJELDAHL, TOTAL	12	0.502	0.113	0.22	0.65	12	-0.00322	0.74558	-0.282*	0.114
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	169.5	117.8	0	360	12	1.307	70.506	0.110*	122.8
SEDIMENT SUSPENDED	12	5.8	3.3	1	13					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	176.8	130.2	57	467					
STREPTOCOCCI, FECAL (COL/100 ML)	12	380.5	368.7	70	1320					
SILICA, DISSOLVED	12	8.71	1.69	5.4	12.0	12	0.1163	-0.1046	0.610	1.57
CALCIUM, DISSOLVED	12	7.78	1.74	5.0	11.0	12	0.1407	-2.8757	0.802	1.09
MAGNESIUM, DISSOLVED	12	1.34	0.34	0.7	2.0	12	0.0262	-0.6448	0.764	0.23
SODIUM, DISSOLVED	12	4.42	0.55	3.4	5.0	12	0.0407	1.3303	0.736	0.39
POTASSIUM, DISSOLVED	12	1.38	0.52	0.8	2.4	12	0.0408	-1.7100	0.774	0.35
BICARBONATE, ION	12	24.4	5.9	18	35	12	0.427	-7.907	0.719	4.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	4.92	1.48	2.5	8.1	12	-0.0208	6.4895	-0.139*	1.54
CHLORIDE, DISSOLVED	12	7.77	0.69	6.6	8.6	12	0.0303	5.4730	0.432*	0.66
DISSOLVED SOLIDS, SUM OF CONST	12	48.6	6.5	39	61	12	0.593	3.626	0.907	2.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	66.8	7.8	54	82	12	0.281	45.542	0.356*	7.6
HARDNESS, TOTAL	12	25.0	5.5	17	35	12	0.458	-4.699	0.827	3.2
HARDNESS, NONCARBONATE	12	5.0	2.7	1	9	12	0.094	-2.109	0.344*	2.7
TURBIDITY (JTU)	12	3.7	1.8	2	7	12	0.041	0.570	0.221*	1.9
FLUORIDE, DISSOLVED	12	0.22	0.08	0.1	0.3	12	-0.0049	0.5882	-0.576	0.07

*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%
	105	97	92	90	88	82	75	57	55	50

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	16.87	7.54	2.81	79	2.79

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	40	4	0	1
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	3	4	0	2
IRON (FE), UG/L	4	460	790	4	270	610
LEAD (PB), UG/L	4	4	13	4	3	7
MANGANESE (MN), UG/L	4	20	90	4	20	50
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	3	10	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.70	4.15			
BIOMASS, ASH WT., G/SQ M	3	0.80	2.31			
CHLOROPHYLL A, MG/SQ M	3	1.000	5.100			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.600			
ORGANIC CARBON, MG/L	4	2.000	17.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, M	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	18.29	6.10	7.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	68.0	11.6	53	100					
STREAMFLOW (CUBIC FT/SEC)	17	14253.1	5119.5	8264	23260	15	-346.905	38074.336	-0.770	3442.7
PH (STANDARD UNITS)	16	6.77	0.40	5.8	7.2	15	0.0069	6.2264	0.325*	0.31
PHOSPHORUS, TOTAL	16	0.065	0.021	0.03	0.09	15	0.00113	-0.01072	0.622	0.017
NITRITE + NITRATE, TOTAL	16	0.274	0.119	0.07	0.46	15	0.00620	-0.14115	0.593	0.101
NITROGEN, KJELDAHL, TOTAL	12	0.287	0.051	0.22	0.41	12	-0.00112	0.36333	-0.280*	0.051
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	270.5	229.0	17	770	12	-3.525	511.352	-0.195*	235.6
SEDIMENT SUSPENDED	12	16.6	7.3	7	32					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	85.9	45.6	28	158					
STREPTOCOCCI, FECAL (COL/100 ML)	12	89.3	42.6	37	155					
SILICA, DISSOLVED	4	9.70	0.22	9.5	10.0					
CALCIUM, DISSOLVED	4	5.05	2.08	3.5	8.1					
MAGNESIUM, DISSOLVED	4	0.90	0.54	0.1	1.2					
SODIUM, DISSOLVED	4	5.92	1.37	4.0	7.2					
POTASSIUM, DISSOLVED	4	1.37	0.15	1.2	1.5					
BICARBONATE, ION	4	23.5	4.4	17	26					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	4.42	0.90	3.3	5.2					
CHLORIDE, DISSOLVED	4	4.87	1.37	3.4	6.4					
DISSOLVED SOLIDS, SUM OF CONST	4	44.0	7.3	34	51					
DISSOLVED SOLIDS, RDE 180 DEG C	4	45.3	10.2	34	58					
HARDNESS, TOTAL	8	15.5	4.4	9	25	7	0.395	-10.767	0.696*	3.7
HARDNESS, NONCARBONATE	4	0.8	1.5	0	3					
TURBIDITY (JTU)	8	13.6	4.7	8	20	7	0.214	-0.357	0.366*	5.0
FLUORIDE, DISSOLVED	4	0.17	0.10	0.1	0.3					

*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%
	87	80	78	74	70	63	60	56	54	51

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
316	18.00	7.20	2.60	93	1.47

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	1
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	1	6	4	0	2
IRON (FE), UG/L	4	900	1300	4	90	360
LEAD (PB), UG/L	4	0	11	4	0	5
MANGANESE (MN), UG/L	4	30	70	4	10	20
MERCURY (HG), UG/L	4	0.2	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	20	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	2.800	8.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.92	5.95	8.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	66.4	16.0	43	95					
STREAMFLOW (CUBIC FT/SEC)	20	1854.9	1066.4	472	4540	12	-68.054	6384.992	-0.872	638.7
PH (STANDARD UNITS)	10	6.40	0.34	5.9	6.9	10	0.0066	5.9607	0.331*	0.34
PHOSPHORUS, TOTAL	12	0.039	0.013	0.01	0.06	12	0.00018	0.02747	0.214*	0.013
NITRITE + NITRATE, TOTAL	12	0.072	0.070	0.00	0.18	12	0.00260	-0.10017	0.595	0.059
NITROGEN, KJELDAHL, TOTAL	11	0.363	0.163	0.19	0.75	11	-0.00684	0.82720	-0.665	0.128
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	131.2	85.6	14	290	11	0.266	117.808	0.038*	90.2
SEDIMENT SUSPENDED	18	7.8	3.6	2	15					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	93.4	126.9	20	460					
STREPTOCOCCI, FECAL (COL/100 ML)	8	516.4	504.0	24	1365					
SILICA, DISSOLVED	7	9.99	2.89	4.0	13.0	7	0.1013	2.9558	0.609*	2.51
CALCIUM, DISSOLVED	7	7.37	1.90	5.0	10.0	7	0.0841	1.5290	0.768	1.34
MAGNESIUM, DISSOLVED	7	0.80	0.16	0.6	1.0	7	0.0037	0.5430	0.394*	0.16
SODIUM, DISSOLVED	7	5.40	1.71	3.7	8.5	7	0.0824	-0.3201	0.836	1.03
POTASSIUM, DISSOLVED	7	0.99	0.16	0.7	1.2	7	0.0080	0.4316	0.881	0.08
BICARBONATE, ION	7	25.9	8.9	15	41	7	0.472	-6.922	0.922	3.8
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	7	5.03	1.36	3.6	7.2	7	0.0508	1.5023	0.646*	1.14
CHLORIDE, DISSOLVED	7	4.91	0.35	4.3	5.4	7	-0.0077	5.4491	-0.379*	0.36
DISSOLVED SOLIDS, SUM OF CONST	7	47.4	10.8	36	65	7	0.564	6.270	0.906	5.0
DISSOLVED SOLIDS, ROE 180 DEG C	7	63.0	9.1	46	75	7	0.225	47.347	0.429*	9.0
HARDNESS, TOTAL	7	21.6	5.3	15	29	7	0.240	4.910	0.788	3.6
HARDNESS, NONCARBONATE	7	1.6	2.1	0	5	7	-0.066	7.545	-0.695*	1.7
TURBIDITY (JTU)	7	4.1	0.7	3	5	7	-0.025	5.847	-0.618*	0.6
FLUORIDE, DISSOLVED	7	0.19	0.15	0.1	0.5	7	0.0040	-0.0922	0.475*	0.14

*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%
	110	104	94	82	77	68	59	45	42	32

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	18.14	7.71	2.85	83	2.47

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	0		5	0	0
CADMIUM (CD), UG/L	4	1	7	4	0	1
CHROMIUM (CR), UG/L	4	10	50	4	0	1
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	4	15	4	0	4
IRON (FE), UG/L	4	1100	1700	5	90	550
LEAD (PB), UG/L	4	7	44	4	0	14
MANGANESE (MN), UG/L	4	10	50	5	10	40
MERCURY (HG), UG/L	4	0.0	0.2	5	0.0	0.3
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	4	20	70	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	4	7.100	9.000			

Table 12. Summary of measurements at each station--Continued.

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

LAT 31D39M16S LONG 081D40M41S
DRAINAGE AREA: 13600 SQ MI (35224 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	18.84	6.68	8.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	96.9	35.3	66	174					
STREAMFLOW (CUBIC FT/SEC)	21	14562.9	11596.3	5060	56700	12	-143.537	27176.160	-0.694	5511.2
PH (STANDARD UNITS)	11	6.32	0.45	5.3	7.0	11	-0.0049	6.7982	-0.400*	0.43
PHOSPHORUS, TOTAL	12	0.069	0.017	0.04	0.11	12	0.00011	0.05882	0.224*	0.017
NITRITE + NITRATE, TOTAL	12	0.266	0.102	0.13	0.43	12	0.00168	0.10262	0.580	0.087
NITROGEN, KJELDAHL, TOTAL	11	0.335	0.108	0.16	0.51	11	0.00082	0.25406	0.270*	0.109
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3839.1	7853.4	200	27000	11	127.665	-8418.633	0.599*	6630.3
SEDIMENT SUSPENDED	18	25.6	7.7	14	43					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	76.3	43.0	30	147					
STREPTOCOCCI, FECAL (COL/100 ML)	9	297.2	199.0	67	580					
SILICA, DISSOLVED	7	11.57	1.40	10.0	14.0	7	0.0156	9.9173	0.449*	1.37
CALCIUM, DISSOLVED	7	7.61	1.83	5.6	11.0	7	0.0410	3.2596	0.904	0.85
MAGNESIUM, DISSOLVED	7	1.24	0.23	1.0	1.5	7	0.0042	0.7994	0.732*	0.17
SODIUM, DISSOLVED	7	10.24	5.28	5.3	18.0	7	0.1259	-3.1435	0.963	1.56
POTASSIUM, DISSOLVED	7	1.71	0.16	1.5	1.9	7	0.0024	1.4608	0.611*	0.14
BICARBONATE, ION	7	31.1	9.7	21	47	7	0.227	6.986	0.941	3.6
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	7	9.44	4.42	5.9	17.0	7	0.1094	-2.1832	0.998	0.34
CHLORIDE, DISSOLVED	7	7.99	4.09	3.9	15.0	7	0.0926	-1.8573	0.912	1.84
DISSOLVED SOLIDS, SUM OF CONST	7	65.4	20.4	49	98	7	0.505	11.780	0.996	2.1
DISSOLVED SOLIDS, ROE 180 DEG C	7	84.3	21.9	66	124	7	0.531	27.802	0.976	5.1
HARDNESS, TOTAL	7	24.3	5.2	18	33	7	0.119	11.678	0.928	2.1
HARDNESS, NONCARBONATE	7	0.7	1.3	0	3	7	-0.014	2.200	-0.450*	1.2
TURBIDITY (JTU)	7	18.7	8.4	7	30	7	-0.094	28.697	-0.451*	8.2
FLUORIDE, DISSOLVED	7	0.17	0.08	0.1	0.3	7	0.0016	0.0063	0.829	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 220

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	137	125	117	105	87	78	64	60	53

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
316	19.96	7.91	2.74	86	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	1		5	0	0
CADMIUM (CD), UG/L	4	1	8	4	0	1
CHROMIUM (CR), UG/L	4	< 10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	6	11	4	3	8
IRON (FE), UG/L	4	1100	1900	5	180	320
LEAD (PB), UG/L	4	18	48	4	0	18
MANGANESE (MN), UG/L	4	30	90	5	0	20
MERCURY (HG), UG/L	4	0.0	0.2	5	0.0	1.0
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	30	60	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	11.30	24.00			
BIOMASS, ASH WT., G/SQ M	2	8.00	17.00			
CHLOROPHYLL A, MG/SQ M	2	25.600	91.000			
CHLOROPHYLL B, MG/SQ M	2	4.000	9.900			
ORGANIC CARBON, MG/L	4	5.200	7.600			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.29	6.12	10.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	44.5	5.9	37	56					
STREAMFLOW (CUBIC FT/SEC)	21	2420.5	2065.2	212	7930	11	-250.082	13776.902	-0.618	1976.9
PH (STANDARD UNITS)	9	5.14	0.53	4.6	5.9	8	0.0919	1.0767	0.924	0.21
PHOSPHORUS, TOTAL	12	0.067	0.034	0.02	0.13	11	0.00257	-0.05070	0.464*	0.030
NITRITE + NITRATE, TOTAL	12	0.081	0.071	0.00	0.18	11	0.00633	-0.20887	0.545*	0.060
NITROGEN, KJELDAHL, TOTAL	11	0.654	0.189	0.20	1.00	10	-0.02915	1.96941	-0.826	0.119
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4778.8	14604.8	28	51000	11	951.631	-37481.941	0.366*	15026.0
SEDIMENT SUSPENDED	21	13.6	3.2	6	21					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	94.5	76.0	7	233					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1082.6	2815.3	82	10000					
SILICA, DISSOLVED	7	7.21	1.43	5.9	9.1	7	0.1762	-0.7659	0.752*	1.03
CALCIUM, DISSOLVED	7	2.13	0.92	1.2	4.0	7	0.1166	-3.1497	0.770	0.64
MAGNESIUM, DISSOLVED	7	0.73	0.19	0.4	1.0	7	0.0194	-0.1517	0.628*	0.16
SODIUM, DISSOLVED	7	4.06	0.83	3.0	5.5	7	0.0886	0.0470	0.652*	0.69
POTASSIUM, DISSOLVED	7	1.19	0.15	1.0	1.4	7	0.0140	0.5516	0.584*	0.13
BICARBONATE, ION	7	3.0	3.2	0	8	7	0.197	-5.918	0.374*	3.3
CARBONATE, ION	5	0.0	0.0	0	0					
SULFATE, DISSOLVED	7	6.17	1.23	4.4	7.9	7	-0.1291	12.0174	-0.638*	1.04
CHLORIDE, DISSOLVED	7	7.06	1.39	5.2	8.9	7	0.2054	-2.2434	0.899	0.67
DISSOLVED SOLIDS, SUM OF CONST	7	30.1	4.5	25	36	7	0.590	3.446	0.862	2.9
DISSOLVED SOLIDS, ROE 180 DEG C	7	64.0	14.4	40	87	7	0.049	61.770	0.021*	15.6
HARDNESS, TOTAL	8	8.0	2.8	5	14	8	0.339	-6.984	0.762	2.0
HARDNESS, NONCARBONATE	7	5.7	3.3	2	12	7	0.208	-3.725	0.391*	3.5
TURBIDITY (JTU)	8	5.3	2.3	3	10	8	-0.235	15.630	-0.645*	1.9
FLUORIDE, DISSOLVED	7	0.21	0.12	0.1	0.4	7	-0.0113	0.7266	-0.568*	0.11

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 334

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	77	70	63	56	52	45	41	38	37	34

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
336	20.33	7.92	2.95	85	2.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	0		5	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	5	6	4	0	7
IRON (FE), UG/L	4	790	1400	5	390	1100
LEAD (PB), UG/L	4	4	12	4	0	11
MANGANESE (MN), UG/L	4	20	40	5	10	30
MERCURY (HG), UG/L	3	0.0	0.1	5	0.0	0.3
SELENIUM (SE), UG/L	2	0	0	4	0	0
ZINC (ZN), UG/L	4	20	70	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	4	7.400	24.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, K	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.58	5.16	9.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	52.4	16.7	36	98					
STREAMFLOW (CUBIC FT/SEC)	12	227.4	164.0	68	578	12	-1.364	298.931	-0.139*	170.3
PH (STANDARD UNITS)	11	5.31	0.74	4.1	6.3	11	0.0176	4.3964	0.416*	0.71
PHOSPHORUS, TOTAL	12	0.047	0.023	0.00	0.09	12	0.00072	0.00988	0.530*	0.020
NITRITE + NITRATE, TOTAL	11	0.135	0.207	0.02	0.75	11	-0.00291	0.28567	-0.245*	0.212
NITROGEN, KJELDAHL, TOTAL	11	0.601	0.122	0.36	0.78	11	-0.00389	0.80289	-0.558*	0.106
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	335.9	656.5	51	2400	12	-5.198	608.367	-0.132*	682.5
SEDIMENT SUSPENDED	12	3.9	2.4	0	7					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	23.3	30.3	0	100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	30.8	22.8	0	90					
SILICA, DISSOLVED	12	9.55	15.02	3.6	57.0	12	0.1462	1.8855	0.163*	15.54
CALCIUM, DISSOLVED	11	3.35	1.05	1.8	5.1	11	0.0259	1.9934	0.431*	1.00
MAGNESIUM, DISSOLVED	11	1.20	0.63	0.2	2.1	11	0.0168	0.3180	0.468*	0.59
SODIUM, DISSOLVED	12	3.66	0.57	3.0	4.5	12	0.0229	2.4574	0.672	0.44
POTASSIUM, DISSOLVED	12	0.42	0.13	0.3	0.7	12	0.0065	0.0782	0.807	0.08
BICARBONATE, ION	12	8.6	6.1	0	19	12	0.104	3.116	0.286*	6.1
CARBONATE, ION	1	19.0	0.0	19						
SULFATE, DISSOLVED	12	5.70	2.19	3.4	11.0	12	-0.0228	6.8973	-0.174*	2.26
CHLORIDE, DISSOLVED	12	6.65	0.75	5.7	7.9	12	0.0112	6.0616	0.250*	0.76
DISSOLVED SOLIDS, SUM OF CONST	11	30.8	5.5	23	39	11	0.168	22.000	0.531*	5.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	62.9	16.3	32	92	12	0.187	53.089	0.192*	16.8
HARDNESS, TOTAL	11	13.2	5.1	5	21	11	0.133	6.223	0.454*	4.8
HARDNESS, NONCARBONATE	11	6.5	3.0	3	13	11	0.038	4.459	0.221*	3.1
TURBIDITY (JTU)	12	2.3	1.4	1	5	12	0.066	-1.196	0.772	0.9
FLUORIDE, DISSOLVED	12	0.20	0.06	0.1	0.3	12	-0.0006	0.2325	-0.171*	0.06

*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%
	76	64	59	54	49	46	42	38	37	35

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
359	21.43	5.88	2.29	77	2.32

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	0
CADMIUM (CD), UG/L	4	0	1	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	5	4	0	6
IRON (FE), UG/L	4	280	690	4	250	590
LEAD (PB), UG/L	4	0	10	4	0	8
MANGANESE (MN), UG/L	4	0	20	4	0	30
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	10	300	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	8.30	13.00			
BIOMASS, ASH WT., G/SQ M	2	5.80	6.40			
CHLOROPHYLL A, MG/SQ M	2	19.000	26.000			
CHLOROPHYLL B, MG/SQ M	1	0.800				
ORGANIC CARBON, MG/L	5	10.000	30.000			

Table 12. Summary of measurements at each station--Continued.

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

LAT 29D38M46S LONG 081D37M32S
DRAINAGE AREA: 7065 SQ MI (18298 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	22.50	5.56	15.0	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	919.2	167.5	620	1100					
STREAMFLOW (CUBIC FT/SEC)	5	9720.0	15679.8	-16600	22200					
PH (STANDARD UNITS)	13	7.72	0.31	7.3	8.4	13	-0.0003	7.9604	-0.145*	0.32
PHOSPHORUS, TOTAL	12	0.061	0.022	0.02	0.09	12	-0.00007	0.12249	-0.457*	0.020
NITRITE + NITRATE, TOTAL	12	0.037	0.035	0.01	0.11	12	-0.00014	0.16346	-0.582	0.030
NITROGEN, KJELDAHL, TOTAL	12	1.245	0.306	0.76	1.62	12	0.00036	0.90975	0.175*	0.316
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	518333.1	415753.4	180000	1600000	12	1360.319	-745515.875	0.485*	381389.9
SEDIMENT SUSPENDED	12	11.9	6.6	5	30					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	22.5	14.4	5	40					
STREPTOCOCCI, FECAL (COL/100 ML)	12	52.4	59.6	10	220					
SILICA, DISSOLVED	11	3.33	1.98	0.1	7.1	11	0.0055	-1.8360	0.421*	1.89
CALCIUM, DISSOLVED	12	46.83	5.36	37.0	58.0	12	0.0148	33.0555	0.410*	5.12
MAGNESIUM, DISSOLVED	12	18.17	1.40	15.0	20.0	12	0.0067	11.9445	0.707	1.04
SODIUM, DISSOLVED	12	122.50	9.65	110.0	140.0	12	0.0476	78.2534	0.731	6.91
POTASSIUM, DISSOLVED	12	3.98	0.93	1.2	4.6	12	-0.0004	4.3287	-0.059*	0.97
BICARBONATE, ION	12	87.9	18.1	56	116	12	0.010	78.484	0.083*	18.9
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	11	62.73	8.22	51.0	72.0	11	0.0466	18.9575	0.858	4.45
CHLORIDE, DISSOLVED	11	222.73	20.54	200.0	260.0	11	0.1094	120.0513	0.806	12.82
DISSOLVED SOLIDS, SUM OF CONST	11	524.8	44.2	449	587	11	0.240	299.661	0.820	26.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	570.5	66.5	432	658	11	0.318	272.210	0.722	48.5
HARDNESS, TOTAL	12	193.3	17.2	160	230	12	0.065	132.888	0.559*	15.0
HARDNESS, NONCARBONATE	12	120.8	10.8	110	140	12	0.052	72.578	0.710	8.0
TURBIDITY (JTU)	12	3.8	2.7	1	8	12	0.004	0.135	0.216*	2.7
FLUORIDE, DISSOLVED	12	0.30	0.07	0.2	0.4	12	0.0000	0.2838	0.035*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 165

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%
	1050	1060	1050	1030	1010	979	948	843	770	709

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
165	24.56	9.21	2.83	87	1.82

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

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

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	1	3	0	1
CADMIUM (CD), UG/L	4	0	2	3	0	6
CHROMIUM (CR), UG/L	3	<10	20	3	0	1
COBALT (CO), UG/L	3	0	2	3	0	0
COPPER (CU), UG/L	4	0	2	3	0	2
IRON (FE), UG/L	4	40	290	4	40	140
LEAD (PB), UG/L	4	8	43	4	4	52
MANGANESE (MN), UG/L	4	0	20	4	0	0
MERCURY (HG), UG/L	4	0.0	0.5	3	0.0	0.3
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	20	70	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	44.70				
BIOMASS, ASH WT., G/SQ M	1	13.50				
CHLOROPHYLL A, MG/SQ M	1	35.800				
CHLOROPHYLL B, MG/SQ M	1	2.200				
ORGANIC CARBON, MG/L	6	10.000	23.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, M	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.79	3.35	16.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	291.2	212.5	55	682					
STREAMFLOW (CUBIC FT/SEC)	12	55.7	117.0	1	392	12	-0.258	130.854	-0.469*	108.4
PH (STANDARD UNITS)	12	6.79	0.72	5.2	7.5	12	0.0022	6.1633	0.638	0.58
PHOSPHORUS, TOTAL	12	0.153	0.162	0.07	0.59	12	-0.00001	0.15596	-0.012*	0.169
NITRITE + NITRATE, TOTAL	12	0.128	0.241	0.01	0.89	12	0.00016	0.08139	0.142*	0.250
NITROGEN, KJELDAHL, TOTAL	12	1.067	0.333	0.55	1.55	12	-0.00071	1.27237	-0.451*	0.312
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	855.5	839.0	32	2500	12	-0.280	937.170	-0.071*	877.8
SEDIMENT SUSPENDED	11	7.5	4.4	1	15					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	389.4	366.0	90	1030					
STREPTOCOCCI, FECAL (COL/100 ML)	9	4528.1	8340.0	143	21000					
SILICA, DISSOLVED	12	8.78	3.49	3.7	13.0	12	0.0109	5.6170	0.662	2.75
CALCIUM, DISSOLVED	12	42.42	32.35	5.6	94.0	12	0.1068	11.3194	0.702	24.18
MAGNESIUM, DISSOLVED	12	4.24	2.59	1.1	7.9	12	0.0075	2.0680	0.613	2.14
SODIUM, DISSOLVED	12	20.14	11.52	5.5	37.0	12	0.0373	9.2877	0.688	8.77
POTASSIUM, DISSOLVED	12	1.46	1.81	0.4	7.0	12	0.0018	0.9272	0.214*	1.85
BICARBONATE, ION	12	127.7	111.1	10	300	12	0.342	28.038	0.654	88.1
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	11.40	3.66	6.0	18.0	12	-0.0064	13.2762	-0.374*	3.56
CHLORIDE, DISSOLVED	12	33.89	18.51	9.7	60.0	12	0.0567	17.3724	0.651	14.73
DISSOLVED SOLIDS, SUM OF CONST	12	186.4	120.4	46	368	12	0.383	74.778	0.677	92.9
DISSOLVED SOLIDS, RDE 180 DEG C	12	248.0	120.1	102	420	12	0.365	141.723	0.646	96.2
HARDNESS, TOTAL	12	123.0	90.7	21	270	12	0.301	35.314	0.706	67.4
HARDNESS, NONCARBONATE	12	18.8	6.9	5	34	12	0.018	13.509	0.553*	6.0
TURBIDITY (JTU)	12	4.5	2.8	1	10	12	0.008	2.283	0.582	2.4
FLUORIDE, DISSOLVED	12	0.47	0.14	0.3	0.7	12	-0.0003	0.5630	-0.474*	0.13

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 243

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%
	826	666	624	574	550	238	150	58	36	26

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
261	21.86	3.82	2.67	72	1.84

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	9	5	0	8
CADMIUM (CD), UG/L	5	0	2	5	0	0
CHROMIUM (CR), UG/L	5	<10	30	5	0	7
COBALT (CO), UG/L	5	0	0	5	0	0
COPPER (CU), UG/L	5	0	5	5	0	5
IRON (FE), UG/L	5	1100	1700	5	440	1300
LEAD (PB), UG/L	5	4	12	5	0	9
MANGANESE (MN), UG/L	5	10	30	5	10	20
MERCURY (HG), UG/L	5	0.0	0.3	5	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	20	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.90	40.90			
BIOMASS, ASH WT., G/SQ M	4	0.50	37.70			
CHLOROPHYLL A, MG/SQ M	4	0.400	21.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.800			
ORGANIC CARBON, MG/L	5	24.000	52.000			

Table 12. *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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	23.22	6.25	2.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	18	1503.6	320.3	905	1970					
STREAMFLOW (CUBIC FT/SEC)	4	219.8	389.6	16	804					
PH (STANDARD UNITS)	12	7.46	0.29	7.1	8.1	12	0.0005	6.6935	0.567*	0.25
PHOSPHORUS, TOTAL	12	0.140	0.073	0.06	0.33	12	-0.00019	0.41836	-0.616	0.045
NITRITE + NITRATE, TOTAL	11	0.226	0.128	0.02	0.52	11	0.00003	0.18815	0.066*	0.134
NITROGEN, KJELDAHL, TOTAL	11	0.900	0.500	0.52	2.29	11	-0.00063	1.84768	-0.419*	0.479
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4397.5	11267.0	350	40000	12	-5.964	13345.754	-0.171*	11642.6
SEDIMENT SUSPENDED	11	20.5	40.2	2	140					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	265.4	382.1	0	1200					
STREPTOCOCCI, FECAL (COL/100 ML)	9	578.7	772.3	32	2300					
SILICA, DISSOLVED	12	12.05	1.86	8.3	14.0	12	-0.0020	15.1143	-0.355*	1.82
CALCIUM, DISSOLVED	12	98.25	9.37	74.0	110.0	12	0.0169	72.6288	0.564	7.98
MAGNESIUM, DISSOLVED	12	32.33	9.75	16.0	47.0	12	0.0286	-10.5057	0.946	3.32
SODIUM, DISSOLVED	12	150.83	45.62	70.0	210.0	12	0.1369	-54.5485	0.970	11.72
POTASSIUM, DISSOLVED	12	7.37	1.57	5.5	9.6	12	0.0021	4.1871	0.437*	1.48
BICARBONATE, ION	12	195.3	19.2	150	218	12	0.023	160.569	0.369*	18.6
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	93.00	17.71	60.0	120.0	12	0.0485	20.2836	0.884	6.69
CHLORIDE, DISSOLVED	12	320.83	96.53	150.0	450.0	12	0.2872	-110.1206	0.961	27.84
DISSOLVED SOLIDS, SUM OF CONST	12	814.6	179.0	464	1050	12	0.535	11.969	0.966	48.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	885.1	191.3	511	1130	12	0.576	21.374	0.974	47.1
HARDNESS, TOTAL	12	381.7	58.6	250	460	12	0.170	127.100	0.936	21.7
HARDNESS, NONCARBONATE	12	222.5	48.6	130	290	12	0.142	9.094	0.945	16.7
TURBIDITY (JTU)	12	7.8	7.8	1	30	12	-0.011	24.054	-0.451*	7.3
FLUORIDE, DISSOLVED	12	0.62	0.09	0.5	0.8	12	-0.0000	0.6253	-0.020*	0.10

*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%
	2270	2100	2050	1950	1890	1520	1250	1080	995	901

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
327	24.14	4.58	2.80	73	1.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

02253000 -- MAIN CANAL AT VERO BEACH, FLA.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	4	5	1	1
CADMIUM (CD), UG/L	5	0	2	5	0	2
CHROMIUM (CR), UG/L	5	<10	10	5	0	5
COBALT (CO), UG/L	5	0	0	5	0	2
COPPER (CU), UG/L	5	2	22	5	0	5
IRON (FE), UG/L	5	270	4800	5	60	310
LEAD (PB), UG/L	5	0	6	5	0	8
MANGANESE (MN), UG/L	5	30	70	5	3	60
MERCURY (HG), UG/L	5	0.0	0.2	5	0.0	0.1
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	0	30	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.50	3.60			
BIOMASS, ASH WT., G/SQ M	3	1.20	2.50			
CHLOROPHYLL A, MG/SQ M	3	0.400	4.300			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.600			
ORGANIC CARBON, MG/L	5	4.000	25.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	27	24.20	4.45	16.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	27	188.8	112.0	13	630					
STREAMFLOW (CUBIC FT/SEC)	25	1509.3	1440.5	0	6000	25	-4.498	2356.271	-0.360*	1372.5
PH (STANDARD UNITS)	26	7.01	0.52	6.2	8.1	26	0.0009	6.8455	0.191*	0.52
PHOSPHORUS, TOTAL	25	0.074	0.046	0.02	0.21	25	-0.00004	0.08244	-0.107*	0.047
NITRITE + NITRATE, TOTAL	26	0.090	0.079	0.01	0.26	26	0.00048	-0.00184	0.690	0.059
NITROGEN, KJELDAHL, TOTAL	26	1.046	0.189	0.82	1.41	26	-0.00062	1.16309	-0.371*	0.179
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	31418.2	59056.7	160	160000	11	-269.765	82747.125	-0.365*	57967.5
SEDIMENT SUSPENDED	12	3.6	2.0	1	8					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	21	15.4	20.3	0	72					
STREPTOCOCCI, FECAL (COL/100 ML)	9	22.0	37.4	0	118					
SILICA, DISSOLVED	26	3.13	1.41	0.9	5.8	26	-0.0008	3.2759	-0.061*	1.44
CALCIUM, DISSOLVED	5	11.40	1.67	10.0	14.0					
MAGNESIUM, DISSOLVED	5	3.14	0.69	2.3	4.1					
SODIUM, DISSOLVED	5	10.74	1.65	9.3	13.0					
POTASSIUM, DISSOLVED	5	1.42	0.38	1.2	2.1					
BICARBONATE, ION	5	29.8	1.8	27	32					
CARBONATE, ION	0									
SULFATE, DISSOLVED	5	12.00	3.54	9.0	18.0					
CHLORIDE, DISSOLVED	5	17.80	3.19	14.0	22.0					
DISSOLVED SOLIDS, SUM OF CONST	5	74.4	10.8	63	91					
DISSOLVED SOLIDS, ROE 180 DEG C	26	115.3	25.9	74	176	26	0.124	91.674	0.544	22.2
HARDNESS, TOTAL	5	41.4	6.9	34	52					
HARDNESS, NONCARBONATE	5	17.4	6.7	12	28					
TURBIDITY (JTU)	26	3.3	1.3	1	6	26	0.001	3.209	0.062*	1.3
FLUORIDE, DISSOLVED	5	0.26	0.05	0.2	0.3					

*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%
	278	247	207	164	155	139	124	115	111	104

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	23.57	5.80	2.70	89	1.44

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

02273000 -- KISSIMMEE RIVER AT S-65 E

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED 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	<10	30	5	0	3
COBALT (CO), UG/L	5	0	2	5	0	0
COPPER (CU), UG/L	5	0	2	5	0	1
IRON (FE), UG/L	26	220	720	5	80	250
LEAD (PB), UG/L	5	0	12	5	0	10
MANGANESE (MN), UG/L	5	0	20	5	0	20
MERCURY (HG), UG/L	5	0.0	0.4	5	0.0	0.4
SELENIUM (SE), UG/L	5	0	0	5	0	0
ZINC (ZN), UG/L	5	10	30	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.80	8.61			
BIOMASS, ASH WT., G/SQ M	4	0.50	5.15			
CHLOROPHYLL A, MG/SQ M	4	3.600	120.000			
CHLOROPHYLL B, MG/SQ M	4	1.100	24.000			
ORGANIC CARBON, MG/L	24	12.000	35.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	25.38	3.33	17.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	726.3	157.0	530	980					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.66	0.25	7.3	8.2	12	0.0003	7.4304	0.200*	0.25
PHOSPHORUS, TOTAL	13	0.108	0.050	0.07	0.23	12	-0.00003	0.12954	-0.082*	0.054
NITRITE + NITRATE, TOTAL	13	0.445	0.300	0.02	1.26	12	0.00064	0.00409	0.329*	0.301
NITROGEN, KJELDAHL, TOTAL	13	1.264	0.254	1.03	1.90	12	0.00066	0.79232	0.395*	0.253
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7624.2	11361.6	140	36000	12	-3.570	10217.219	-0.049*	11901.5
SEDIMENT SUSPENDED	12	3.2	1.9	1	7					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	98.5	128.7	24	480					
STREPTOCOCCI, FECAL (COL/100 ML)	11	74.2	78.6	12	290					
SILICA, DISSOLVED	13	8.42	2.28	6.5	15.0	12	0.0073	3.1863	0.487*	2.17
CALCIUM, DISSOLVED	13	85.31	9.68	68.0	97.0	12	0.0370	58.2060	0.577	8.63
MAGNESIUM, DISSOLVED	13	9.55	3.93	4.9	17.0	12	0.0178	-3.7327	0.724	2.79
SODIUM, DISSOLVED	13	58.08	22.81	30.0	94.0	12	0.1175	-29.0808	0.809	14.07
POTASSIUM, DISSOLVED	13	3.70	1.06	2.2	5.5	12	0.0044	0.4185	0.646	0.66
BICARBONATE, ION	13	242.6	33.4	181	304	12	0.160	125.776	0.721	25.2
CARBONATE, ION	13	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	44.69	9.82	29.0	64.0	12	0.0434	12.4276	0.693	7.44
CHLORIDE, DISSOLVED	13	94.08	33.26	51.0	140.0	12	0.1653	-28.9795	0.790	21.12
DISSOLVED SOLIDS, SUM OF CONST	13	424.7	87.1	305	576	12	0.474	74.114	0.850	48.3
DISSOLVED SOLIDS, ROE 180 DEG C	13	465.2	69.3	351	634	12	0.477	110.937	0.847	49.2
HARDNESS, TOTAL	13	253.1	34.7	190	310	12	0.178	121.281	0.794	22.5
HARDNESS, NONCARBONATE	13	54.3	10.0	30	70	12	0.037	26.454	0.623	7.6
TURBIDITY (JTU)	13	2.3	1.8	1	7	12	0.004	-0.685	0.340*	1.8
FLUORIDE, DISSOLVED	13	0.40	0.14	0.1	0.6	12	0.0004	0.1336	0.407*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	25.44	3.48	2.84	56	2.42

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	3	4	1	2
CADMIUM (CD), UG/L	4	0	2	4	0	3
CHROMIUM (CR), UG/L	4	< 10	30	4	0	4
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	11	24	4	2	9
IRON (FE), UG/L	4	110	470	5	30	180
LEAD (PB), UG/L	4	5	18	3	5	17
MANGANESE (MN), UG/L	4	0	40	4	10	20
MERCURY (HG), UG/L	4	0.0	1.4	4	0.0	0.6
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	40	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.90				
BIOMASS, ASH WT., G/SQ M	1	0.20				
CHLOROPHYLL A, MG/SQ M	1	0.500				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	14.000	21.000			

Table 12. Summary of measurements at each station--Continued.

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

LAT 25D48M29S LONG 080D15M44S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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 COEFFICIENT, M	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	25.10	2.75	19.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	616.9	84.0	510	940					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.68	0.26	7.4	8.2	12	0.0002	7.5634	0.035*	0.27
PHOSPHORUS, TOTAL	12	0.020	0.016	0.00	0.05	12	0.00013	-0.05752	0.374*	0.016
NITRITE + NITRATE, TOTAL	12	0.198	0.081	0.06	0.33	12	0.00005	0.16757	0.029*	0.085
NITROGEN, KJELDAHL, TOTAL	12	1.566	0.294	1.12	2.10	12	-0.00081	2.03727	-0.124*	0.306
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1640.9	2401.9	100	8100	11	20.326	-10149.945	0.394*	2326.8
SEDIMENT SUSPENDED	12	1.2	0.8	0	3					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	240.7	232.0	44	660					
STREPTOCOCCI, FECAL (COL/100 ML)	12	108.5	99.8	40	370					
SILICA, DISSOLVED	11	6.55	1.55	3.0	8.3	11	-0.0162	15.9616	-0.489*	1.42
CALCIUM, DISSOLVED	11	79.91	2.88	74.0	84.0	11	-0.0009	80.4146	-0.014*	3.03
MAGNESIUM, DISSOLVED	11	8.75	0.60	7.8	9.9	11	0.0062	5.1404	0.479*	0.56
SODIUM, DISSOLVED	11	37.64	4.41	30.0	44.0	11	0.0402	14.2897	0.425*	4.21
POTASSIUM, DISSOLVED	11	1.68	0.32	1.3	2.2	11	-0.0026	3.2907	-0.405*	0.31
BICARBONATE, ION	12	268.4	11.0	254	282	12	-0.029	285.361	-0.118*	11.5
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	4.09	1.90	1.6	8.0	11	0.0076	-0.2984	0.166*	1.96
CHLORIDE, DISSOLVED	22	70.56	24.75	49.0	170.0	22	0.2721	-96.3490	0.938	8.78
DISSOLVED SOLIDS, SUM OF CONST	11	332.1	12.7	310	349	11	0.075	288.348	0.277*	12.9
DISSOLVED SOLIDS, ROE 180 DEG C	11	361.4	17.2	334	382	11	0.003	359.458	0.009*	16.1
HARDNESS, TOTAL	11	236.4	8.1	220	250	11	0.009	231.187	0.051*	8.5
HARDNESS, NONCARBONATE	11	16.7	8.7	4	30	11	0.049	-11.803	0.262*	8.9
TURBIDITY (JTU)	12	1.3	1.1	0	4	12	-0.003	2.836	-0.108*	1.1
FLUORIDE, DISSOLVED	11	0.43	0.26	0.3	1.2	11	0.0001	0.3531	0.022*	0.28

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	25.17	3.32	2.59	69	1.73

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	1
CADMIUM (CD), UG/L	4	0	9	4	0	5
CHROMIUM (CR), UG/L	4	<10	30	4	0	4
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	6	13	4	3	4
IRON (FE), UG/L	4	140	570	4	70	250
LEAD (PB), UG/L	4	12	120	4	10	66
MANGANESE (MN), UG/L	4	0	10	4	0	10
MERCURY (HG), UG/L	4	0.2	0.7	4	0.2	0.6
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	9.31	104.00			
BIOMASS, ASH WT., G/SQ M	3	5.80	97.10			
CHLOROPHYLL A, MG/SQ M	3	28.000	75.300			
CHLOROPHYLL B, MG/SQ M	3	2.800	11.500			
ORGANIC CARBON, MG/L	4	17.000	28.000			

Table 12. Summary of measurements at each station--Continued.

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

LAT 26D47M22S LONG 081D18M11S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	25.07	4.80	16.5	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	556.0	119.1	350	700					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	11	7.94	0.28	7.4	8.3	11	0.0013	7.2334	0.529*	0.25
PHOSPHORUS, TOTAL	12	0.129	0.051	0.05	0.19	11	-0.00035	0.32921	-0.857	0.026
NITRITE + NITRATE, TOTAL	12	0.134	0.136	0.01	0.40	11	-0.00052	0.43649	-0.452*	0.130
NITROGEN, KJELDAHL, TOTAL	12	1.389	0.191	1.06	1.63	11	0.00059	1.04739	0.359*	0.193
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	37016.5	82086.6	18	260000	11	223.714	-67816.063	0.325*	81843.1
SEDIMENT SUSPENDED	12	6.3	13.8	1	50					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	20.0	35.1	<2	120					
STREPTOCOCCI, FECAL (COL/100 ML)	12	45.0	65.4	2	200					
SILICA, DISSOLVED	11	7.66	2.00	4.3	9.8	11	-0.0064	11.4514	-0.383*	1.95
CALCIUM, DISSOLVED	11	57.73	8.27	45.0	72.0	11	-0.0060	61.0923	-0.087*	8.69
MAGNESIUM, DISSOLVED	11	13.27	5.26	6.9	21.0	11	0.0405	-9.3252	0.917	2.21
SODIUM, DISSOLVED	11	42.09	16.08	22.0	69.0	11	0.1236	-26.8895	0.916	6.82
POTASSIUM, DISSOLVED	11	4.36	0.85	2.8	5.6	11	0.0063	0.8731	0.876	0.43
BICARBONATE, ION	11	181.8	25.4	136	224	11	0.039	160.207	0.182*	26.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	36.82	14.40	19.0	57.0	11	0.1098	-24.4444	0.908	6.37
CHLORIDE, DISSOLVED	11	67.55	23.64	37.0	110.0	11	0.1813	-33.6090	0.913	10.15
DISSOLVED SOLIDS, SUM OF CONST	11	320.6	61.6	242	412	11	0.470	58.323	0.909	27.1
DISSOLVED SOLIDS, ROE 180 DEG C	11	364.5	53.6	287	438	11	0.390	146.719	0.867	28.1
HARDNESS, TOTAL	11	200.0	27.6	160	240	11	0.161	110.228	0.695	20.9
HARDNESS, NONCARBONATE	11	50.5	16.1	28	73	11	0.122	-17.581	0.901	7.4
TURBIDITY (JTU)	12	1.5	1.0	1	4	11	-0.000	1.525	-0.083*	0.7
FLUORIDE, DISSOLVED	11	0.46	0.08	0.3	0.6	11	0.0004	0.2487	0.567*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	25.64	6.44	2.77	92	1.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	3	3	2	3
CADMIUM (CD), UG/L	3	0	2	3	0	3
CHROMIUM (CR), UG/L	3	<10	12	3	0	0
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	10	14	3	2	3
IRON (FE), UG/L	3	210	590	3	110	420
LEAD (PB), UG/L	3	4	19	3	4	15
MANGANESE (MN), UG/L	3	10	40	3	0	20
MERCURY (HG), UG/L	3	0.4	0.7	3	0.4	0.6
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	30	100	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.54	24.00			
BIOMASS, ASH WT., G/SQ M	2	1.15	16.00			
CHLOROPHYLL A, MG/SQ M	2	5.800	110.000			
CHLOROPHYLL B, MG/SQ M	2	0.300	7.700			
ORGANIC CARBON, MG/L	4	20.000	28.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 02296750 NAME: PEACE R AT ARCADIA FLA.

LAT 27D13M19S LONG 081D52M34S
DRAINAGE AREA: 1367 SQ MI (3541 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	24.46	4.23	17.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	329.8	166.7	135	630					
STREAMFLOW (CUBIC FT/SEC)	10	901.1	1175.7	85	3660	10	-4.240	2307.655	-0.663	933.4
PH (STANDARD UNITS)	9	7.11	0.39	6.3	7.7	9	0.0004	6.9630	0.191*	0.41
PHOSPHORUS, TOTAL	12	2.626	1.206	0.94	4.50	9	0.00474	1.06546	0.644*	1.047
NITRITE + NITRATE, TOTAL	4	0.552	0.379	0.13	0.92					
NITROGEN, KJELDAHL, TOTAL	4	0.715	0.239	0.50	0.96					
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	7385.3	18086.9	92	52000	6	-7.193	3579.763	-0.670*	1400.3
SEDIMENT SUSPENDED	12	7.6	8.7	0	29					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	117.4	246.4	1	840					
STREPTOCOCCI, FECAL (COL/100 ML)	11	194.4	261.8	6	740					
SILICA, DISSOLVED	7	5.59	1.73	2.3	7.4					
CALCIUM, DISSOLVED	7	34.00	17.36	13.0	50.0					
MAGNESIUM, DISSOLVED	7	12.40	4.95	5.9	17.0					
SODIUM, DISSOLVED	7	14.27	4.95	7.7	20.0					
POTASSIUM, DISSOLVED	7	2.30	0.44	1.8	2.9					
BICARBONATE, ION	7	63.9	25.3	31	94					
CARBONATE, ION	3	0.0	0.0	0	0					
SULFATE, DISSOLVED	7	83.00	43.87	26.0	120.0					
CHLORIDE, DISSOLVED	7	16.86	3.02	13.0	20.0					
DISSOLVED SOLIDS, SUM OF CONST	7	202.0	84.5	93	278					
DISSOLVED SOLIDS, ROE 180 DEG C	7	240.3	84.5	114	324					
HARDNESS, TOTAL	7	136.9	64.5	60	200					
HARDNESS, NONCARBONATE	7	84.4	44.8	34	130					
TURBIDITY (JTU)	9	2.7	2.1	0	7					
FLUORIDE, DISSOLVED	7	1.30	0.38	0.8	1.7					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 180

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%
	560	550	520	470	456	338	215	156	135	115

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
180	23.41	5.06	2.86	70	2.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	1	3	0	1
CADMIUM (CD), UG/L	3	0	5	3	0	0
CHROMIUM (CR), UG/L	3	<10	20	3	0	0
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	4	8	3	2	8
IRON (FE), UG/L	3	90	710	6	10	470
LEAD (PB), UG/L	3	10	68	3	0	11
MANGANESE (MN), UG/L	3	0	130	3	6	10
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	3	10	50	3	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	4.000	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	23.06	2.53	16.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	349.6	101.4	220	524					
STREAMFLOW (CUBIC FT/SEC)	14	165.5	122.5	20	418	12	-0.867	487.767	-0.707	91.1
PH (STANDARD UNITS)	14	6.97	0.67	5.5	7.8	14	0.0000	6.9706	0.000*	0.69
PHOSPHORUS, TOTAL	14	1.123	0.741	0.47	2.70	14	-0.00153	1.65719	-0.209*	0.754
NITRITE + NITRATE, TOTAL	2	1.490	0.679	1.01	1.97					
NITROGEN, KJELDAHL, TOTAL	2	4.110	1.061	3.36	4.86					
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	840.0	1134.2	50	4300	13	-2.691	1801.367	-0.240*	1150.0
SEDIMENT SUSPENDED	12	3.8	2.1	2	7					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	82.0	78.7	13	240					
STREPTOCOCCI, FECAL (COL/100 ML)	13	347.5	415.0	19	1300					
SILICA, DISSOLVED	10	10.22	1.63	8.1	13.0	10	0.0103	6.5717	0.643	1.32
CALCIUM, DISSOLVED	10	49.30	10.98	36.0	64.0	10	0.0976	14.5931	0.909	4.86
MAGNESIUM, DISSOLVED	10	4.81	1.86	3.0	9.7	10	0.0141	-0.1943	0.773	1.25
SODIUM, DISSOLVED	10	9.89	2.06	6.5	13.0	10	0.0124	5.4831	0.615*	1.72
POTASSIUM, DISSOLVED	10	1.89	1.04	0.7	4.2	10	-0.0061	4.0481	-0.596*	0.89
BICARBONATE, ION	10	113.0	27.4	74	161	10	0.088	81.858	0.327*	27.5
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	39.20	20.26	16.0	75.0	10	0.1459	-12.6655	0.736	14.55
CHLORIDE, DISSOLVED	10	13.31	4.98	9.1	27.0	10	0.0252	4.3522	0.517*	4.52
DISSOLVED SOLIDS, SUM OF CONST	10	185.2	40.8	126	268	10	0.343	63.283	0.858	22.2
DISSOLVED SOLIDS, ROE 180 DEG C	10	217.4	41.5	154	290	10	0.336	97.966	0.827	24.7
HARDNESS, TOTAL	10	144.0	34.4	100	200	10	0.311	33.297	0.925	13.8
HARDNESS, NONCARBONATE	10	50.5	28.4	22	100	10	0.231	-31.536	0.830	16.8
TURBIDITY (JTU)	10	2.0	1.6	0	6	10	0.000	1.871	0.023*	1.7
FLUORIDE, DISSOLVED	10	0.66	0.18	0.4	1.0	10	0.0007	0.4056	0.412*	0.17

*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%
	496	450	427	410	393	333	282	205	180	130

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
235	22.95	2.46	3.20	9	5.19

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	1	4	0	2
CADMIUM (CD), UG/L	4	0	4	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	5	0	12	4	0	1
IRON (FE), UG/L	6	100	680	4	30	530
LEAD (PB), UG/L	5	8	30	4	0	18
MANGANESE (MN), UG/L	6	0	30	4	0	20
MERCURY (HG), UG/L	5	0.0	0.8	4	0.0	0.4
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	10	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.85	22.00			
BIOMASS, ASH WT., G/SQ M	4	0.39	22.00			
CHLOROPHYLL A, MG/SQ M	4	0.000	59.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.100			
ORGANIC CARBON, MG/L	6	0.000	18.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.08	5.48	11.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	268.7	31.4	225	328					
STREAMFLOW (CUBIC FT/SEC)	12	707.9	316.5	320	1200	12	-5.255	2119.603	-0.521*	283.3
PH (STANDARD UNITS)	11	7.46	0.34	7.0	7.9	11	0.0058	5.8986	0.553*	0.30
PHOSPHORUS, TOTAL	12	0.027	0.012	0.01	0.05	12	-0.00018	0.07608	-0.469*	0.011
NITRITE + NITRATE, TOTAL	12	0.058	0.041	0.00	0.15	12	-0.00063	0.22780	-0.482*	0.038
NITROGEN, KJELDAHL, TOTAL	12	0.516	0.180	0.27	0.84	12	-0.00302	1.32805	-0.527*	0.161
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	184.5	201.1	4	750	11	1.843	-310.789	0.302*	202.1
SEDIMENT SUSPENDED	12	1.6	1.0	0	3					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	5.9	5.8	0	20					
STREPTOCOCCI, FECAL (COL/100 ML)	10	158.5	245.4	20	800					
SILICA, DISSOLVED	5	5.82	2.61	2.5	8.5					
CALCIUM, DISSOLVED	7	47.06	6.37	39.0	57.0	7	0.1561	5.7392	0.730*	4.73
MAGNESIUM, DISSOLVED	7	4.31	0.93	3.1	5.1	7	0.0256	-2.4572	0.830	0.57
SODIUM, DISSOLVED	5	5.30	0.36	4.9	5.8					
POTASSIUM, DISSOLVED	5	0.32	0.15	0.1	0.5					
BICARBONATE, ION	7	122.4	12.6	107	145	7	-0.001	122.595	-0.002*	13.8
CARBONATE, ION	3	0.0	0.0	0	0					
SULFATE, DISSOLVED	5	27.60	17.04	12.0	54.0					
CHLORIDE, DISSOLVED	9	9.47	1.40	8.0	12.0	9	-0.0113	12.4294	-0.225*	1.46
DISSOLVED SOLIDS, SUM OF CONST	5	160.2	25.7	130	187					
DISSOLVED SOLIDS, ROE 180 DEG C	5	184.0	36.9	122	218					
HARDNESS, TOTAL	9	133.3	15.8	110	160	9	0.375	35.246	0.658*	12.7
HARDNESS, NONCARBONATE	7	35.3	14.9	22	64	7	0.406	-70.615	0.818	9.4
TURBIDITY (JTU)	12	2.0	1.3	1	6	12	-0.019	6.982	-0.432*	1.3
FLUORIDE, DISSOLVED	5	0.24	0.05	0.2	0.3					

*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%
	348	327	324	318	310	283	258	242	239	230

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	21.66	6.06	2.67	78	2.28

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	3	0	1
CADMIUM (CD), UG/L	4	0	2	3	0	3
CHROMIUM (CR), UG/L	3	<10	20	3	0	1
COBALT (CO), UG/L	3	0	2	3	0	0
COPPER (CU), UG/L	3	0	3	4	0	2
IRON (FE), UG/L	4	20	480	4	30	330
LEAD (PB), UG/L	4	8	52	4	3	39
MANGANESE (MN), UG/L	4	0	20	4	0	10
MERCURY (HG), UG/L	3	0.2	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	0	20	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	2.62	13.00			
BIOMASS, ASH WT., G/SQ M	5	1.69	6.50			
CHLOROPHYLL A, MG/SQ M	5	14.500	67.000			
CHLOROPHYLL B, MG/SQ M	5	0.500	2.100			
ORGANIC CARBON, MG/L	8	4.000	25.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.29	4.38	11.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	172.5	84.5	43	300					
STREAMFLOW (CUBIC FT/SEC)	12	6561.3	3786.6	3200	16900	11	-37.180	13086.992	-0.794	2536.4
PH (STANDARD UNITS)	12	7.31	0.56	6.0	8.0	11	0.0058	6.3004	0.844	0.33
PHOSPHORUS, TOTAL	12	0.228	0.051	0.13	0.30	11	0.00019	0.19200	0.309*	0.052
NITRITE + NITRATE, TOTAL	12	0.356	0.200	0.03	0.65	11	0.00190	0.01563	0.784	0.134
NITROGEN, KJELDAHL, TOTAL	12	0.420	0.210	0.17	0.75	11	-0.00245	0.85551	-0.961	0.063
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	212.5	200.3	4	600	10	0.860	93.456	0.357*	196.3
SEDIMENT SUSPENDED	10	6.8	4.9	2	16					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	5	100.0	130.4	10	330					
STREPTOCOCCI, FECAL (COL/100 ML)	5	59.6	62.9	8	150					
SILICA, DISSOLVED	12	6.87	1.19	4.3	8.4	11	0.0121	4.7566	0.821	0.75
CALCIUM, DISSOLVED	12	27.57	14.20	5.0	45.0	11	0.1664	-1.7073	0.953	4.70
MAGNESIUM, DISSOLVED	11	5.40	2.37	1.4	8.1	10	0.0305	-0.3613	0.947	0.85
SODIUM, DISSOLVED	12	4.98	1.19	3.6	7.3	11	0.0043	4.3359	0.305*	1.20
POTASSIUM, DISSOLVED	12	0.71	0.24	0.4	1.1	11	-0.0021	1.0939	-0.764	0.16
BICARBONATE, ION	12	88.5	52.7	0	150	11	0.625	-21.330	0.964	15.4
CARBONATE, ION	12	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	12.13	3.80	6.6	17.0	11	0.0443	4.4083	0.943	1.40
CHLORIDE, DISSOLVED	12	6.50	1.21	5.3	8.8	11	-0.0056	7.4753	-0.371*	1.24
DISSOLVED SOLIDS, SUM OF CONST	11	115.0	41.9	39	164	10	0.548	12.380	0.954	14.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	123.9	43.4	44	172	11	0.491	37.681	0.916	16.9
HARDNESS, TOTAL	12	89.6	47.0	14	150	11	0.551	-7.358	0.953	15.6
HARDNESS, NONCARBONATE	12	16.6	4.2	8	23	11	0.035	10.371	0.673	3.4
TURBIDITY (JTU)	12	5.3	3.3	1	10	11	-0.039	12.190	-0.961	1.0
FLUORIDE, DISSOLVED	12	0.30	0.04	0.2	0.4	11	0.0001	0.2782	0.206*	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%
	290	283	278	256	233	207	160	96	60	40

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	21.20	4.91	2.77	79	1.87

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	12	4	0	6
IRON (FE), UG/L	4	260	790	4	170	360
LEAD (PB), UG/L	4	8	30	4	4	13
MANGANESE (MN), UG/L	4	10	30	4	0	10
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	0	4	0	4
ZINC (ZN), UG/L	4	10	40	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	11	0.000	22.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	11	20.50	5.30	9.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	84.5	26.8	38	130					
STREAMFLOW (CUBIC FT/SEC)	11	1246.9	1510.8	219	5460	11	-41.335	4741.570	-0.732	1084.6
PH (STANDARD UNITS)	11	6.61	0.32	5.9	6.9	11	0.0003	6.5815	0.027*	0.34
PHOSPHORUS, TOTAL	11	0.180	0.065	0.11	0.32	11	0.00112	0.08533	0.464*	0.060
NITRITE + NITRATE, TOTAL	11	0.366	0.199	0.03	0.61	11	0.00542	-0.09222	0.731	0.143
NITROGEN, KJELDAHL, TOTAL	11	0.535	0.154	0.33	0.86	11	-0.00248	0.74512	-0.431*	0.146
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	883.0	948.0	80	2400	10	-18.247	2444.965	-0.538*	847.4
SEDIMENT SUSPENDED	10	16.4	6.2	9	29					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	157.9	163.6	10	530					
STREPTOCOCCI, FECAL (COL/100 ML)	10	232.2	306.8	10	1020					
SILICA, DISSOLVED	11	7.54	1.80	4.2	10.0	11	0.0353	4.5515	0.526*	1.61
CALCIUM, DISSOLVED	11	4.98	2.17	1.5	8.8	11	0.0423	1.4053	0.521*	1.96
MAGNESIUM, DISSOLVED	11	1.54	0.76	0.2	2.7	11	0.0194	-0.1053	0.684	0.58
SODIUM, DISSOLVED	11	7.64	3.20	2.5	14.0	11	0.0996	-0.7840	0.833	1.86
POTASSIUM, DISSOLVED	11	1.65	0.21	1.4	2.0	11	-0.0007	1.7151	-0.093*	0.22
BICARBONATE, ION	11	17.2	8.2	5	30	11	0.211	-0.688	0.691	6.2
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	4.21	0.94	2.6	5.7	11	0.0096	3.3953	0.275*	0.95
CHLORIDE, DISSOLVED	11	12.08	4.71	5.2	22.0	11	0.1365	0.5439	0.775	3.14
DISSOLVED SOLIDS, SUM OF CONST	11	48.5	13.7	23	67	11	0.450	10.482	0.877	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	59.0	18.1	18	83	11	0.484	18.042	0.717	13.3
HARDNESS, TOTAL	11	19.1	8.3	5	32	11	0.187	3.304	0.602	7.0
HARDNESS, NONCARBONATE	11	5.0	3.2	0	11	11	0.005	4.587	0.041*	3.4
TURBIDITY (JTU)	11	23.2	11.5	15	55	11	-0.334	51.382	-0.779	7.6
FLUORIDE, DISSOLVED	11	0.20	0.13	0.1	0.5	11	0.0012	0.0949	0.248*	0.14

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	2	4	0	1
CADMIUM (CD), UG/L	4	1	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	2
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	3	18	4	3	5
IRON (FE), UG/L	4	1600	2000	4	350	770
LEAD (PB), UG/L	4	10	20	4	3	12
MANGANESE (MN), UG/L	4	30	80	4	0	50
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	10	20	4	8	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	5	6.000	14.000			

STATION NUMBER: 02358000 NAME: APALACHICOLA RIVER AT CHATTAHOOCHEE FLA

LAT 30D42M03S LONG 084D51M33S
DRAINAGE AREA: 17100 SQ MI (44289 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	11	22.09	5.71	9.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	100.5	28.1	67	165					
STREAMFLOW (CUBIC FT/SEC)	11	29363.6	16680.7	12800	60700	11	-336.353	63151.820	-0.566*	14489.3
PH (STANDARD UNITS)	10	7.39	0.22	7.1	7.8	10	0.0054	6.8412	0.706	0.17
PHOSPHORUS, TOTAL	11	0.039	0.012	0.02	0.06	11	-0.00014	0.05342	-0.328*	0.012
NITRITE + NITRATE, TOTAL	11	0.219	0.094	0.03	0.39	11	-0.00142	0.36183	-0.424*	0.090
NITROGEN, KJELDAHL, TOTAL	11	0.328	0.076	0.21	0.43	11	0.00047	0.28136	0.172*	0.079
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	20460.0	35073.3	5400	120000	10	101.984	10302.445	0.086*	37064.1
SEDIMENT SUSPENDED	10	13.5	4.7	10	26					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	191.2	268.6	20	733					
STREPTOCOCCI, FECAL (COL/100 ML)	11	353.5	597.5	2	2000					
SILICA, DISSOLVED	11	7.28	0.83	6.0	8.5	11	-0.0103	8.3155	-0.348*	0.82
CALCIUM, DISSOLVED	11	11.42	2.63	5.7	15.0	11	0.0773	3.6543	0.826	1.56
MAGNESIUM, DISSOLVED	11	0.81	0.21	0.5	1.3	11	0.0002	0.7931	0.021*	0.22
SODIUM, DISSOLVED	11	4.34	0.56	3.2	5.2	11	0.0010	4.2369	0.050*	0.59
POTASSIUM, DISSOLVED	11	1.35	0.19	1.0	1.7	11	-0.0044	1.7849	-0.660	0.15
BICARBONATE, ION	11	38.3	9.2	22	54	11	0.217	16.437	0.662	7.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	4.20	0.89	3.0	5.9	11	-0.0158	5.7909	-0.499*	0.81
CHLORIDE, DISSOLVED	11	3.41	0.20	3.0	3.7	11	0.0012	3.2887	0.166*	0.21
DISSOLVED SOLIDS, SUM OF CONST	11	51.9	6.9	38	63	11	0.153	36.503	0.628	5.6
DISSOLVED SOLIDS, RDE 180 DEG C	11	57.9	12.3	39	79	11	0.233	34.510	0.534*	10.9
HARDNESS, TOTAL	11	32.0	6.8	17	41	11	0.195	12.387	0.809	4.2
HARDNESS, NONCARBONATE	11	1.5	1.8	0	5	11	0.012	0.307	0.198*	1.8
TURBIDITY (JTU)	11	15.0	5.0	10	25	11	-0.096	24.673	-0.541*	4.4
FLUORIDE, DISSOLVED	11	0.12	0.08	0.0	0.3	11	-0.0008	0.2008	-0.308*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	1	4	0	0
CADMIUM (CD), UG/L	4	0	0	4	0	2
CHROMIUM (CR), UG/L	4	10	20	3	0	4
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	1	8	4	0	4
IRON (FE), UG/L	4	480	840	4	0	310
LEAD (PB), UG/L	4	5	13	4	0	13
MANGANESE (MN), UG/L	4	50	130	4	0	60
MERCURY (HG), UG/L	4	0.0	0.3	3	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	3	0	0
ZINC (ZN), UG/L	4	20	40	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	2.000	5.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.32	4.63	10.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	194.1	20.8	163	221					
STREAMFLOW (CUBIC FT/SEC)	11	1374.5	462.9	707	2380	11	-17.361	4744.172	-0.781	304.4
PH (STANDARD UNITS)	11	7.75	0.26	7.3	8.1	11	0.0004	7.6672	0.033*	0.27
PHOSPHORUS, TOTAL	11	0.035	0.019	0.02	0.08	11	0.00019	-0.00281	0.215*	0.019
NITRITE + NITRATE, TOTAL	11	0.613	0.133	0.31	0.79	11	0.00340	-0.04798	0.532*	0.119
NITROGEN, KJELDAHL, TOTAL	11	0.200	0.096	0.03	0.36	11	-0.00175	0.54026	-0.380*	0.094
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	187.8	104.6	86	350	10	3.991	-576.029	0.757	72.4
SEDIMENT SUSPENDED	11	8.3	3.7	2	16					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	115.7	116.2	23	380					
STREPTOCOCCI, FECAL (COL/100 ML)	11	69.6	55.6	18	196					
SILICA, DISSOLVED	11	5.87	0.62	4.6	6.6	11	0.0123	3.4839	0.412*	0.60
CALCIUM, DISSOLVED	11	29.18	7.49	10.0	36.0	11	0.0244	24.4505	0.068*	7.88
MAGNESIUM, DISSOLVED	11	3.07	1.12	1.1	4.7	11	0.0174	-0.3040	0.323*	1.12
SODIUM, DISSOLVED	11	3.28	0.53	2.5	4.5	11	-0.0179	6.7640	-0.707	0.39
POTASSIUM, DISSOLVED	11	0.52	0.15	0.4	0.8	11	-0.0001	0.5280	-0.007*	0.16
BICARBONATE, ION	11	96.8	23.8	39	115	11	0.167	64.349	0.146*	24.8
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	1.19	0.65	0.5	2.8	11	0.0153	-1.7694	0.492*	0.59
CHLORIDE, DISSOLVED	11	5.68	1.10	4.3	8.2	11	-0.0394	13.3222	-0.749	0.77
DISSOLVED SOLIDS, SUM OF CONST	11	96.8	19.6	47	113	11	0.101	77.271	0.107*	20.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	110.7	25.9	46	136	11	0.171	77.583	0.138*	27.0
HARDNESS, TOTAL	11	85.1	22.2	30	110	11	0.086	68.328	0.081*	23.4
HARDNESS, NONCARBONATE	11	6.6	6.2	0	20	11	-0.005	7.514	-0.015*	6.5
TURBIDITY (JTU)	11	7.5	3.3	3	15	11	-0.120	30.815	-0.768	2.2
FLUORIDE, DISSOLVED	11	0.15	0.14	0.0	0.5	11	-0.0013	0.4068	-0.195*	0.15

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	0	20	4	0	3
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	7	4	0	1
IRON (FE), UG/L	4	170	580	4	0	210
LEAD (PB), UG/L	4	5	24	4	0	8
MANGANESE (MN), UG/L	4	0	40	4	0	20
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	0	20	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	5	0.000	4.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 02366500   NAME: CHOCTAWHATCHEE RIVER NR BRUCE FLA

LAT 30D27M03S LONG 085D53M54S
DRAINAGE AREA: 4384 SQ MI (11355 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.55	5.73	8.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	76.1	31.3	34	146					
STREAMFLOW (CUBIC FT/SEC)	11	8549.6	4248.4	2980	17000	11	-99.972	16156.574	-0.737	3025.3
PH (STANDARD UNITS)	10	7.00	0.31	6.3	7.4	10	0.0017	6.8632	0.165*	0.32
PHOSPHORUS, TOTAL	11	0.040	0.013	0.02	0.07	11	-0.00011	0.04822	-0.252*	0.014
NITRITE + NITRATE, TOTAL	11	0.209	0.081	0.05	0.32	11	0.00183	0.07003	0.703	0.061
NITROGEN, KJELDAHL, TOTAL	11	0.257	0.059	0.16	0.32	11	-0.00132	0.35801	-0.707	0.044
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	295.9	349.8	1	1100	10	-3.581	554.808	-0.310*	352.7
SEDIMENT SUSPENDED	11	11.2	5.3	5	22					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	55.5	44.0	17	177					
STREPTOCOCCI, FECAL (COL/100 ML)	11	105.3	71.6	10	188					
SILICA, DISSOLVED	11	5.35	1.34	2.8	7.0	11	0.0301	3.0622	0.706	1.00
CALCIUM, DISSOLVED	11	12.09	7.53	5.9	32.0	11	0.1390	1.5130	0.578*	6.48
MAGNESIUM, DISSOLVED	11	1.57	1.03	0.2	3.8	11	0.0234	-0.2056	0.713	0.76
SODIUM, DISSOLVED	11	2.75	0.60	1.5	3.7	11	0.0173	1.4388	0.902	0.27
POTASSIUM, DISSOLVED	11	0.91	0.28	0.4	1.5	11	-0.0006	0.9572	-0.071*	0.30
BICARBONATE, ION	11	40.1	26.9	17	111	11	0.513	1.073	0.597*	22.8
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	1.98	0.55	1.2	2.9	11	-0.0123	2.9203	-0.706	0.41
CHLORIDE, DISSOLVED	11	4.39	0.61	3.2	5.3	11	0.0160	3.1724	0.822	0.37
DISSOLVED SOLIDS, SUM OF CONST	11	49.3	22.6	31	107	11	0.459	14.316	0.637	18.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	58.7	24.4	29	106	11	0.537	17.893	0.689	18.7
HARDNESS, TOTAL	11	36.7	22.9	17	96	11	0.444	2.970	0.608	19.1
HARDNESS, NONCARBONATE	11	4.0	2.7	0	8	11	0.014	2.961	0.159*	2.8
TURBIDITY (JTU)	11	22.2	15.1	9	65	11	-0.190	36.639	-0.393*	14.7
FLUORIDE, DISSOLVED	11	0.07	0.06	0.0	0.2	11	0.0000	0.0717	0.006*	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%
	138	124	111	95	82	64	54	45	39	34

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	20.71	7.80	2.81	86	2.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

02366500 -- CHOCTAWHATCHEE RIVER NR BRUCE FLA

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	2	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	0	0	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	2
IRON (FE), UG/L	4	980	2400	5	50	940
LEAD (PB), UG/L	4	3	28	4	0	8
MANGANESE (MN), UG/L	4	30	100	4	0	50
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	3	0	0
ZINC (ZN), UG/L	4	10	40	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	4.000	8.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	19.67	5.64	8.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	43.1	14.0	26	69					
STREAMFLOW (CUBIC FT/SEC)	12	2346.0	1660.5	369	6150	12	-93.117	6357.789	-0.787	1073.5
PH (STANDARD UNITS)	12	6.64	0.35	5.8	7.1	12	0.0030	6.5114	0.121*	0.36
PHOSPHORUS, TOTAL	12	0.043	0.012	0.03	0.07	12	-0.00058	0.06823	-0.659	0.010
NITRITE + NITRATE, TOTAL	12	0.125	0.054	0.04	0.21	12	0.00208	0.03551	0.537*	0.048
NITROGEN, KJELDAHL, TOTAL	12	0.341	0.091	0.16	0.47	12	-0.00488	0.55121	-0.753	0.063
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	517.5	961.8	18	3300	11	26.661	-583.843	0.353*	948.6
SEDIMENT SUSPENDED	12	17.1	5.2	10	24					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	468.8	627.3	50	2200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	331.0	296.4	48	900					
SILICA, DISSOLVED	12	5.25	0.96	3.5	6.0	12	0.0356	3.7155	0.520*	0.86
CALCIUM, DISSOLVED	12	4.76	1.87	2.1	7.9	12	0.0747	1.5415	0.560*	1.63
MAGNESIUM, DISSOLVED	12	0.64	0.44	0.0	1.4	12	0.0216	-0.2891	0.690	0.33
SODIUM, DISSOLVED	12	2.00	0.33	1.3	2.6	12	0.0179	1.2293	0.767	0.22
POTASSIUM, DISSOLVED	12	0.53	0.10	0.4	0.7	12	-0.0022	0.6274	-0.311*	0.10
BICARBONATE, ION	12	16.3	7.2	7	30	12	0.401	-0.942	0.782	4.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	1.85	0.60	0.8	2.6	12	-0.0198	2.7012	-0.464*	0.56
CHLORIDE, DISSOLVED	12	3.32	0.64	2.6	5.1	12	0.0062	3.0508	0.135*	0.67
DISSOLVED SOLIDS, SUM OF CONST	12	26.6	6.5	17	37	12	0.326	12.551	0.699	4.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	35.1	10.1	20	56	12	0.208	26.106	0.289*	10.2
HARDNESS, TOTAL	12	14.8	6.5	5	26	12	0.280	2.707	0.608	5.4
HARDNESS, NONCARBONATE	12	2.0	2.6	0	7	12	-0.031	3.351	-0.170*	2.7
TURBIDITY (JTU)	12	22.5	11.8	10	45	12	-0.391	39.335	-0.466*	10.9
FLUORIDE, DISSOLVED	12	0.08	0.07	0.0	0.2	12	-0.0012	0.1346	-0.233*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.44	7.32	2.58	83	2.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	1	4	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	0
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	1	12	4	0	3
IRON (FE), UG/L	4	390	1900	4	150	630
LEAD (PB), UG/L	4	2	32	4	0	15
MANGANESE (MN), UG/L	4	40	50	4	10	50
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	2
ZINC (ZN), UG/L	4	10	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	5	3.000	10.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.00	5.95	8.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	69.3	24.6	39	114					
STREAMFLOW (CUBIC FT/SEC)	13	12916.2	9588.0	1730	32000	12	-288.099	31975.684	-0.754	6475.2
PH (STANDARD UNITS)	11	6.77	0.40	6.0	7.2	11	0.0060	6.3523	0.392*	0.38
PHOSPHORUS, TOTAL	12	0.047	0.018	0.02	0.08	12	-0.00022	0.06161	-0.299*	0.018
NITRITE + NITRATE, TOTAL	12	0.143	0.057	0.05	0.23	12	0.00070	0.09447	0.305*	0.057
NITROGEN, KJELDAHL, TOTAL	12	0.342	0.113	0.14	0.51	12	-0.00197	0.47843	-0.429*	0.107
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	242.4	208.9	67	740	11	1.653	134.469	0.168*	217.1
SEDIMENT SUSPENDED	12	31.3	19.8	9	76					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	532.8	639.3	13	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	13	454.3	632.7	42	2000					
SILICA, DISSOLVED	12	7.02	1.01	5.5	8.4	12	0.0149	5.9889	0.365*	0.98
CALCIUM, DISSOLVED	12	7.07	1.90	3.9	10.0	12	0.0570	3.1208	0.738	1.35
MAGNESIUM, DISSOLVED	12	0.52	0.31	0.1	1.1	12	0.0061	0.0908	0.492*	0.28
SODIUM, DISSOLVED	12	4.38	2.29	2.0	9.2	12	0.0819	-1.2943	0.879	1.15
POTASSIUM, DISSOLVED	12	0.89	0.16	0.7	1.1	12	0.0025	0.7197	0.377*	0.16
BICARBONATE, ION	12	21.3	7.9	10	34	12	0.242	4.546	0.752	5.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.59	0.58	2.9	4.9	12	0.0122	2.7455	0.516*	0.52
CHLORIDE, DISSOLVED	12	5.62	2.73	2.6	12.0	12	0.0959	-1.0354	0.866	1.43
DISSOLVED SOLIDS, SUM OF CONST	12	39.8	11.0	27	59	12	0.381	13.402	0.856	5.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	52.2	15.9	28	76	12	0.268	33.604	0.415*	15.1
HARDNESS, TOTAL	12	20.1	5.7	11	30	12	0.168	8.467	0.720	4.2
HARDNESS, NONCARBONATE	12	2.8	3.0	0	10	12	-0.040	5.635	-0.330*	3.0
TURBIDITY (JTU)	12	29.2	17.6	10	70	12	-0.317	51.135	-0.444*	16.5
FLUORIDE, DISSOLVED	12	0.10	0.10	0.0	0.3	12	-0.0012	0.1801	-0.272*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.74	7.87	2.67	87	2.39

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	2	4	0	1
CADMIUM (CD), UG/L	4	1	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	10
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	2	11	4	1	3
IRON (FE), UG/L	4	1400	2600	4	10	630
LEAD (PB), UG/L	4	18	22	4	0	20
MANGANESE (MN), UG/L	4	50	100	4	0	60
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	10	30	4	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	5	6.000	10.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	11	19.23	7.53	7.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	82.7	10.2	67	100					
STREAMFLOW (CUBIC FT/SEC)	11	34346.4	36077.6	3010	136000	11	-1557.277	163175.563	-0.440*	34145.3
PH (STANDARD UNITS)	11	7.09	0.19	6.7	7.3	11	-0.0091	7.8410	-0.495*	0.17
PHOSPHORUS, TOTAL	11	0.052	0.019	0.02	0.07	11	0.00009	0.04423	0.050*	0.020
NITRITE + NITRATE, TOTAL	11	0.188	0.054	0.07	0.24	11	-0.00123	0.28960	-0.232*	0.055
NITROGEN, KJELDAHL, TOTAL	11	0.233	0.101	0.04	0.37	11	0.00431	-0.12345	0.433*	0.096
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1086.4	1043.6	100	3200	11	8.277	401.669	0.081*	1096.5
SEDIMENT SUSPENDED	11	18.1	10.8	5	41					
SEDIMENT, CLAY-SILT (PERCENT)	11	90.4	5.2	82	99					
COLIFORM, FECAL (COL/100 ML)	11	195.6	164.5	24	600					
STREPTOCOCCI, FECAL (COL/100 ML)	11	137.3	208.0	3	710					
SILICA, DISSOLVED	11	6.64	0.81	5.4	7.9	11	0.0258	4.5044	0.324*	0.81
CALCIUM, DISSOLVED	11	8.45	1.29	6.8	11.0	11	0.0765	2.1128	0.607	1.08
MAGNESIUM, DISSOLVED	11	2.16	0.45	1.6	3.0	11	0.0390	-1.0647	0.876	0.23
SODIUM, DISSOLVED	11	3.71	0.79	2.5	5.0	11	0.0594	-1.2082	0.771	0.53
POTASSIUM, DISSOLVED	11	1.27	0.15	1.1	1.5	11	0.0111	0.3568	0.758	0.10
BICARBONATE, ION	11	33.5	5.9	26	42	11	0.538	-10.963	0.932	2.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	5.22	0.89	4.0	7.0	11	0.0624	0.0522	0.718	0.65
CHLORIDE, DISSOLVED	11	3.35	0.62	2.3	4.2	11	0.0541	-1.1271	0.891	0.30
DISSOLVED SOLIDS, SUM OF CONST	11	48.5	5.7	40	57	11	0.519	5.558	0.922	2.3
DISSOLVED SOLIDS, ROE 180 DEG C	9	49.2	3.2	44	54	9	0.004	48.889	0.012*	3.4
HARDNESS, TOTAL	11	30.0	4.4	24	40	11	0.359	0.335	0.822	2.7
HARDNESS, NONCARBONATE	11	2.8	2.6	0	7	11	-0.087	10.019	-0.341*	2.6
TURBIDITY (JTU)	11	16.5	9.5	6	35	11	-0.645	69.940	-0.693	7.2
FLUORIDE, DISSOLVED	11	0.10	0.06	0.0	0.2	11	0.0006	0.0523	0.093*	0.07

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	1	4	1	1
CADMIUM (CD), UG/L	4	0	8	4	0	2
CHROMIUM (CR), UG/L	4	< 10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	7	18	4	0	4
IRON (FE), UG/L	3	510	1600	4	0	110
LEAD (PB), UG/L	4	9	62	4	0	10
MANGANESE (MN), UG/L	4	40	120	4	0	30
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	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.50	7.38			
BIOMASS, ASH WT., G/SQ M	3	0.10	6.23			
CHLOROPHYLL A, MG/SQ M	3	0.200	11.500			
CHLOROPHYLL B, MG/SQ M	3	0.000	1.300			
ORGANIC CARBON, MG/L	3	1.900	10.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.25	7.45	8.0	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	100.5	12.6	80	118					
STREAMFLOW (CUBIC FT/SEC)	12	42630.0	34366.4	10300	132200	12	-1591.098	202535.313	-0.581	29324.1
PH (STANDARD UNITS)	12	7.20	0.23	6.8	7.6	12	0.0125	5.9431	0.664	0.18
PHOSPHORUS, TOTAL	12	0.056	0.019	0.02	0.09	12	-0.00025	0.08103	-0.163*	0.020
NITRITE + NITRATE, TOTAL	12	0.212	0.046	0.11	0.26	12	-0.00092	0.30375	-0.249*	0.047
NITROGEN, KJELDAHL, TOTAL	12	0.272	0.105	0.13	0.45	12	-0.00171	0.44423	-0.205*	0.108
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1243.3	1605.5	130	6000	12	13.625	-126.015	0.107*	1674.2
SEDIMENT SUSPENDED	12	40.3	32.8	8	98					
SEDIMENT, CLAY-SILT (PERCENT)	12	78.7	19.0	40	99					
COLIFORM, FECAL (COL/100 ML)	12	128.5	190.6	6	690					
STREPTOCOCCI, FECAL (COL/100 ML)	10	217.9	456.9	5	1500					
SILICA, DISSOLVED	12	6.86	0.97	4.9	8.4	12	-0.0166	8.5240	-0.214*	1.00
CALCIUM, DISSOLVED	12	11.50	1.50	9.2	14.0	12	0.0876	2.6722	0.736	1.06
MAGNESIUM, DISSOLVED	12	2.28	0.51	1.4	3.3	12	0.0312	-0.8563	0.773	0.34
SODIUM, DISSOLVED	12	4.18	0.93	2.8	5.7	12	0.0703	-2.8776	0.950	0.31
POTASSIUM, DISSOLVED	12	1.35	0.19	1.1	1.6	12	0.0059	0.7533	0.366*	0.19
BICARBONATE, ION	12	41.6	6.4	32	53	12	0.487	-7.392	0.952	2.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.33	0.97	4.7	8.2	12	0.0380	2.5106	0.494*	0.88
CHLORIDE, DISSOLVED	12	4.17	1.24	2.5	7.4	12	0.0791	-3.7807	0.801	0.78
DISSOLVED SOLIDS, SUM OF CONST	12	58.7	7.4	46	67	12	0.540	4.391	0.921	3.0
DISSOLVED SOLIDS, ROE 180 DEG C	9	59.8	6.5	46	68	9	-0.189	79.173	-0.367*	6.5
HARDNESS, TOTAL	12	38.1	5.2	30	46	12	0.354	2.546	0.846	2.9
HARDNESS, NONCARBONATE	12	3.9	2.8	0	8	12	-0.054	9.333	-0.244*	2.8
TURBIDITY (JTU)	12	22.0	14.1	9	50	12	-0.863	108.772	-0.767	9.5
FLUORIDE, DISSOLVED	12	0.11	0.05	0.0	0.2	12	0.0015	-0.0394	0.358*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.26	10.11	2.72	94	2.00

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	2	5	0	1
CADMIUM (CD), UG/L	5	0	1	5	0	0
CHROMIUM (CR), UG/L	5	<10	20	5	0	3
COBALT (CO), UG/L	5	0	1	5	0	0
COPPER (CU), UG/L	5	3	14	5	0	4
IRON (FE), UG/L	5	460	4200	5	90	170
LEAD (PB), UG/L	5	10	31	5	0	3
MANGANESE (MN), UG/L	5	30	160	5	0	20
MERCURY (HG), UG/L	5	0.0	0.2	5	0.0	0.2
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	10	50	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.50	5.31			
BIOMASS, ASH WT., G/SQ M	3	0.20	2.46			
CHLOROPHYLL A, MG/SQ M	3	0.200	11.400			
CHLOROPHYLL B, MG/SQ M	3	0.000	2.500			
ORGANIC CARBON, MG/L	5	1.800	9.800			

Table 12. 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: 10/01/75 - 09/30/76

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)	14	17.69	8.39	4.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	106.8	18.6	75	140					
STREAMFLOW (CUBIC FT/SEC)	14	17271.4	22101.2	1920	81300	14	-597.994	81128.563	-0.504*	19872.9
PH (STANDARD UNITS)	14	7.30	0.28	6.8	7.8	14	0.0004	7.2623	0.024*	0.29
PHOSPHORUS, TOTAL	14	0.126	0.046	0.06	0.24	14	0.00127	-0.00917	0.519*	0.040
NITRITE + NITRATE, TOTAL	14	0.181	0.083	0.08	0.30	14	0.00197	-0.07896	0.442*	0.078
NITROGEN, KJELDAHL, TOTAL	14	0.429	0.260	0.04	1.10	14	0.00511	-0.11591	0.365*	0.252
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	8193.6	11723.7	410	41000	11	-50.975	13735.973	-0.075*	12322.5
SEDIMENT SUSPENDED	12	77.7	70.9	12	215					
SEDIMENT, CLAY-SILT (PERCENT)	11	85.3	12.7	64	99					
COLIFORM, FECAL (COL/100 ML)	10	368.2	543.5	20	1700					
STREPTOCOCCI, FECAL (COL/100 ML)	10	667.8	1118.1	3	3500					
SILICA, DISSOLVED	11	6.75	1.27	4.3	8.2	11	-0.0236	9.3167	-0.321*	1.27
CALCIUM, DISSOLVED	11	14.09	2.77	11.0	20.0	11	0.1448	-1.6520	0.905	1.24
MAGNESIUM, DISSOLVED	11	1.06	0.22	0.7	1.5	11	-0.0003	1.1002	-0.026*	0.23
SODIUM, DISSOLVED	11	4.06	1.24	2.8	6.9	11	0.0375	-0.0159	0.524*	1.11
POTASSIUM, DISSOLVED	11	1.57	0.34	1.1	2.1	11	0.0137	0.0820	0.704	0.25
BICARBONATE, ION	11	37.0	6.9	20	45	11	0.333	0.760	0.838	4.0
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	8.35	1.77	6.3	12.0	11	0.0485	3.0792	0.476*	1.64
CHLORIDE, DISSOLVED	14	5.25	2.05	2.4	10.0	14	0.0875	-4.0990	0.794	1.30
DISSOLVED SOLIDS, SUM OF CONST	11	62.0	8.9	45	78	11	0.490	8.689	0.950	2.9
DISSOLVED SOLIDS, ROE 180 DEG C	10	66.9	12.0	54	92	10	0.508	12.891	0.858	6.5
HARDNESS, TOTAL	11	39.5	7.0	32	54	11	0.358	0.642	0.887	3.4
HARDNESS, NONCARBONATE	11	9.2	4.5	5	17	11	0.082	0.265	0.318*	4.5
TURBIDITY (JTU)	14	39.6	25.5	10	85	14	-0.002	39.905	-0.002*	26.6
FLUORIDE, DISSOLVED	11	0.19	0.11	0.1	0.5	11	0.0050	-0.3506	0.760	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	17.58	11.08	2.85	92	2.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	1	2	4	0	1
CADMIUM (CD), UG/L	7	0	2	4	0	0
CHROMIUM (CR), UG/L	7	< 10	30	4	0	10
COBALT (CO), UG/L	4	0	0	4	0	1
COPPER (CU), UG/L	7	0	9	4	0	2
IRON (FE), UG/L	7	1300	3600	4	10	390
LEAD (PB), UG/L	7	0	80	4	0	12
MANGANESE (MN), UG/L	7	50	120	4	0	20
MERCURY (HG), UG/L	7	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	7	0	0	4	0	0
ZINC (ZN), UG/L	7	10	50	4	0	4
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.40	0.60			
BIOMASS, ASH WT., G/SQ M	2	0.20	0.30			
CHLOROPHYLL A, MG/SQ M	2	0.300	4.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	3	3.800	12.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 02469762   NAME: TOMBIGBEE R BELOW COFFEEVILLE L&D NR COFFEEVILLE ALA.

LAT 31D45M30S LONG 088D07M45S
DRAINAGE AREA: 18500 SQ MI (47915 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.20	7.99	5.0	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	136.4	26.2	98	196					
STREAMFLOW (CUBIC FT/SEC)	12	29426.7	34283.5	2960	127000	12	-826.037	142111.813	-0.632	27876.6
PH (STANDARD UNITS)	12	7.29	0.22	6.7	7.5	12	0.0004	7.2405	0.046*	0.23
PHOSPHORUS, TOTAL	12	0.075	0.032	0.03	0.14	12	-0.00073	0.17489	-0.594	0.027
NITRITE + NITRATE, TOTAL	12	0.329	0.103	0.17	0.51	12	0.00241	-0.00009	0.614	0.085
NITROGEN, KJELDAHL, TOTAL	12	0.362	0.154	0.01	0.60	12	-0.00235	0.68252	-0.400*	0.148
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	708.3	660.5	100	2500	12	18.295	-1787.372	0.726	476.4
SEDIMENT SUSPENDED	12	53.3	58.9	7	189					
SEDIMENT, CLAY-SILT (PERCENT)	12	86.6	18.8	29	99					
COLIFORM, FECAL (COL/100 ML)	12	155.7	206.6	6	620					
STREPTOCOCCI, FECAL (COL/100 ML)	12	85.8	129.2	1	410					
SILICA, DISSOLVED	12	7.13	1.17	4.3	8.7	12	-0.0167	9.4140	-0.375*	1.14
CALCIUM, DISSOLVED	12	13.58	1.83	12.0	18.0	12	0.0587	5.5689	0.841	1.04
MAGNESIUM, DISSOLVED	12	2.60	0.81	1.7	4.0	12	0.0275	-1.1502	0.889	0.39
SODIUM, DISSOLVED	12	7.04	2.71	3.7	13.0	12	0.1004	-6.6540	0.973	0.66
POTASSIUM, DISSOLVED	12	1.77	0.34	1.3	2.3	12	0.0058	0.9877	0.450*	0.31
BICARBONATE, ION	12	38.3	5.4	32	52	12	0.181	13.512	0.876	2.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	18.00	5.61	12.0	31.0	12	0.1945	-8.5293	0.909	2.45
CHLORIDE, DISSOLVED	12	6.92	2.80	3.3	12.0	12	0.0988	-6.5630	0.925	1.11
DISSOLVED SOLIDS, SUM OF CONST	12	77.9	13.9	59	110	12	0.516	7.489	0.973	3.4
DISSOLVED SOLIDS, ROE 180 DEG C	10	85.5	14.5	69	120	10	0.508	13.793	0.866	7.1
HARDNESS, TOTAL	12	44.5	7.1	37	61	12	0.261	8.938	0.957	2.2
HARDNESS, NONCARBONATE	12	13.3	4.0	8	21	12	0.112	-1.904	0.735	2.8
TURBIDITY (JTU)	12	27.7	21.1	7	75	12	-0.442	88.004	-0.550*	18.5
FLUORIDE, DISSOLVED	12	0.22	0.09	0.0	0.4	12	0.0011	0.0684	0.304*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.18	10.70	2.73	91	2.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

02469762 -- TOMBIGBEE R BELOW COFFEEVILLE L&D NR COFFEEVILLE

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	1	5	0	1
CADMIUM (CD), UG/L	5	0	3	5	0	0
CHROMIUM (CR), UG/L	5	10	30	5	0	1
COBALT (CO), UG/L	5	0	0	5	0	0
COPPER (CU), UG/L	5	4	12	5	0	5
IRON (FE), UG/L	5	730	1800	5	120	310
LEAD (PB), UG/L	5	10	59	5	0	14
MANGANESE (MN), UG/L	5	30	100	5	0	60
MERCURY (HG), UG/L	5	0.0	0.3	5	0.0	0.3
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	10	40	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.80	116.00			
BIOMASS, ASH WT., G/SQ M	3	0.60	106.00			
CHLOROPHYLL A, MG/SQ M	3	0.200	111.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	7.600			
ORGANIC CARBON, MG/L	4	3.200	8.200			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.25	6.43	10.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	78.6	7.5	60	85					
STREAMFLOW (CUBIC FT/SEC)	12	10036.7	10068.7	2130	37400	12	-1198.602	104226.750	-0.897	4662.4
PH (STANDARD UNITS)	12	6.66	0.34	5.9	7.1	12	0.0046	6.2961	0.101*	0.36
PHOSPHORUS, TOTAL	12	0.072	0.019	0.05	0.11	12	-0.00112	0.16022	-0.440*	0.018
NITRITE + NITRATE, TOTAL	12	0.192	0.110	0.01	0.43	12	0.00425	-0.14264	0.291*	0.110
NITROGEN, KJELDAHL, TOTAL	12	0.418	0.095	0.25	0.54	12	-0.00585	0.87839	-0.466*	0.088
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7485.0	14534.3	420	53000	12	649.055	-43519.895	0.337*	14354.1
SEDIMENT SUSPENDED	11	74.8	52.6	18	154					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	669.7	1019.1	47	3200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1899.3	4149.1	116	14000					
SILICA, DISSOLVED	12	9.51	1.17	7.5	11.0	12	0.1002	1.6326	0.648	0.93
CALCIUM, DISSOLVED	12	5.40	1.07	4.0	7.4	12	0.0403	2.2312	0.283*	1.08
MAGNESIUM, DISSOLVED	12	0.86	0.16	0.7	1.1	12	0.0005	0.8218	0.022*	0.16
SODIUM, DISSOLVED	12	6.45	1.57	3.6	9.0	12	0.1647	-6.4957	0.791	1.01
POTASSIUM, DISSOLVED	12	1.42	0.20	1.2	1.8	12	0.0031	1.1831	0.116*	0.21
BICARBONATE, ION	12	14.8	4.1	10	21	12	0.249	-4.836	0.459*	3.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.31	1.16	3.5	7.6	12	0.0417	2.0340	0.270*	1.18
CHLORIDE, DISSOLVED	12	9.61	2.18	6.3	14.0	12	0.1754	-4.1777	0.606	1.82
DISSOLVED SOLIDS, SUM OF CONST	12	46.5	6.5	35	59	12	0.686	-7.384	0.797	4.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	57.2	9.4	38	67	12	0.229	39.205	0.184*	9.7
HARDNESS, TOTAL	12	17.0	2.8	13	23	12	0.122	7.443	0.324*	2.8
HARDNESS, NONCARBONATE	12	5.1	3.8	0	11	12	-0.105	13.330	-0.208*	3.9
TURBIDITY (JTU)	12	16.2	11.5	6	45	12	-0.856	83.464	-0.560*	10.0
FLUORIDE, DISSOLVED	11	0.10	0.04	0.0	0.2	11	0.0009	0.0328	0.147*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	20.81	8.22	2.78	89	2.33

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	5	4	0	0
COPPER (CU), UG/L	4	5	12	4	0	0
IRON (FE), UG/L	4	1200	1500	4	750	1100
LEAD (PB), UG/L	4	3	12	4	0	7
MANGANESE (MN), UG/L	4	50	110	4	40	120
MERCURY (HG), UG/L	3	0.1	0.8	4	0.0	0.7
SELENIUM (SE), UG/L	3	0	1	4	0	0
ZINC (ZN), UG/L	4	30	180	4	0	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	4	3.400	7.400			

STATION NUMBER: 02489500   NAME: PEARL RIVER NR BOGALUSA LOUISIANA

LAT 30D47M35S LONG 089D49M15S
DRAINAGE AREA: 6630 SQ MI (17172 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	20.10	6.97	10.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	69.3	12.0	48	88					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	6.75	0.28	6.2	7.1	12	-0.0010	6.8218	-0.044*	0.29
PHOSPHORUS, TOTAL	12	0.097	0.034	0.06	0.15	12	-0.00100	0.16625	-0.359*	0.033
NITRITE + NITRATE, TOTAL	12	0.279	0.116	0.10	0.48	12	0.00699	-0.20501	0.723	0.084
NITROGEN, KJELDAHL, TOTAL	12	0.529	0.151	0.32	0.79	12	-0.00601	0.94530	-0.479*	0.139
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1622.4	3132.0	96	11000	11	-97.271	8560.586	-0.392*	3037.4
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	550.2	744.3	13	2500					
STREPTOCOCCI, FECAL (COL/100 ML)	11	532.5	570.4	8	1900					
SILICA, DISSOLVED	5	8.10	2.50	5.8	12.0					
CALCIUM, DISSOLVED	5	3.12	0.68	2.3	4.1					
MAGNESIUM, DISSOLVED	5	0.76	0.15	0.5	0.9					
SODIUM, DISSOLVED	5	6.04	2.30	3.8	8.6					
POTASSIUM, DISSOLVED	4	1.85	0.10	1.7	1.9					
BICARBONATE, ION	12	15.4	3.3	9	20	12	0.156	4.642	0.574*	2.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	5	7.96	1.84	6.1	11.0					
CHLORIDE, DISSOLVED	5	5.94	1.61	3.7	7.8					
DISSOLVED SOLIDS, SUM OF CONST	5	40.6	8.4	31	50					
DISSOLVED SOLIDS, ROE 180 DEG C	4	49.5	5.1	42	53					
HARDNESS, TOTAL	5	11.2	1.8	9	14					
HARDNESS, NONCARBONATE	5	1.0	1.4	0	3					
TURBIDITY (JTU)	12	33.8	21.4	10	75	12	-0.751	85.777	-0.422*	20.4
FLUORIDE, DISSOLVED	5	0.16	0.09	0.1	0.3					

*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%
	103	95	90	86	80	75	69	54	49	41

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	19.72	9.38	2.80	93	1.89

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

02489500 -- PEARL RIVER NR BOGALUSA

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED 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	0	3
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	3	2	21	4	2	17
IRON (FE), UG/L	4	940	2400	5	40	350
LEAD (PB), UG/L	4	3	10	4	0	0
MANGANESE (MN), UG/L	4	80	200	5	17	80
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	20	70	4	20	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	1.000	7.200			

Table 12. 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 RECDRD: 10/01/75 - 09/30/76

STATISTICAL SUMMARY OF SELECTED DISSDLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TO SPECIFIC CONDUCTANCE (MICROMHOS)

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.59	6.37	10.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	46.1	7.1	32	64					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	6.67	0.24	6.3	7.1	12	0.0122	6.1141	0.365*	0.23
PHOSPHORUS, TOTAL	12	0.073	0.021	0.04	0.11	12	-0.00092	0.11551	-0.305*	0.021
NITRITE + NITRATE, TOTAL	12	0.293	0.290	0.14	1.20	12	-0.00190	0.38069	-0.047*	0.303
NITROGEN, KJELDAHL, TOTAL	12	0.379	0.158	0.13	0.68	12	-0.00059	0.40620	-0.026*	0.166
PHYTOPLANKTON, TDTAL (CELLS/ML)	12	1304.2	1521.8	210	5000	12	-44.346	3347.757	-0.208*	1561.1
SEDIMENT SUSPENDED	11	54.1	49.0	24	193					
SEDIMENT, CLAY-SILT (PERCENT)	11	81.5	11.6	62	94					
COLIFORM, FECAL (COL/100 ML)	11	539.0	653.4	45	1800					
STREPTDCOCCI, FECAL (COL/100 ML)	11	750.0	1163.1	47	3400					
SILICA, DISSOLVED	12	9.82	1.87	5.9	12.0	12	0.1133	4.6021	0.433*	1.77
CALCIUM, DISSOLVED	12	1.97	0.51	1.4	3.0	12	0.0457	-0.1303	0.642	0.41
MAGNESIUM, DISSOLVED	12	0.77	0.39	0.4	1.6	12	0.0222	-0.2548	0.407*	0.37
SODIUM, DISSOLVED	12	4.53	0.68	2.8	5.5	12	0.0732	1.1594	0.766	0.46
POTASSIUM, DISSDLVED	12	1.46	0.25	1.1	1.9	12	0.0086	1.0606	0.246*	0.25
BICARBONATE, ION	12	9.8	1.7	8	13	12	0.122	4.143	0.524*	1.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSDLVED	12	2.28	0.76	1.2	3.2	12	0.0015	2.2163	0.014*	0.80
CHLORIDE, DISSDLVED	12	7.01	1.19	3.8	8.5	12	0.1239	1.2990	0.745	0.83
DISSOLVED SOLIDS, SUM OF CONST	12	32.7	4.1	23	39	12	0.468	11.114	0.620	2.4
DISSOLVED SOLIDS, RDE 180 DEG C	11	38.8	9.4	26	61	11	0.185	30.377	0.145*	9.8
HARDNESS, TOTAL	12	8.1	2.0	6	13	12	0.203	-1.276	0.718	1.5
HARDNESS, NONCARBONATE	12	1.0	1.5	0	4	12	0.121	-4.587	0.563*	1.3
TURBIDITY (JTU)	12	19.7	15.2	4	60	12	-1.226	76.163	-0.576*	13.0
FLUORIDE, DISSOLVED	12	0.08	0.07	0.0	0.2	12	-0.0005	0.1066	-0.050*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 353

DAILY SPECIFIC CONDUCTANCE IN MICRDMHOS AT 25 DEG C, THAT WAS EQUALLED DR EXCEEDED FDR THE INDICATED PERCENTAGE DF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	62	51	50	48	46	44	42	38	35	33

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
351	20.97	8.50	2.85	51	5.91

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

02492000 — BDGUE CHITTO NEAR BUSH, LOUISIANA

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	1	3	0	1
CADMIUM (CD), UG/L	3	0	0	3	0	0
CHROMIUM (CR), UG/L	3	< 10	15	3	0	0
CDBALT (CD), UG/L	3	0	2	3	0	0
COPPER (CU), UG/L	2	3	5	3	0	9
IRON (FE), UG/L	3	800	1700	3	70	310
LEAD (PB), UG/L	3	3	6	3	0	2
MANGANESE (MN), UG/L	2	90	90	3	40	130
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.2
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	20	30	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	0					
BIDMASS, ASH WT., G/SQ M	0					
CHLORDPHVLL A, MG/SQ M	0					
CHLORDPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	4	3.300	9.400			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	10.07	7.93	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	19	242.1	52.2	175	335					
STREAMFLOW (CUBIC FT/SEC)	20	26330.0	28030.3	8070	130000	19	-209.258	71536.188	-0.771	9281.4
PH (STANDARD UNITS)	19	6.87	0.19	6.5	7.3	19	-0.0021	7.3739	-0.557	0.17
PHOSPHORUS, TOTAL	19	0.103	0.097	0.01	0.37	19	-0.00040	0.19928	-0.215*	0.098
NITRITE + NITRATE, TOTAL	13	0.633	0.195	0.38	1.00	13	-0.00167	1.03627	-0.462*	0.181
NITROGEN, KJELDAHL, TOTAL	13	0.382	0.124	0.20	0.65	13	0.00006	0.36901	0.024*	0.130
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3028.9	2863.6	87	8800	12	33.913	-5322.082	0.621	2355.1
SEDIMENT SUSPENDED	12	21.7	25.6	6	101					
SEDIMENT, CLAY-SILT (PERCENT)	12	91.9	9.4	72	100					
COLIFORM, FECAL (COL/100 ML)	12	221.7	216.9	3	610					
STREPTOCOCCI, FECAL (COL/100 ML)	12	194.4	293.4	2	820					
SILICA, DISSOLVED	13	4.55	0.91	2.6	5.9	13	-0.0068	6.1745	-0.403*	0.87
CALCIUM, DISSOLVED	19	22.81	5.41	15.0	33.0	19	0.0823	2.8824	0.794	3.39
MAGNESIUM, DISSOLVED	19	7.37	2.68	4.0	15.0	19	0.0306	-0.0376	0.596	2.22
SODIUM, DISSOLVED	13	10.28	2.74	6.6	16.0	13	0.0363	1.5395	0.713	2.01
POTASSIUM, DISSOLVED	13	1.95	0.37	1.5	2.7	13	0.0048	0.8018	0.695	0.28
BICARBONATE, ION	13	21.8	7.0	15	35	13	0.037	13.038	0.282*	7.0
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	19	72.53	23.07	35.0	120.0	19	0.3728	-17.7235	0.844	12.73
CHLORIDE, DISSOLVED	19	13.84	2.73	10.0	20.0	19	0.0133	10.6316	0.253*	2.72
DISSOLVED SOLIDS, SUM OF CONST	13	145.3	35.2	95	206	13	0.543	14.602	0.832	20.4
DISSOLVED SOLIDS, ROE 180 DEG C	13	158.4	38.7	100	227	13	0.521	32.963	0.727	27.7
HARDNESS, TOTAL	19	86.1	20.7	54	122	19	0.346	2.241	0.874	10.4
HARDNESS, NONCARBONATE	13	67.1	18.5	40	100	13	0.286	-1.887	0.836	10.6
TURBIDITY (JTU)	14	6.9	4.2	1	15	14	-0.052	19.265	-0.633	3.4
FLUORIDE, DISSOLVED	13	0.15	0.07	0.0	0.2	13	-0.0000	0.1541	-0.001*	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%
	370	340	315	280	265	220	200	155	145	140

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	12.79	11.37	2.73	96	1.75

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	0	<20	5	0	0
CADMIUM (CD), UG/L	7	1	<20	5	0	2
CHROMIUM (CR), UG/L	7	<10	<50	5	0	<10
COBALT (CO), UG/L	5	4	8	5	3	6
COPPER (CU), UG/L	7	0	<50	5	0	0
IRON (FE), UG/L	12	250	3700	5	10	370
LEAD (PB), UG/L	7	4	<100	5	2	10
MANGANESE (MN), UG/L	7	280	810	5	250	560
MERCURY (HG), UG/L	6	<0.5	<0.5	5	<0.5	<0.5
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	7	30	100	5	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.00	30.80			
BIOMASS, ASH WT., G/SQ M	4	0.50	26.20			
CHLOROPHYLL A, MG/SQ M	4	0.000	15.600			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.100			
ORGANIC CARBON, MG/L	5	1.400	3.900			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, K	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	14.93	8.47	1.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	394.8	103.1	220	600					
STREAMFLOW (CUBIC FT/SEC)	22	10597.7	8006.9	1880	31500	22	-34.874	24365.199	-0.449	7331.0
PH (STANDARD UNITS)	21	7.12	0.22	6.8	7.5	21	0.0009	6.7820	0.423*	0.20
PHOSPHORUS, TOTAL	22	0.661	2.074	< 0.02	9.59	22	0.00456	-1.14061	0.227*	2.070
NITRITE + NITRATE, TOTAL	13	0.882	0.249	0.63	1.60	13	0.00121	0.44864	0.412*	0.237
NITROGEN, KJELDAHL, TOTAL	13	0.674	0.293	0.28	1.20	13	0.00086	0.36496	0.250*	0.296
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4730.8	7048.2	150	25000	12	51.209	-14259.184	0.568*	6083.7
SEDIMENT SUSPENDED	12	40.7	47.7	9	176					
SEDIMENT, CLAY-SILT (PERCENT)	12	97.0	4.0	88	100					
COLIFORM, FECAL (COL/100 ML)	12	2049.2	1598.5	350	5100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	614.4	555.1	35	1500					
SILICA, DISSOLVED	13	5.18	0.56	3.7	5.6	13	-0.0030	6.2537	-0.453*	0.52
CALCIUM, DISSOLVED	21	34.86	6.46	23.0	45.1	21	0.0422	18.3636	0.681	4.85
MAGNESIUM, DISSOLVED	21	9.14	3.80	0.0	19.5	21	0.0160	2.8870	0.436	3.50
SODIUM, DISSOLVED	13	22.78	8.48	8.2	38.0	13	0.0928	-10.5883	0.931	3.22
POTASSIUM, DISSOLVED	13	2.58	0.85	1.4	4.1	13	0.0087	-0.5590	0.875	0.43
BICARBONATE, ION	13	34.4	8.5	18	48	13	0.076	7.200	0.758	5.8
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	22	126.18	42.96	40.0	210.0	22	0.2004	47.0842	0.481	38.60
CHLORIDE, DISSOLVED	22	15.04	6.05	5.0	30.0	22	0.0200	7.1520	0.340*	5.83
DISSOLVED SOLIDS, SUM OF CONST	13	228.8	59.2	130	319	13	0.659	-8.162	0.947	20.0
DISSOLVED SOLIDS, ROE 180 DEG C	13	243.5	62.9	136	345	13	0.685	-2.694	0.926	24.7
HARDNESS, TOTAL	21	125.0	26.3	79	164	21	0.164	60.801	0.650	20.5
HARDNESS, NONCARBONATE	13	91.7	20.4	65	120	13	0.213	14.992	0.892	9.6
TURBIDITY (JTU)	17	12.1	13.8	2	60	17	-0.016	18.259	-0.128*	14.1
FLUORIDE, DISSOLVED	13	0.20	0.08	0.1	0.4	13	0.0007	-0.0463	0.714	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
22	15.24	11.09	2.79	89	2.92

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	2	5	0	1
CADMIUM (CD), UG/L	5	1	2	5	0	2
CHROMIUM (CR), UG/L	5	<10	20	5	0	<10
COBALT (CO), UG/L	5	1	8	5	0	6
COPPER (CU), UG/L	5	0	20	5	0	10
IRON (FE), UG/L	14	140	2900	5	10	70
LEAD (PB), UG/L	5	7	15	5	2	7
MANGANESE (MN), UG/L	13	10	430	5	200	400
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	60	300	5	20	240
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	3.20	18.00			
BIOMASS, ASH WT., G/SQ M	4	2.50	15.00			
CHLOROPHYLL A, MG/SQ M	4	0.300	3.800			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.300			
ORGANIC CARBON, MG/L	5	2.500	6.700			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.63	7.99	0.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	684.1	194.2	400	1080					
STREAMFLOW (CUBIC FT/SEC)	12	8983.3	7598.0	2280	26900	12	-31.337	30420.168	-0.801	4773.4
PH (STANDARD UNITS)	12	7.77	0.36	7.3	8.5	12	0.0012	6.9218	0.669	0.28
PHOSPHORUS, TOTAL	12	0.157	0.119	0.08	0.52	12	-0.00031	0.36591	-0.497*	0.109
NITRITE + NITRATE, TOTAL	12	1.057	0.390	0.35	1.70	12	-0.00051	1.40622	-0.254*	0.396
NITROGEN, KJELDAHL, TOTAL	12	0.802	0.607	0.00	2.20	12	0.00041	0.52278	0.130*	0.632
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	37877.5	34670.5	830	110000	12	153.906	-67407.000	0.862	18440.9
SEDIMENT SUSPENDED	12	126.8	282.4	14	1010					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1176.5	1130.8	48	3000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	673.2	1320.1	22	4300					
SILICA, DISSOLVED	4	6.70	1.31	5.0	8.1					
CALCIUM, DISSOLVED	4	62.25	11.30	55.0	79.0					
MAGNESIUM, DISSOLVED	4	18.25	0.96	17.0	19.0					
SODIUM, DISSOLVED	4	25.75	7.63	20.0	37.0					
POTASSIUM, DISSOLVED	4	3.30	0.70	2.5	4.1					
BICARBONATE, ION	4	114.3	16.0	104	138					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	115.00	12.91	100.0	130.0					
CHLORIDE, DISSOLVED	4	51.75	14.57	40.0	73.0					
DISSOLVED SOLIDS, SUM OF CONST	4	339.8	51.9	307	416					
DISSOLVED SOLIDS, ROE 180 DEG C	4	390.5	83.4	337	515					
HARDNESS, TOTAL	4	232.5	32.0	210	280					
HARDNESS, NONCARBONATE	4	135.0	17.3	120	160					
TURBIDITY (JTU)	4	23.3	21.8	8	55					
FLUORIDE, DISSOLVED	4	0.20	0.08	0.1	0.3					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	13.69	11.42	2.82	97	1.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

03150000 — MUSKINGUM R AT MCCONNELSVILLE OH

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED 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	<10	10
COBALT (CO), UG/L	4	2	5	4	0	5
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	1100	7200	4	10	40
LEAD (PB), UG/L	4	6	17	4	0	6
MANGANESE (MN), UG/L	4	300	670	4	10	370
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	20	60	4	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	16.90	23.60			
BIOMASS, ASH WT., G/SQ M	3	13.20	21.00			
CHLOROPHYLL A, MG/SQ M	3	21.100	42.000			
CHLOROPHYLL B, MG/SQ M	3	3.400	8.200			
ORGANIC CARBON, MG/L	4	5.800	8.800			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 03201300 NAME: KANAWHA @ WINFIELD W. VA.

LAT 38D31M32S LONG 081D54M40S
DRAINAGE AREA: 11809 SQ MI (30585 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	13.61	8.09	1.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	283.3	79.2	190	380					
STREAMFLOW (CUBIC FT/SEC)	10	11897.0	9886.4	2780	31100	9	-107.072	42700.383	-0.818	6376.2
PH (STANDARD UNITS)	8	7.39	0.22	7.1	7.6	8	0.0007	7.1898	0.267*	0.23
PHOSPHORUS, TOTAL	9	0.101	0.024	0.08	0.16	9	0.00004	0.09114	0.115*	0.026
NITRITE + NITRATE, TOTAL	9	0.577	0.239	0.30	1.10	9	-0.00100	0.86113	-0.333*	0.241
NITROGEN, KJELDAHL, TOTAL	9	1.799	1.622	0.05	5.30	9	0.00466	0.47913	0.228*	1.688
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	3952.0	3893.7	190	10000	9	15.999	-364.063	0.312*	4129.4
SEDIMENT SUSPENDED	10	33.2	38.5	8	138					
SEDIMENT, CLAY-SILT (PERCENT)	10	73.6	16.5	48	96					
COLIFORM, FECAL (COL/100 ML)	8	401.1	655.2	8	1800					
STREPTOCOCCI, FECAL (COL/100 ML)	8	71.3	134.7	0	400					
SILICA, DISSOLVED	9	4.20	1.43	1.9	5.7	9	0.0012	3.8501	0.068*	1.53
CALCIUM, DISSOLVED	9	16.22	4.47	10.0	23.0	9	0.0491	2.3189	0.870	2.35
MAGNESIUM, DISSOLVED	9	5.24	1.17	3.8	7.0	9	0.0094	2.5880	0.632*	0.97
SODIUM, DISSOLVED	9	20.84	9.40	7.8	37.0	9	0.0898	-4.6028	0.757	6.57
POTASSIUM, DISSOLVED	9	2.53	1.12	1.6	4.5	9	0.0017	2.0649	0.117*	1.19
BICARBONATE, ION	9	44.0	14.1	19	71	9	0.084	20.182	0.472*	13.3
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	32.67	11.87	16.0	53.0	9	0.0978	4.9542	0.652*	9.62
CHLORIDE, DISSOLVED	9	25.00	12.63	11.0	51.0	9	0.1195	-8.8645	0.750	8.94
DISSOLVED SOLIDS, SUM OF CONST	9	128.7	41.3	80	201	9	0.413	11.778	0.792	26.9
DISSOLVED SOLIDS, ROE 180 DEG C	9	143.3	45.5	80	220	9	0.478	7.762	0.832	27.0
HARDNESS, TOTAL	9	62.1	15.5	41	86	9	0.164	15.679	0.836	9.1
HARDNESS, NONCARBONATE	9	26.0	10.7	14	49	9	0.092	-0.076	0.680	8.4
TURBIDITY (JTU)	9	9.9	6.8	3	20	9	-0.012	13.257	-0.139*	7.2
FLUORIDE, DISSOLVED	9	0.10	0.00	0.1	0.1	9	-0.0000	0.1000	0.000*	0.00

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 340

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%
	411	380	346	294	255	209	171	141	135	122

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
343	16.06	11.04	2.75	95	1.79

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	1
CADMIUM (CD), UG/L	4	0	4	4	0	3
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	10	20	4	0	20
IRON (FE), UG/L	4	250	1200	4	10	80
LEAD (PB), UG/L	4	15	339	4	2	39
MANGANESE (MN), UG/L	4	70	140	4	10	120
MERCURY (HG), UG/L	4	< 0.5	< 5.0	4	<0.5	<5.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	50	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	15.00	130.00			
BIOMASS, ASH WT., G/SQ M	2	11.00	120.00			
CHLOROPHYLL A, MG/SQ M	2	45.000	51.000			
CHLOROPHYLL B, MG/SQ M	2	0.500	3.700			
ORGANIC CARBON, MG/L	5	2.300	5.100			

Table 12. 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: 10/01/75 - 09/30/76

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)	25	13.12	7.07	1.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	140.6	28.8	80	190					
STREAMFLOW (CUBIC FT/SEC)	26	319.9	586.3	3	2760	24	-4.781	1013.743	-0.226*	603.4
PH (STANDARD UNITS)	21	7.40	0.62	6.1	8.4	21	0.0016	7.1766	0.075*	0.63
PHOSPHORUS, TOTAL	10	0.069	0.047	0.02	0.19	10	-0.00065	0.15782	-0.442*	0.044
NITRITE + NITRATE, TOTAL	10	0.230	0.116	0.01	0.37	10	-0.00206	0.51268	-0.565*	0.101
NITROGEN, KJELDAHL, TOTAL	10	0.665	0.426	0.19	1.50	10	0.00196	0.39546	0.147*	0.447
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	327.7	309.4	0	1100	13	-0.942	457.208	-0.093*	321.8
SEDIMENT SUSPENDED	18	43.5	58.3	5	223					
SEDIMENT, CLAY-SILT (PERCENT)	11	70.3	19.4	30	95					
COLIFORM, FECAL (COL/100 ML)	16	870.6	1944.8	20	8000					
STREPTOCOCCI, FECAL (COL/100 ML)	17	1174.0	3582.2	14	15000					
SILICA, DISSOLVED	14	5.96	0.96	3.8	6.7	14	-0.0128	7.6443	-0.418*	0.91
CALCIUM, DISSOLVED	14	11.94	5.36	7.5	28.0	14	0.0612	3.8985	0.357*	5.21
MAGNESIUM, DISSOLVED	14	3.20	0.97	1.5	4.5	14	0.0108	1.7828	0.348*	0.95
SODIUM, DISSOLVED	14	4.06	1.86	1.7	8.7	14	0.0330	-0.2703	0.556	1.61
POTASSIUM, DISSOLVED	14	2.25	0.71	1.2	3.4	14	0.0064	1.4115	0.281*	0.71
BICARBONATE, ION	14	34.2	15.5	16	58	14	0.275	-1.907	0.557	13.4
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	14	17.43	2.56	12.0	21.0	14	0.0073	16.4662	0.089*	2.66
CHLORIDE, DISSOLVED	14	4.50	2.19	2.2	9.7	14	0.0380	-0.5008	0.543	1.92
DISSOLVED SOLIDS, SUM OF CONST	14	66.7	16.0	50	100	14	0.275	30.542	0.539	14.0
DISSOLVED SOLIDS, ROE 180 DEG C	13	72.8	14.7	49	94	13	0.269	36.694	0.552*	12.8
HARDNESS, TOTAL	14	42.8	16.4	26	88	14	0.197	16.918	0.376*	15.8
HARDNESS, NONCARBONATE	14	15.1	9.2	6	43	14	-0.026	18.506	-0.089*	9.5
TURBIDITY (JTU)	18	24.2	44.3	3	190	18	-0.329	68.699	-0.226*	44.5
FLUORIDE, DISSOLVED	13	0.11	0.03	0.1	0.2	13	-0.0005	0.1751	-0.544*	0.02

*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%
	241	210	156	142	135	121	101	88	85	73

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	14.97	9.02	2.83	83	2.84

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	3	5	0	3
CADMIUM (CD), UG/L	7	0	10	7	0	9
CHROMIUM (CR), UG/L	7	0	10	5	0	<10
COBALT (CO), UG/L	5	0	3	5	0	3
COPPER (CU), UG/L	5	0	10	5	0	10
IRON (FE), UG/L	8	290	2000	11	30	230
LEAD (PB), UG/L	7	2	34	7	0	23
MANGANESE (MN), UG/L	8	50	320	11	20	300
MERCURY (HG), UG/L	7	<0.5	<5.0	7	<0.5	<5.0
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	7	10	20	7	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.60	22.00			
BIOMASS, ASH WT., G/SQ M	2	0.20	15.00			
CHLOROPHYLL A, MG/SQ M	2	0.200	8.500			
CHLOROPHYLL B, MG/SQ M	2	0.100	12.000			
ORGANIC CARBON, MG/L	9	2.100	6.100			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	16.58	7.30	4.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	375.8	120.7	180	550					
STREAMFLOW (CUBIC FT/SEC)	12	3699.7	5055.7	415	16500	12	-35.123	16899.996	-0.839	2887.2
PH (STANDARD UNITS)	12	6.78	0.43	6.2	7.5	12	0.0027	5.7774	0.747	0.30
PHOSPHORUS, TOTAL	12	0.109	0.106	0.03	0.32	12	-0.00054	0.31272	-0.620	0.087
NITRITE + NITRATE, TOTAL	12	0.336	0.236	0.00	0.82	12	-0.00087	0.66108	-0.443*	0.221
NITROGEN, KJELDAHL, TOTAL	12	0.530	0.520	0.13	1.90	12	-0.00195	1.26143	-0.452*	0.487
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10199.9	15341.7	99	47000	12	36.201	-3405.684	0.285*	15423.6
SEDIMENT SUSPENDED	6	486.7	523.6	32	1310					
SEDIMENT, CLAY-SILT (PERCENT)	6	97.8	2.4	95	100					
COLIFORM, FECAL (COL/100 ML)	11	3246.4	2971.4	430	9900					
STREPTOCOCCI, FECAL (COL/100 ML)	11	2999.5	3664.7	95	10000					
SILICA, DISSOLVED	12	5.13	1.97	1.9	7.9	12	-0.0147	10.6752	-0.906	0.87
CALCIUM, DISSOLVED	12	28.83	8.50	14.0	41.0	12	0.0694	2.7412	0.986	1.51
MAGNESIUM, DISSOLVED	12	12.27	3.71	5.4	17.0	12	0.0304	0.8543	0.988	0.61
SODIUM, DISSOLVED	12	28.42	13.26	9.0	45.0	12	0.1068	-11.7255	0.973	3.22
POTASSIUM, DISSOLVED	12	2.87	0.73	1.8	3.8	12	0.0057	0.7306	0.935	0.27
BICARBONATE, ION	12	82.9	32.0	35	123	12	0.258	-14.137	0.973	7.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	91.50	27.13	47.0	130.0	12	0.2226	7.8325	0.991	3.86
CHLORIDE, DISSOLVED	12	14.67	7.48	5.1	26.0	12	0.0584	-7.2754	0.943	2.62
DISSOLVED SOLIDS, SUM OF CONST	12	224.9	73.7	108	325	12	0.607	-3.398	0.995	7.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	234.8	71.5	104	312	12	0.577	17.920	0.974	17.0
HARDNESS, TOTAL	12	121.8	36.1	57	170	12	0.295	10.972	0.988	5.9
HARDNESS, NONCARBONATE	12	54.5	13.1	27	72	12	0.086	22.118	0.794	8.4
TURBIDITY (JTU)	12	76.9	98.3	3	250	12	-0.583	295.910	-0.716	72.0
FLUORIDE, DISSOLVED	12	0.18	0.10	0.0	0.4	12	0.0004	0.0376	0.455*	0.10

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 305

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%
	529	509	487	463	437	375	266	203	181	161

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
305	15.81	11.19	2.86	94	2.03

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	9	4	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	30	4	0	5
COBALT (CO), UG/L	4	0	9	4	0	0
COPPER (CU), UG/L	4	2	37	4	1	2
IRON (FE), UG/L	4	470	18000	4	0	240
LEAD (PB), UG/L	4	0	30	4	0	0
MANGANESE (MN), UG/L	4	30	400	4	10	20
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	80	4	0	110
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	8	0.00	57.00			
BIOMASS, ASH WT., G/SQ M	8	0.00	30.00			
CHLOROPHYLL A, MG/SQ M	8	0.000	44.600			
CHLOROPHYLL B, MG/SQ M	8	0.000	8.300			
ORGANIC CARBON, MG/L	4	1.800	8.300			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 03216600 NAME: OHIO R AT GREENUP DAM NR GREENUP, KY

LAT 38038M48S LONG 082D51M38S
DRAINAGE AREA: 62000 SQ MI (160580 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.67	8.36	3.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	361.7	72.7	235	460					
STREAMFLOW (CUBIC FT/SEC)	12	55459.2	33751.9	6810	124000	12	-289.748	160251.250	-0.624	27669.5
PH (STANDARD UNITS)	12	6.79	0.38	6.1	7.4	12	0.0024	5.9187	0.459*	0.36
PHOSPHORUS, TOTAL	12	0.077	0.057	0.02	0.24	12	-0.00006	0.09805	-0.075*	0.060
NITRITE + NITRATE, TOTAL	12	0.984	0.261	0.75	1.60	12	0.00176	0.34660	0.491*	0.239
NITROGEN, KJELDAHL, TOTAL	12	0.597	0.241	0.15	1.20	12	0.00095	0.25306	0.286*	0.242
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6087.5	9163.8	330	31000	12	51.475	-12529.344	0.408*	8774.1
SEDIMENT SUSPENDED	7	29.9	21.0	8	69					
SEDIMENT, CLAY-SILT (PERCENT)	7	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	11	398.5	250.5	31	760					
STREPTOCOCCI, FECAL (COL/100 ML)	11	143.5	160.4	3	500					
SILICA, DISSOLVED	12	4.74	1.95	1.0	6.6	12	-0.0136	9.6674	-0.508*	1.76
CALCIUM, DISSOLVED	12	36.33	5.93	26.0	44.0	12	0.0768	8.5647	0.941	2.11
MAGNESIUM, DISSOLVED	12	10.00	1.76	7.3	12.0	12	0.0210	2.4075	0.865	0.93
SODIUM, DISSOLVED	12	20.33	5.60	12.0	30.0	12	0.0665	-3.7293	0.864	2.96
POTASSIUM, DISSOLVED	12	2.61	0.60	1.8	3.5	12	0.0062	0.3547	0.752	0.42
BICARBONATE, ION	12	51.2	5.9	39	58	12	0.070	25.993	0.859	3.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	86.83	16.42	62.0	120.0	12	0.2157	8.8321	0.954	5.15
CHLORIDE, DISSOLVED	12	26.67	7.73	15.0	41.0	12	0.0949	-7.6626	0.893	3.65
DISSOLVED SOLIDS, SUM OF CONST	12	213.2	38.0	150	284	12	0.503	31.098	0.962	10.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	233.3	44.6	162	302	12	0.545	36.212	0.887	21.6
HARDNESS, TOTAL	12	132.1	20.8	95	160	12	0.274	32.843	0.957	6.3
HARDNESS, NONCARBONATE	12	89.8	17.1	63	110	12	0.220	10.337	0.931	6.5
TURBIDITY (JTU)	12	14.8	11.8	5	40	12	-0.081	44.086	-0.499*	10.7
FLUORIDE, DISSOLVED	12	0.27	0.12	0.0	0.4	12	0.0005	0.0694	0.322*	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%
	500	484	469	453	443	345	309	252	232	218

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	16.45	11.16	2.72	96	1.53

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	10	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	5	21	4	4	8
IRON (FE), UG/L	4	430	3200	4	10	30
LEAD (PB), UG/L	4	0	24	4	0	0
MANGANESE (MN), UG/L	4	100	300	4	10	230
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	8	2.90	51.00			
BIOMASS, ASH WT., G/SQ M	8	1.60	42.00			
CHLOROPHYLL A, MG/SQ M	8	0.100	101.000			
CHLOROPHYLL B, MG/SQ M	8	0.000	8.500			
ORGANIC CARBON, MG/L	4	2.600	6.300			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	14.21	7.61	1.5	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	680.8	76.0	563	800					
STREAMFLOW (CUBIC FT/SEC)	12	2182.8	1266.3	904	5120	12	-11.419	9956.410	-0.685	967.6
PH (STANDARD UNITS)	12	7.85	0.16	7.6	8.1	12	0.0011	7.1093	0.528*	0.14
PHOSPHORUS, TOTAL	12	0.492	0.213	0.03	0.84	12	0.00069	0.02160	0.246*	0.217
NITRITE + NITRATE, TOTAL	12	2.725	1.031	1.50	5.40	12	-0.00648	7.13882	-0.478*	0.949
NITROGEN, KJELDAHL, TOTAL	12	1.194	0.542	0.29	2.50	12	0.00430	-1.73472	0.603	0.454
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	46141.7	60728.0	1300	170000	12	407.958	-231576.000	0.510*	54774.8
SEDIMENT SUSPENDED	12	31.8	28.7	10	114					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1566.7	1590.9	280	5500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	309.4	254.9	17	720					
SILICA, DISSOLVED	4	6.52	1.44	4.4	7.4					
CALCIUM, DISSOLVED	4	76.75	6.08	70.0	84.0					
MAGNESIUM, DISSOLVED	4	28.00	1.83	26.0	30.0					
SODIUM, DISSOLVED	4	23.25	2.22	20.0	25.0					
POTASSIUM, DISSOLVED	4	3.45	0.68	2.6	4.2					
BICARBONATE, ION	4	256.8	19.3	240	284					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	83.00	11.60	68.0	96.0					
CHLORIDE, DISSOLVED	4	33.25	1.26	32.0	35.0					
DISSOLVED SOLIDS, SUM OF CONST	4	381.0	25.7	356	410					
DISSOLVED SOLIDS, ROE 180 DEG C	4	423.3	21.7	394	442					
HARDNESS, TOTAL	4	307.5	22.2	280	330					
HARDNESS, NONCARBONATE	4	97.0	10.6	85	110					
TURBIDITY (JTU)	4	9.5	4.9	3	15					
FLUORIDE, DISSOLVED	4	0.37	0.10	0.3	0.5					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	14.37	10.38	2.78	92	2.30

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	3	4	0	3
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	9	4	0	3
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	450	830	4	20	60
LEAD (PB), UG/L	4	3	8	4	0	3
MANGANESE (MN), UG/L	4	50	90	4	10	50
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	30	40	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	11.50	110.00			
BIOMASS, ASH WT., G/SQ M	4	8.38	110.00			
CHLOROPHYLL A, MG/SQ M	4	28.100	51.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	5.700			
ORGANIC CARBON, MG/L	3	3.000	9.900			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	14.25	7.86	1.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	689.6	106.6	405	831					
STREAMFLOW (CUBIC FT/SEC)	12	762.7	920.7	108	3390	12	-7.485	5924.035	-0.866	482.4
PH (STANDARD UNITS)	12	8.27	0.25	7.7	8.6	12	0.0017	7.1294	0.711	0.18
PHOSPHORUS, TOTAL	12	0.457	0.221	0.07	0.77	12	0.00055	0.07477	0.267*	0.223
NITRITE + NITRATE, TOTAL	12	2.300	0.839	1.60	4.50	12	-0.00006	2.34416	-0.008*	0.880
NITROGEN, KJELDAHL, TOTAL	12	0.590	0.262	0.00	1.00	12	0.00106	-0.13895	0.429*	0.249
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	5416.4	8823.0	500	31000	11	10.524	-1907.168	0.130*	9220.7
SEDIMENT SUSPENDED	12	40.1	26.6	8	102					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	587.3	1179.6	4	4100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	783.6	1722.1	15	6000					
SILICA, DISSOLVED	4	5.30	2.80	1.2	7.4					
CALCIUM, DISSOLVED	4	73.75	19.09	47.0	92.0					
MAGNESIUM, DISSOLVED	4	26.50	8.10	16.0	35.0					
SODIUM, DISSOLVED	4	26.00	11.20	12.0	36.0					
POTASSIUM, DISSOLVED	4	3.15	0.66	2.2	3.6					
BICARBONATE, ION	4	278.0	81.3	166	360					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	50.75	13.79	31.0	62.0					
CHLORIDE, DISSOLVED	4	46.25	14.91	27.0	59.0					
DISSOLVED SOLIDS, SUM OF CONST	4	369.3	102.8	225	468					
DISSOLVED SOLIDS, ROE 180 DEG C	4	403.5	105.5	252	483					
HARDNESS, TOTAL	4	290.0	80.4	180	370					
HARDNESS, NONCARBONATE	4	65.3	15.0	47	79					
TURBIDITY (JTU)	4	21.3	20.5	2	50					
FLUORIDE, DISSOLVED	4	0.25	0.06	0.2	0.3					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	14.40	10.56	2.75	91	2.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	5	4	0	3
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	7	4	0	3
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	280	2300	4	0	460
LEAD (PB), UG/L	4	4	10	4	0	3
MANGANESE (MN), UG/L	4	50	100	4	0	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	10	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	17.00	40.40			
BIOMASS, ASH WT., G/SQ M	4	14.00	34.80			
CHLOROPHYLL A, MG/SQ M	4	3.200	57.700			
CHLOROPHYLL B, MG/SQ M	4	0.300	14.100			
ORGANIC CARBON, MG/L	4	2.000	10.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 03254000 NAME: LICKING RIVER AT BUTLER,KY.

LAT 38D47M22S LONG 084D21M05S
DRAINAGE AREA: 3385 SQ MI (8767 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.96	7.17	3.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	255.0	56.8	165	330					
STREAMFLOW (CUBIC FT/SEC)	12	4814.1	9026.1	176	32100	12	-44.842	16248.801	-0.282*	9061.1
PH (STANDARD UNITS)	12	6.93	0.53	6.3	8.1	12	0.0053	5.5921	0.564*	0.46
PHOSPHORUS, TOTAL	12	0.167	0.180	0.04	0.67	12	-0.00045	0.28144	-0.142*	0.187
NITRITE + NITRATE, TOTAL	12	0.458	0.374	0.00	1.00	12	-0.00149	0.83743	-0.226*	0.382
NITROGEN, KJELDAHL, TOTAL	12	0.713	0.532	0.21	1.80	12	0.00115	0.41889	0.123*	0.554
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	11849.2	12952.6	200	42000	12	100.941	-13890.680	0.443*	12176.9
SEDIMENT SUSPENDED	6	136.5	181.8	16	496					
SEDIMENT, CLAY-SILT (PERCENT)	6	99.2	2.0	95	100					
COLIFORM, FECAL (COL/100 ML)	11	1443.2	3033.6	16	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	5979.8	13217.2	14	43000					
SILICA, DISSOLVED	12	3.92	1.96	0.8	6.3	12	-0.0118	6.9222	-0.343*	1.93
CALCIUM, DISSOLVED	12	38.50	9.26	20.0	51.0	12	0.1566	-1.9557	0.974	2.20
MAGNESIUM, DISSOLVED	12	6.82	2.07	4.5	11.0	12	0.0316	-1.2816	0.873	1.06
SODIUM, DISSOLVED	12	4.03	1.02	2.6	5.8	12	0.0106	1.3363	0.590	0.86
POTASSIUM, DISSOLVED	12	2.41	0.52	1.5	3.3	12	0.0000	2.4048	0.002*	0.54
BICARBONATE, ION	12	113.7	29.3	70	155	12	0.512	-16.846	0.994	3.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	30.25	7.84	21.0	45.0	12	0.1077	2.7774	0.781	5.13
CHLORIDE, DISSOLVED	12	5.03	0.90	3.6	6.4	12	0.0081	2.9640	0.513*	0.81
DISSOLVED SOLIDS, SUM OF CONST	12	147.5	32.3	96	196	12	0.556	5.654	0.976	7.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	158.8	38.8	96	232	12	0.617	1.303	0.905	17.3
HARDNESS, TOTAL	12	124.7	30.5	68	170	12	0.519	-7.747	0.967	8.1
HARDNESS, NONCARBONATE	12	31.1	9.1	11	43	12	0.109	3.324	0.682	7.0
TURBIDITY (JTU)	12	50.6	97.1	1	350	12	-0.460	167.934	-0.269*	98.1
FLUORIDE, DISSOLVED	12	0.20	0.06	0.1	0.3	12	-0.0002	0.2395	-0.146*	0.06

*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%
	370	352	337	310	277	252	227	196	184	165

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	16.42	10.74	2.81	92	2.25

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	1	8	4	0	5
IRON (FE), UG/L	4	280	1500	4	0	50
LEAD (PB), UG/L	4	0	12	4	0	14
MANGANESE (MN), UG/L	4	30	100	4	0	10
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	3	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.00	3.50			
BIOMASS, ASH WT., G/SQ M	3	0.00	2.50			
CHLOROPHYLL A, MG/SQ M	3	0.000	1.500			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.000			
ORGANIC CARBON, MG/L	4	2.000	8.700			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	15.71	7.82	1.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	696.3	136.9	350	830					
STREAMFLOW (CUBIC FT/SEC)	12	3801.3	4513.8	514	13600	12	-22.697	19606.242	-0.688	3433.6
PH (STANDARD UNITS)	12	7.87	0.34	7.3	8.4	12	0.0013	6.9778	0.511*	0.31
PHOSPHORUS, TOTAL	12	0.576	0.145	0.35	0.82	12	0.00047	0.24917	0.444*	0.136
NITRITE + NITRATE, TOTAL	12	5.042	2.555	1.50	10.00	12	0.00332	2.73217	0.178*	2.637
NITROGEN, KJELDAHL, TOTAL	12	1.558	0.703	0.00	2.80	12	0.00260	-0.39354	0.546*	0.617
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	32695.8	38126.9	750	110000	12	123.521	-53315.916	0.444*	35638.7
SEDIMENT SUSPENDED	12	88.4	83.7	16	268					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	5626.7	4063.4	620	14000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1909.4	4147.3	73	15000					
SILICA, DISSOLVED	4	4.30	2.45	2.0	7.6					
CALCIUM, DISSOLVED	4	72.25	21.95	42.0	92.0					
MAGNESIUM, DISSOLVED	4	28.75	9.98	14.0	36.0					
SODIUM, DISSOLVED	4	28.82	15.48	9.3	44.0					
POTASSIUM, DISSOLVED	4	4.42	0.81	3.5	5.4					
BICARBONATE, ION	4	254.5	75.8	145	306					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	73.50	28.20	32.0	93.0					
CHLORIDE, DISSOLVED	4	45.50	20.14	20.0	64.0					
DISSOLVED SOLIDS, SUM OF CONST	4	383.8	126.3	198	478					
DISSOLVED SOLIDS, ROE 180 DEG C	4	437.3	152.2	214	552					
HARDNESS, TOTAL	4	300.0	97.6	160	380					
HARDNESS, NONCARBONATE	4	90.8	35.4	44	130					
TURBIDITY (JTU)	4	25.0	43.4	1	90					
FLUORIDE, DISSOLVED	4	0.52	0.22	0.3	0.8					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	15.87	10.50	2.68	93	2.37

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	8	4	0	2
CADMIUM (CD), UG/L	4	1	4	4	0	2
CHROMIUM (CR), UG/L	4	10	30	4	0	10
COBALT (CO), UG/L	4	1	26	4	0	2
COPPER (CU), UG/L	4	0	20	4	0	20
IRON (FE), UG/L	4	520	5000	4	10	40
LEAD (PB), UG/L	4	7	51	4	0	18
MANGANESE (MN), UG/L	4	50	120	4	0	50
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	30	120	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	14.00	120.00			
BIOMASS, ASH WT., G/SQ M	4	11.50	100.00			
CHLOROPHYLL A, MG/SQ M	4	5.000	30.800			
CHLOROPHYLL B, MG/SQ M	4	0.200	2.200			
ORGANIC CARBON, MG/L	4	2.400	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	14.93	7.84	2.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	524.7	96.8	345	705					
STREAMFLOW (CUBIC FT/SEC)	12	592.4	656.8	135	2360	11	-5.446	3488.899	-0.782	442.9
PH (STANDARD UNITS)	11	8.08	0.38	7.4	8.5	11	0.0015	7.3201	0.371*	0.37
PHOSPHORUS, TOTAL	11	0.060	0.027	0.03	0.12	11	-0.00008	0.09978	-0.274*	0.027
NITRITE + NITRATE, TOTAL	11	1.701	0.469	0.91	2.60	11	0.00036	1.51293	0.074*	0.494
NITROGEN, KJELDAHL, TOTAL	11	0.457	0.165	0.23	0.70	11	-0.00061	0.77886	-0.359*	0.162
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	19036.4	25600.1	1500	71000	11	127.207	-47712.512	0.481*	23654.8
SEDIMENT SUSPENDED	11	43.1	15.0	22	70					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	0									
STREPTOCOCCI, FECAL (COL/100 ML)	0									
SILICA, DISSOLVED	11	3.89	1.31	1.4	5.6	11	0.0059	0.8126	0.432*	1.25
CALCIUM, DISSOLVED	11	66.82	9.14	48.0	80.0	11	0.0612	34.6830	0.649	7.33
MAGNESIUM, DISSOLVED	11	24.73	4.36	15.0	32.0	11	0.0230	12.6464	0.511*	3.95
SODIUM, DISSOLVED	11	10.12	1.73	7.3	12.0	11	0.0153	2.1141	0.853	0.95
POTASSIUM, DISSOLVED	11	2.36	0.30	1.8	2.9	11	-0.0011	2.9524	-0.357*	0.30
BICARBONATE, ION	11	271.8	30.6	204	315	11	0.206	163.684	0.652	24.4
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	43.18	5.31	31.0	49.0	11	0.0383	23.0700	0.699	4.00
CHLORIDE, DISSOLVED	11	17.91	2.43	15.0	23.0	11	0.0143	10.4076	0.570*	2.10
DISSOLVED SOLIDS, SUM OF CONST	11	303.5	34.0	234	344	11	0.258	168.138	0.735	24.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	333.8	55.3	221	387	11	0.495	74.043	0.867	29.1
HARDNESS, TOTAL	11	269.1	35.9	200	300	11	0.234	146.072	0.632	29.3
HARDNESS, NONCARBONATE	11	45.8	17.1	12	70	11	0.079	4.345	0.447*	16.2
TURBIDITY (JTU)	11	5.7	4.3	1	15	11	-0.020	16.044	-0.439*	4.1
FLUORIDE, DISSOLVED	11	0.21	0.08	0.1	0.4	11	0.0002	0.0998	0.243*	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%
	560	550	545	540	530	515	480	430	410	375

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	13.93	9.40	2.89	89	2.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	< 10	10	4	<10	10
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	130	1200	4	20	40
LEAD (PB), UG/L	4	5	10	4	0	5
MANGANESE (MN), UG/L	4	30	300	4	0	240
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	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	2.500	5.600			

Table 12. 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 SC KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	16.46	8.20	2.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	364.6	63.6	265	475					
STREAMFLOW (CUBIC FT/SEC)	12	151233.1	129423.4	24500	447499	12	-1716.071	776883.688	-0.844	72895.8
PH (STANDARD UNITS)	12	6.90	0.39	6.0	7.4	12	-0.0013	7.3627	-0.205*	0.40
PHOSPHORUS, TOTAL	12	0.197	0.166	0.05	0.51	12	-0.00167	0.80605	-0.641	0.133
NITRITE + NITRATE, TOTAL	12	1.203	0.279	0.92	1.90	12	0.00061	0.98096	0.139*	0.290
NITROGEN, KJELDAHL, TOTAL	12	0.872	0.396	0.51	1.60	12	-0.00266	1.84153	-0.427*	0.375
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10709.2	13624.1	710	44000	12	104.149	-27261.820	0.486*	12485.2
SEDIMENT SUSPENDED	8	110.5	171.3	9	512					
SEDIMENT, CLAY-SILT (PERCENT)	8	98.3	3.4	91	100					
COLIFORM, FECAL (COL/100 ML)	12	1660.7	2310.3	23	8100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2049.9	3092.8	2	9300					
SILICA, DISSOLVED	12	4.40	2.29	0.1	6.3	12	-0.0248	13.4486	-0.690	1.74
CALCIUM, DISSOLVED	11	38.45	5.79	30.0	48.0	11	0.0793	9.5706	0.915	2.47
MAGNESIUM, DISSOLVED	11	10.84	1.63	8.2	13.0	11	0.0222	2.7522	0.909	0.72
SODIUM, DISSOLVED	11	18.73	5.12	12.0	29.0	11	0.0740	-8.2150	0.964	1.44
POTASSIUM, DISSOLVED	11	2.67	0.51	2.1	3.6	11	0.0046	0.9852	0.611	0.42
BICARBONATE, ION	12	76.1	10.8	54	98	12	0.073	49.549	0.428*	10.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	75.92	15.68	56.0	110.0	12	0.2179	-3.5104	0.884	7.69
CHLORIDE, DISSOLVED	12	25.25	6.54	17.0	36.0	12	0.0917	-8.1702	0.892	3.10
DISSOLVED SOLIDS, SUM OF CONST	11	213.6	35.1	162	281	11	0.503	30.397	0.956	10.9
DISSOLVED SOLIDS, RDE 180 DEG C	12	231.4	37.8	176	310	12	0.517	43.100	0.870	19.5
HARDNESS, TOTAL	11	140.9	19.7	110	170	11	0.267	43.860	0.901	9.0
HARDNESS, NONCARBONATE	11	78.3	17.0	56	110	11	0.222	-2.398	0.868	8.9
TURBIDITY (JTU)	12	44.2	53.2	2	130	12	-0.591	259.523	-0.707	39.4
FLUORIDE, DISSOLVED	12	0.31	0.09	0.2	0.4	12	0.0001	0.2712	0.072*	0.09

*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%
	504	495	485	463	417	366	325	293	278	263

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
354	16.24	11.04	2.69	96	1.58

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	11	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	50	4	0	0
COBALT (CO), UG/L	4	0	19	4	0	0
COPPER (CU), UG/L	4	9	35	4	4	12
IRON (FE), UG/L	4	380	16000	4	0	60
LEAD (PB), UG/L	4	5	45	4	0	5
MANGANESE (MN), UG/L	4	60	1500	4	0	80
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	4	10	210	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	9	0.00	22.00			
BIOMASS, ASH WT., G/SQ M	9	0.00	20.00			
CHLOROPHYLL A, MG/SQ M	9	0.000	63.000			
CHLOROPHYLL B, MG/SQ M	9	0.000	17.000			
ORGANIC CARBON, MG/L	4	4.700	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	15.25	6.99	4.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	242.9	25.4	195	275					
STREAMFLOW (CUBIC FT/SEC)	12	5038.7	5529.8	244	20800	12	-108.157	31311.797	-0.498*	5030.3
PH (STANDARD UNITS)	12	6.86	0.41	6.2	7.5	12	0.0003	6.7921	0.017*	0.43
PHOSPHORUS, TOTAL	12	0.142	0.060	0.07	0.24	12	0.00048	0.02600	0.202*	0.062
NITRITE + NITRATE, TOTAL	12	0.719	0.204	0.35	0.91	12	-0.00009	0.74038	-0.011*	0.214
NITROGEN, KJELDAHL, TOTAL	12	0.443	0.220	0.13	0.90	12	0.00281	-0.23987	0.325*	0.218
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1602.8	1937.5	13	5800	12	32.847	-6376.383	0.431*	1833.2
SEDIMENT SUSPENDED	3	171.0	135.2	20	281					
SEDIMENT, CLAY-SILT (PERCENT)	3	98.3	1.5	97	100					
COLIFORM, FECAL (COL/100 ML)	12	1170.8	1719.0	10	6200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	673.1	1019.8	6	2600					
SILICA, DISSOLVED	12	5.27	1.11	2.2	6.3	12	-0.0176	9.5600	-0.405*	1.06
CALCIUM, DISSOLVED	12	33.50	3.99	27.0	40.0	12	0.0712	16.1925	0.455*	3.73
MAGNESIUM, DISSOLVED	12	6.44	0.48	5.6	7.0	12	0.0099	4.0367	0.525*	0.43
SODIUM, DISSOLVED	12	6.59	2.77	3.7	11.0	12	0.0632	-8.7645	0.582	2.36
POTASSIUM, DISSOLVED	12	2.09	0.52	1.3	2.9	12	0.0186	-2.4198	0.913	0.22
BICARBONATE, ION	12	90.7	13.9	70	125	12	0.283	21.891	0.517*	12.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	32.33	5.71	25.0	44.0	12	0.0545	19.0898	0.243*	5.81
CHLORIDE, DISSOLVED	12	8.89	3.98	4.8	16.0	12	0.0917	-13.3874	0.586	3.38
DISSOLVED SOLIDS. SUM OF CONST	12	139.9	12.5	123	161	12	0.435	34.267	0.883	6.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	145.8	13.4	128	166	12	0.405	47.416	0.772	8.9
HARDNESS, TOTAL	12	109.3	10.5	93	130	12	0.217	56.700	0.527*	9.3
HARDNESS, NONCARBONATE	12	35.7	7.1	25	46	12	-0.015	39.191	-0.052*	7.5
TURBIDITY (JTU)	12	36.9	33.3	4	120	12	-0.825	237.346	-0.631	27.1
FLUORIDE, DISSOLVED	12	0.20	0.07	0.0	0.3	12	0.0015	-0.1751	0.532*	0.07

*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%
	398	366	330	283	268	252	242	221	207	182

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
351	16.11	10.58	2.75	95	1.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	4	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	5	4	0	0
COPPER (CU), UG/L	4	5	29	4	2	5
IRON (FE), UG/L	4	1100	8600	4	0	30
LEAD (PB), UG/L	4	0	20	4	0	4
MANGANESE (MN), UG/L	4	60	300	4	0	20
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.30	13.10			
BIOMASS, ASH WT., G/SQ M	4	1.20	13.00			
CHLOROPHYLL A, MG/SQ M	4	0.000	28.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	2.700			
ORGANIC CARBON, MG/L	3	3.600	8.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.88	6.87	3.5	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	320.8	86.6	140	455					
STREAMFLOW (CUBIC FT/SEC)	12	3724.7	7211.2	122	25100	12	-60.618	23172.918	-0.728	5183.7
PH (STANDARD UNITS)	12	7.07	0.30	6.5	7.5	12	0.0019	6.4658	0.545*	0.27
PHOSPHORUS, TOTAL	12	0.231	0.225	0.05	0.87	12	-0.00196	0.86094	-0.757	0.154
NITRITE + NITRATE, TOTAL	12	0.574	0.352	0.00	1.10	12	-0.00056	0.75371	-0.138*	0.365
NITROGEN, KJELDAHL, TOTAL	12	0.722	0.498	0.21	1.90	12	-0.00342	1.81832	-0.594	0.421
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5425.8	6471.8	160	23000	12	52.219	-11327.676	0.534*	7512.6
SEDIMENT SUSPENDED	5	117.6	117.4	8	298					
SEDIMENT, CLAY-SILT (PERCENT)	5	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	2551.2	3841.5	33	12000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	5728.4	9524.0	4	29000					
SILICA, DISSOLVED	12	4.97	1.74	1.3	7.2	12	-0.0014	5.4319	-0.072*	1.82
CALCIUM, DISSOLVED	12	47.67	11.61	24.0	63.0	12	0.1297	6.0442	0.968	3.06
MAGNESIUM, DISSOLVED	12	10.86	3.85	4.3	17.0	12	0.0415	-2.4424	0.932	1.46
SODIUM, DISSOLVED	12	4.01	1.44	1.4	6.1	12	0.0126	-0.0259	0.755	0.99
POTASSIUM, DISSOLVED	12	2.64	0.84	1.5	4.1	12	-0.0033	3.7006	-0.340*	0.83
BICARBONATE, ION	12	161.1	44.8	76	222	12	0.500	0.732	0.967	12.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	29.25	8.67	14.0	43.0	12	0.0893	0.6131	0.892	4.11
CHLORIDE, DISSOLVED	12	4.92	1.42	2.3	6.8	12	0.0105	1.5474	0.640	1.15
DISSOLVED SOLIDS, SUM OF CONST	12	184.2	46.6	91	243	12	0.524	15.986	0.975	16.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	195.0	45.0	102	250	12	0.493	36.899	0.949	14.9
HARDNESS, TOTAL	12	162.3	45.1	78	220	12	0.506	0.106	0.972	11.2
HARDNESS, NONCARBONATE	12	31.5	10.1	15	47	12	0.085	4.253	0.729	7.2
TURBIDITY (JTU)	12	61.8	94.6	7	350	12	-0.831	328.334	-0.760	64.5
FLUORIDE, DISSOLVED	12	0.27	0.11	0.1	0.5	12	-0.0006	0.4656	-0.500*	0.10

*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%
	445	427	414	397	370	349	317	253	236	188

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
310	15.16	9.21	2.85	91	2.15

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

03301630 — ROLLING FORK NR LEBANON JUNCTION.KY.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	30	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	3	19	4	2	9
IRON (FE), UG/L	4	740	4500	4	0	50
LEAD (PB), UG/L	4	0	12	4	0	6
MANGANESE (MN), UG/L	4	60	150	4	0	40
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	4	10	100	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	2.200	9.000			

Table 12. 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: 10/01/75 - 09/30/76

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	17.12	7.78	2.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	350.0	57.0	260	445					
STREAMFLOW (CUBIC FT/SEC)	13	128907.6	121130.8	32100	477999	13	-1066.277	502104.625	-0.502*	109431.4
PH (STANDARD UNITS)	13	7.08	0.42	6.5	8.1	13	0.0021	6.3457	0.282*	0.42
PHOSPHORUS, TOTAL	13	0.144	0.091	0.03	0.35	13	-0.00059	0.34892	-0.369*	0.088
NITRITE + NITRATE, TOTAL	13	1.260	0.308	0.89	2.00	13	0.00140	0.76916	0.259*	0.311
NITROGEN, KJELDAHL, TOTAL	13	0.622	0.208	0.34	1.10	13	-0.00069	0.86551	-0.191*	0.213
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	4260.0	5069.7	120	15000	13	29.544	-6080.277	0.332*	4994.3
SEDIMENT SUSPENDED	4	21.5	19.5	5	45					
SEDIMENT, CLAY-SILT (PERCENT)	4	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	676.6	808.6	4	2900					
STREPTOCOCCI, FECAL (COL/100 ML)	11	875.0	2471.0	1	8300					
SILICA, DISSOLVED	13	4.81	1.99	0.2	6.5	13	-0.0173	10.8745	-0.497*	1.80
CALCIUM, DISSOLVED	13	38.08	4.89	30.0	45.0	13	0.0792	10.3457	0.924	1.96
MAGNESIUM, DISSOLVED	13	10.08	1.34	8.0	12.0	13	0.0210	2.7390	0.891	0.64
SODIUM, DISSOLVED	13	16.77	4.15	11.0	25.0	13	0.0662	-6.3850	0.910	1.80
POTASSIUM, DISSOLVED	13	2.71	0.65	1.9	3.7	13	0.0079	-0.0563	0.695	0.49
BICARBONATE, ION	13	78.7	10.4	65	95	13	0.137	30.858	0.748	7.2
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	68.08	11.83	51.0	96.0	13	0.1754	6.6913	0.845	6.60
CHLORIDE, DISSOLVED	13	22.31	5.60	16.0	35.0	13	0.0863	-7.8915	0.878	2.80
DISSOLVED SOLIDS, SUM OF CONST	13	201.8	29.2	157	258	13	0.487	31.465	0.952	9.3
DISSOLVED SOLIDS, ROE 180 DEG C	13	213.4	27.7	176	268	13	0.419	66.876	0.861	14.7
HARDNESS, TOTAL	13	136.2	16.6	110	160	13	0.272	41.024	0.933	6.2
HARDNESS, NONCARBONATE	13	72.1	11.8	53	100	13	0.171	12.172	0.830	6.9
TURBIDITY (JTU)	13	39.8	50.2	2	180	13	-0.497	213.727	-0.564	43.3
FLUORIDE, DISSOLVED	13	0.27	0.11	0.1	0.4	13	0.0012	-0.1481	0.613	0.09

*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%
	531	493	471	436	412	355	330	298	275	260

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	15.88	11.66	2.71	96	1.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	3	4	0	3
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	3	15	4	2	8
IRON (FE), UG/L	4	190	4200	4	10	60
LEAD (PB), UG/L	4	0	16	4	0	0
MANGANESE (MN), UG/L	4	40	170	4	0	30
MERCURY (HG), UG/L	4	0.0	0.8	4	0.0	0.7
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	100	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.50	120.00			
BIOMASS, ASH WT., G/SQ M	4	0.20	110.00			
CHLOROPHYLL A, MG/SQ M	4	4.000	97.000			
CHLOROPHYLL B, MG/SQ M	4	0.300	4.100			
ORGANIC CARBON, MG/L	4	3.500	6.700			

Table 12. Summary of measurements at each station--Continued.

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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.00	8.31	5.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	297.9	55.6	230	450					
STREAMFLOW (CUBIC FT/SEC)	12	14454.2	12779.8	2490	41400	12	-150.841	59392.305	-0.656	10117.0
PH (STANDARD UNITS)	11	6.82	0.75	6.0	8.5	11	0.0002	6.7660	0.014*	0.79
PHOSPHORUS, TOTAL	12	0.072	0.077	0.01	0.31	12	-0.00062	0.25502	-0.442*	0.073
NITRITE + NITRATE, TOTAL	12	0.831	0.144	0.62	1.00	12	-0.00007	0.85126	-0.026*	0.151
NITROGEN, KJELDAHL, TOTAL	12	0.375	0.216	0.16	1.00	12	-0.00176	0.89919	-0.452*	0.202
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1399.1	1359.0	150	4400	11	8.888	-1279.455	0.372*	1329.5
SEDIMENT SUSPENDED	6	33.3	9.9	22	48					
SEDIMENT, CLAY-SILT (PERCENT)	6	98.3	1.6	96	100					
COLIFORM, FECAL (COL/100 ML)	12	352.7	606.0	16	2200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	782.3	1375.9	12	4100					
SILICA, DISSOLVED	12	5.88	0.49	5.0	6.7	12	-0.0065	7.8075	-0.733	0.35
CALCIUM, DISSOLVED	12	40.00	6.42	30.0	54.0	12	0.1055	8.5623	0.913	2.75
MAGNESIUM, DISSOLVED	12	9.07	2.61	5.7	16.0	12	0.0442	-4.0996	0.940	0.94
SODIUM, DISSOLVED	12	6.24	2.47	3.1	11.0	12	0.0364	-4.6106	0.820	1.48
POTASSIUM, DISSOLVED	12	2.82	2.62	1.4	11.0	12	0.0016	2.3373	0.035*	2.75
BICARBONATE, ION	12	98.3	17.6	72	122	12	0.145	55.159	0.458*	16.4
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	54.33	22.76	19.0	110.0	12	0.3491	-49.6552	0.852	12.48
CHLORIDE, DISSOLVED	12	6.32	3.17	3.0	13.0	12	0.0188	0.7052	0.330*	3.14
DISSOLVED SOLIDS, SUM OF CONST	12	173.4	36.0	133	260	12	0.620	-11.311	0.957	11.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	194.9	48.8	130	288	12	0.728	-21.884	0.828	28.7
HARDNESS, TOTAL	12	137.5	25.6	100	200	12	0.441	6.071	0.957	7.8
HARDNESS, NONCARBONATE	12	56.8	22.5	29	110	12	0.332	-42.244	0.820	13.5
TURBIDITY (JTU)	12	32.2	30.4	9	120	12	-0.243	104.476	-0.444*	28.5
FLUORIDE, DISSOLVED	12	0.17	0.05	0.1	0.2	12	-0.0003	0.2441	-0.294*	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%
	446	370	345	320	300	283	258	230	216	180

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	17.09	10.63	2.79	92	2.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	6	3	1	1
CADMIUM (CD), UG/L	4	2	3	4	0	3
CHROMIUM (CR), UG/L	4	10	20	3	0	0
COBALT (CO), UG/L	4	0	11	4	0	0
COPPER (CU), UG/L	4	4	19	4	2	8
IRON (FE), UG/L	4	400	9200	4	30	140
LEAD (PB), UG/L	4	9	18	4	0	11
MANGANESE (MN), UG/L	4	250	840	4	10	190
MERCURY (HG), UG/L	4	0.0	0.3	3	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	3	0	0
ZINC (ZN), UG/L	4	30	60	4	7	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.80	66.00			
BIOMASS, ASH WT., G/SQ M	3	0.10	42.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	48.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	4.200			
ORGANIC CARBON, MG/L	4	1.500	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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, E	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	17.05	8.81	2.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	470.1	89.7	336	610					
STREAMFLOW (CUBIC FT/SEC)	11	9189.1	12958.8	1040	46600	11	-100.257	56319.180	-0.694	9830.9
PH (STANDARD UNITS)	11	7.95	0.44	7.3	8.7	11	0.0022	6.9160	0.445*	0.42
PHOSPHORUS, TOTAL	11	0.248	0.071	0.16	0.44	11	0.00033	0.09167	0.419*	0.068
NITRITE + NITRATE, TOTAL	11	1.750	1.069	0.01	3.10	11	-0.00419	3.71866	-0.352*	1.055
NITROGEN, KJELDAHL, TOTAL	11	1.031	0.475	0.49	2.00	11	0.00250	-0.14329	0.472*	0.442
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	67828.1	83042.6	510	230000	11	537.808	-184990.625	0.581*	71232.7
SEDIMENT SUSPENDED	11	118.0	34.8	76	173					
SEDIMENT, CLAY-SILT (PERCENT)	1	95.0	0.0	95						
COLIFORM, FECAL (COL/100 ML)	0									
STREPTOCOCCI, FECAL (COL/100 ML)	0									
SILICA, DISSOLVED	11	5.17	2.97	0.1	8.0	11	-0.0159	12.6403	-0.480*	2.75
CALCIUM, DISSOLVED	11	57.64	6.56	43.0	68.0	11	0.0253	45.7259	0.347*	6.49
MAGNESIUM, DISSOLVED	11	19.82	4.53	11.0	27.0	11	0.0307	5.3929	0.607	3.80
SODIUM, DISSOLVED	11	16.15	6.44	6.6	27.0	11	0.0631	-13.5343	0.879	3.23
POTASSIUM, DISSOLVED	11	3.05	0.70	2.2	4.3	11	0.0054	0.5086	0.690	0.54
BICARBONATE, ION	11	198.5	26.2	134	229	11	0.143	131.121	0.491*	24.1
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	56.73	11.82	33.0	77.0	11	0.0761	20.9366	0.578*	10.16
CHLORIDE, DISSOLVED	11	24.18	8.11	14.0	37.0	11	0.0751	-11.1042	0.831	4.76
DISSOLVED SOLIDS, SUM OF CONST	11	281.0	41.3	184	342	11	0.330	125.883	0.717	30.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	313.0	65.1	212	467	11	0.509	73.671	0.701	48.9
HARDNESS, TOTAL	11	224.5	30.8	150	260	11	0.185	137.420	0.540*	27.3
HARDNESS, NONCARBONATE	11	62.8	12.5	43	86	11	0.073	28.727	0.520*	11.3
TURBIDITY (JTU)	11	32.0	21.2	5	85	11	-0.168	110.933	-0.711	15.7
FLUORIDE, DISSOLVED	11	0.23	0.05	0.2	0.3	11	0.0004	0.0552	0.703	0.04

*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%
	584	566	538	510	491	450	408	337	321	276

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
227	15.32	11.63	2.87	93	2.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	4	4	1	2
CADMIUM (CD), UG/L	4	0	1	4	0	6
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	4	1	3	4	0	0
COPPER (CU), UG/L	4	10	10	4	0	10
IRON (FE), UG/L	4	530	4100	4	10	20
LEAD (PB), UG/L	4	7	18	4	0	37
MANGANESE (MN), UG/L	4	80	200	4	0	20
MERCURY (HG), UG/L	4	<0.5	<0.5	4	< 0.5	< 0.5
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	10	20	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	6.000	10.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	15.91	8.73	1.5	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	500.3	96.7	356	625					
STREAMFLOW (CUBIC FT/SEC)	11	22685.5	25178.9	5920	92000	11	-197.317	121397.938	-0.758	17312.9
PH (STANDARD UNITS)	11	7.93	0.46	7.3	8.6	11	0.0017	7.0681	0.354*	0.45
PHOSPHORUS, TOTAL	11	0.228	0.077	0.14	0.35	11	-0.00000	0.22826	-0.000*	0.081
NITRITE + NITRATE, TOTAL	11	1.846	1.284	0.22	3.60	11	-0.00870	6.19692	-0.655	1.022
NITROGEN, KJELDAHL, TOTAL	11	1.086	0.469	0.00	1.60	11	0.00272	-0.27325	0.560*	0.410
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	103555.0	139874.6	950	460000	10	846.592	-322111.313	0.615*	117016.4
SEDIMENT SUSPENDED	11	125.6	72.3	49	292					
SEDIMENT, CLAY-SILT (PERCENT)	1	98.0	0.0	98						
COLIFORM, FECAL (COL/100 ML)	0									
STREPTOCOCCI, FECAL (COL/100 ML)	0									
SILICA, DISSOLVED	11	4.31	3.00	0.1	8.0	11	-0.0219	15.2507	-0.704	2.25
CALCIUM, DISSOLVED	10	58.90	9.17	42.0	76.0	10	0.0144	51.7855	0.155*	9.61
MAGNESIUM, DISSOLVED	10	22.00	4.71	12.0	28.0	10	0.0286	7.9042	0.598*	4.01
SODIUM, DISSOLVED	10	16.67	6.36	6.7	29.0	10	0.0568	-11.3099	0.880	3.21
POTASSIUM, DISSOLVED	10	2.91	0.40	2.3	3.4	10	0.0009	2.4746	0.220*	0.41
BICARBONATE, ION	11	206.5	32.2	129	245	11	0.164	124.435	0.493*	29.6
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	67.55	14.77	35.0	88.0	11	0.1003	17.3683	0.657	11.75
CHLORIDE, DISSOLVED	11	24.73	5.95	15.0	37.0	11	0.0490	0.1966	0.797	3.79
DISSOLVED SOLIDS, SUM OF CONST	10	298.0	51.0	184	362	10	0.314	143.233	0.607*	43.0
DISSOLVED SOLIDS, RDE 180 DEG C	11	335.1	59.2	209	434	11	0.425	122.647	0.694	44.9
HARDNESS, TOTAL	10	237.0	36.8	150	280	10	0.161	157.646	0.431*	35.3
HARDNESS, NONCARBONATE	10	70.4	10.4	48	79	10	0.031	55.195	0.292*	10.6
TURBIDITY (JTU)	11	36.4	35.9	10	130	11	-0.280	176.584	-0.755	24.8
FLUORIDE, DISSOLVED	11	0.28	0.21	0.1	0.9	11	0.0005	0.0371	0.221*	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%
	615	605	570	550	535	520	475	410	390	370

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.64	11.30	2.79	93	2.27

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

03378500 -- WABASH RIVER AT NEW HARMONY, IND.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	6	4	1	1
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	0	<10	4	0	<10
COBALT (CO), UG/L	4	1	3	4	0	1
COPPER (CU), UG/L	4	10	20	4	0	20
IRON (FE), UG/L	4	690	5400	4	10	20
LEAD (PB), UG/L	4	9	26	4	1	5
MANGANESE (MN), UG/L	4	140	210	4	0	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	20	30	4	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	4	9.200	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	13.82	4.94	5.5	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	167.3	19.3	145	200					
STREAMFLOW (CUBIC FT/SEC)	11	13551.3	12411.0	175	32700	11	133.508	-8780.984	0.207*	12797.7
PH (STANDARD UNITS)	9	7.00	0.61	6.0	7.9	9	0.0055	6.0731	0.193*	0.64
PHOSPHORUS, TOTAL	11	0.026	0.020	0.01	0.07	11	0.00016	-0.00022	0.152*	0.021
NITRITE + NITRATE, TOTAL	11	0.284	0.089	0.12	0.39	11	-0.00101	0.45196	-0.218*	0.092
NITROGEN, KJELDAHL, TOTAL	11	0.220	0.078	0.09	0.39	11	0.00122	0.01532	0.304*	0.078
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	5913.6	10146.3	250	32000	11	-12.961	8081.680	-0.025*	10691.8
SEDIMENT SUSPENDED	10	12.7	8.0	4	27					
SEDIMENT, CLAY-SILT (PERCENT)	10	84.5	9.1	66	96					
COLIFORM, FECAL (COL/100 ML)	11	46.8	49.6	<1	172					
STREPTOCOCCI, FECAL (COL/100 ML)	11	89.2	130.6	4	457					
SILICA, DISSOLVED	11	3.84	1.28	0.5	5.0	11	-0.0041	4.5301	-0.062*	1.35
CALCIUM, DISSOLVED	11	22.45	2.54	20.0	29.0	11	0.0440	15.0929	0.334*	2.53
MAGNESIUM, DISSOLVED	11	4.28	0.40	3.6	4.6	11	0.0017	3.9919	0.084*	0.42
SODIUM, DISSOLVED	11	2.89	0.68	1.6	4.0	11	0.0197	-0.4033	0.555*	0.60
POTASSIUM, DISSOLVED	11	1.23	0.17	1.0	1.5	11	0.0016	0.9206	0.211*	0.17
BICARBONATE, ION	11	65.9	13.5	49	100	11	0.153	40.389	0.218*	13.9
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	18.36	4.95	10.0	24.0	11	0.0608	8.2005	0.237*	5.06
CHLORIDE, DISSOLVED	11	2.65	0.40	1.8	3.3	11	0.0117	0.6946	0.564*	0.35
DISSOLVED SOLIDS, SUM OF CONST	11	88.6	7.8	79	109	11	0.208	53.812	0.515*	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	93.9	9.1	82	112	11	0.194	61.416	0.411*	8.7
HARDNESS, TOTAL	11	73.8	6.4	67	90	11	0.121	53.594	0.362*	6.3
HARDNESS, NONCARBONATE	11	19.6	6.7	8	27	11	-0.012	21.702	-0.036*	7.0
TURBIDITY (JTU)	11	7.2	6.8	2	20	11	-0.017	10.086	-0.050*	7.1
FLUORIDE, DISSOLVED	11	0.12	0.04	0.1	0.2	11	0.0007	0.0037	0.326*	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 202

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C. THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	340	225	212	195	188	172	166	156	155	152

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
210	14.20	5.80	2.38	78	1.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	0
CADMIUM (CD), UG/L	4	1	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	30	4	0	8
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	2	13	4	0	2
IRON (FE), UG/L	4	140	1100	4	0	40
LEAD (PB), UG/L	4	8	20	4	0	9
MANGANESE (MN), UG/L	4	20	110	4	10	80
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	10	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	97.80				
BIOMASS, ASH WT., G/SQ M	1	86.20				
CHLOROPHYLL A, MG/SQ M	1	86.100				
CHLOROPHYLL B, MG/SQ M	1	2.400				
ORGANIC CARBON, MG/L	3	1.400	3.900			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	16.96	7.72	6.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	200.0	16.0	180	230					
STREAMFLOW (CUBIC FT/SEC)	12	44527.5	18709.7	6130	68100	12	419.787	-39429.813	0.358*	18322.3
PH (STANDARD UNITS)	11	7.13	0.54	6.3	7.9	11	-0.0136	9.8432	-0.420*	0.52
PHOSPHORUS, TOTAL	11	0.109	0.039	0.07	0.21	11	0.00046	0.01621	0.200*	0.040
NITRITE + NITRATE, TOTAL	11	0.349	0.203	0.07	0.61	11	0.00561	-0.77231	0.461*	0.190
NITROGEN, KJELDAHL, TOTAL	11	0.331	0.133	0.05	0.52	11	-0.00243	0.81665	-0.306*	0.133
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	11898.3	11598.9	980	41000	12	-139.505	39799.281	-0.192*	11938.8
SEDIMENT SUSPENDED	10	30.8	48.2	7	167					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	43.5	46.9	<1	150					
STREPTOCOCCI, FECAL (COL/100 ML)	12	159.9	204.5	<1	580					
SILICA, DISSOLVED	4	3.97	1.35	2.0	4.9					
CALCIUM, DISSOLVED	4	30.75	4.11	26.0	36.0					
MAGNESIUM, DISSOLVED	4	3.82	0.17	3.6	4.0					
SODIUM, DISSOLVED	4	2.97	0.74	2.3	4.0					
POTASSIUM, DISSOLVED	5	1.46	0.19	1.3	1.8					
BICARBONATE, ION	4	90.5	9.5	81	103					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	15.50	0.58	15.0	16.0					
CHLORIDE, DISSOLVED	4	3.40	0.73	2.4	4.0					
DISSOLVED SOLIDS, SUM OF CONST	4	106.8	9.4	96	119					
DISSOLVED SOLIDS, ROE 180 DEG C	4	111.0	12.5	96	126					
HARDNESS, TOTAL	4	93.5	12.4	80	110					
HARDNESS, NONCARBONATE	4	18.3	3.9	13	22					
TURBIDITY (JTU)	4	18.8	10.3	10	30					
FLUORIDE, DISSOLVED	4	0.20	0.14	0.1	0.4					

*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%
	232	212	206	199	191	180	170	158	155	150

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
350	17.86	9.14	2.75	93	1.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	2	4	0	1
CADMIUM (CD), UG/L	4	1	19	4	1	11
CHROMIUM (CR), UG/L	4	<10	10	4	0	2
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	6	19	4	2	8
IRON (FE), UG/L	4	670	1700	4	0	10
LEAD (PB), UG/L	4	8	72	4	0	16
MANGANESE (MN), UG/L	4	60	100	4	0	10
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	20	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.50	5.80			
BIOMASS, ASH WT., G/SQ M	3	0.20	4.00			
CHLOROPHYLL A, MG/SQ M	3	0.500	16.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.200			
ORGANIC CARBON, MG/L	4	1.400	8.600			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	14.71	6.75	3.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	146.7	20.0	120	180					
STREAMFLOW (CUBIC FT/SEC)	12	4060.8	4692.5	300	14000	12	-39.774	9894.289	-0.170*	4850.0
PH (STANDARD UNITS)	11	7.45	0.69	6.3	8.2	11	-0.0002	7.4817	-0.006*	0.73
PHOSPHORUS, TOTAL	12	0.026	0.014	0.01	0.05	12	-0.00007	0.03635	-0.100*	0.015
NITRITE + NITRATE, TOTAL	12	0.468	0.140	0.27	0.79	12	-0.00048	0.53864	-0.068*	0.147
NITROGEN, KJELDAHL, TOTAL	12	0.208	0.086	0.07	0.42	12	0.00055	0.12754	0.128*	0.089
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	943.3	480.2	260	1700	12	-1.260	1128.186	-0.053*	502.9
SEDIMENT SUSPENDED	12	9.6	6.8	3	30					
SEDIMENT, CLAY-SILT (PERCENT)	12	93.3	6.8	80	100					
COLIFORM, FECAL (COL/100 ML)	11	32.0	44.5	3	161					
STREPTOCOCCI, FECAL (COL/100 ML)	10	23.5	20.8	1	68					
SILICA, DISSOLVED	12	7.03	1.29	3.6	8.3	12	-0.0050	7.7699	-0.078*	1.34
CALCIUM, DISSOLVED	12	14.75	1.91	12.0	18.0	12	0.0691	4.6217	0.723	1.39
MAGNESIUM, DISSOLVED	12	2.32	0.29	1.8	2.7	12	0.0097	0.8997	0.663	0.23
SODIUM, DISSOLVED	12	8.59	1.82	6.0	13.0	12	0.0663	-1.1264	0.728	1.31
POTASSIUM, DISSOLVED	12	1.60	0.37	1.2	2.6	12	0.0086	0.3381	0.464*	0.35
BICARBONATE, ION	12	43.9	6.0	34	52	12	0.163	19.952	0.545*	5.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	14.00	1.48	11.0	17.0	12	0.0532	6.1962	0.722	1.07
CHLORIDE, DISSOLVED	12	9.35	2.28	6.3	15.0	12	0.0768	-1.9068	0.674	1.77
DISSOLVED SOLIDS, SUM OF CONST	12	79.5	9.0	64	101	12	0.363	26.202	0.805	5.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	85.7	9.8	72	105	12	0.362	32.645	0.742	6.9
HARDNESS, TOTAL	12	46.3	5.5	37	55	12	0.210	15.506	0.764	3.7
HARDNESS, NONCARBONATE	12	10.3	3.2	2	14	12	0.086	-2.230	0.536*	2.8
TURBIDITY (JTU)	12	7.5	4.4	4	20	12	0.023	4.179	0.103*	4.6
FLUORIDE, DISSOLVED	12	0.23	0.14	0.1	0.6	12	0.0017	-0.0102	0.243*	0.14

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 314

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C. THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	177	172	162	152	146	129	121	112	108	104

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
314	15.31	8.80	2.53	90	2.15

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	0
CHROMIUM (CR), UG/L	4	< 10	20	4	0	4
COBALT (CO), UG/L	4	0	3	4	0	0
COPPER (CU), UG/L	4	6	10	4	0	0
IRON (FE), UG/L	4	280	3100	4	0	60
LEAD (PB), UG/L	4	6	38	4	0	0
MANGANESE (MN), UG/L	4	40	250	4	0	10
MERCURY (HG), UG/L	2	0.0	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	20	60	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	3.700	6.200			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	16.65	7.02	4.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	150.4	17.0	120	190					
STREAMFLOW (CUBIC FT/SEC)	20	31310.7	12388.8	14	45000	20	-101.564	46646.828	-0.148*	12587.2
PH (STANDARD UNITS)	23	7.53	0.43	6.7	8.7	23	0.0146	5.3337	0.581	0.36
PHOSPHORUS, TOTAL	13	0.024	0.008	0.01	0.04	13	0.00009	0.01027	0.209*	0.008
NITRITE + NITRATE, TOTAL	13	0.290	0.124	0.11	0.54	13	0.00209	-0.01833	0.294*	0.124
NITROGEN, KJELDAHL, TOTAL	1	0.200	0.000	0.20						
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	7231.0	7090.9	710	23000	10	-186.898	35826.461	-0.470*	6639.2
SEDIMENT SUSPENDED	12	8.2	1.7	5	11					
SEDIMENT, CLAY-SILT (PERCENT)	12	94.3	5.9	84	100					
COLIFORM, FECAL (COL/100 ML)	15	5.0	4.5	<1	14					
STREPTOCOCCI, FECAL (COL/100 ML)	9	1.4	0.7	<1	3					
SILICA, DISSOLVED	13	4.36	0.87	3.0	5.7	13	0.0141	2.2867	0.281*	0.87
CALCIUM, DISSOLVED	12	18.50	2.88	14.0	23.0	12	0.0605	9.0157	0.387*	2.78
MAGNESIUM, DISSOLVED	12	4.22	0.58	3.2	5.1	12	0.0194	1.1751	0.616	0.48
SODIUM, DISSOLVED	12	5.39	1.15	3.8	7.4	12	0.0478	-2.0966	0.764	0.78
POTASSIUM, DISSOLVED	12	1.37	0.19	1.1	1.6	12	0.0071	0.2580	0.703	0.14
BICARBONATE, ION	1	74.0	0.0	74						
CARBONATE, ION	1	0.0	0.0	0						
SULFATE, DISSOLVED	13	11.69	3.84	3.0	18.0	13	0.0466	4.8265	0.211*	3.92
CHLORIDE, DISSOLVED	13	6.38	1.12	4.0	8.0	13	0.0257	2.5927	0.399*	1.07
DISSOLVED SOLIDS, SUM OF CONST	1	96.0	0.0	96						
DISSOLVED SOLIDS, ROE 180 DEG C	13	89.3	16.1	70	130	13	0.528	11.581	0.570	13.8
HARDNESS, TOTAL	23	61.8	8.9	46	78	23	0.263	22.313	0.502	7.9
HARDNESS, NONCARBONATE	1	13.0	0.0	13						
TURBIDITY (JTU)	13	5.3	1.8	3	9	13	-0.029	9.537	-0.278*	1.8
FLUORIDE, DISSOLVED	12	0.12	0.06	0.0	0.2	12	-0.0022	0.4622	-0.627	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 214

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	178	174	165	161	157	143	129	126	124

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
214	16.69	8.50	2.45	98	0.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	8	<5	<10	4	0	1
CADMIUM (CD), UG/L	7	<1	2	4	0	0
CHROMIUM (CR), UG/L	7	<5	<5	4	0	6
COBALT (CO), UG/L	0			4	0	0
COPPER (CU), UG/L	7	<10	50	4	0	2
IRON (FE), UG/L	15	240	900	8	<50	150
LEAD (PB), UG/L	7	<10	<10	4	0	7
MANGANESE (MN), UG/L	15	20	160	8	<10	90
MERCURY (HG), UG/L	8	<0.2	<0.2	4	0.0	0.5
SELENIUM (SE), UG/L	8	<1	<2	4	0	0
ZINC (ZN), UG/L	7	<10	30	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	8	1.700	3.200			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.75	7.17	4.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	150.8	14.1	125	170					
STREAMFLOW (CUBIC FT/SEC)	12	40316.7	6648.8	30000	50000	12	78.610	28459.586	0.167*	6875.5
PH (STANDARD UNITS)	11	7.58	0.33	7.1	8.2	11	0.0015	7.3486	0.065*	0.34
PHOSPHORUS, TOTAL	11	0.031	0.010	0.02	0.05	11	0.00042	-0.03379	0.489*	0.010
NITRITE + NITRATE, TOTAL	11	0.337	0.076	0.22	0.44	11	0.00191	0.04474	0.304*	0.076
NITROGEN, KJELDAHL, TOTAL	11	0.252	0.107	0.00	0.40	11	0.00146	0.02827	0.165*	0.112
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2025.3	2044.4	93	6400	12	-28.103	6264.086	-0.194*	2103.4
SEDIMENT SUSPENDED	12	10.7	3.4	5	18					
SEDIMENT, CLAY-SILT (PERCENT)	12	94.8	4.4	88	100					
COLIFORM, FECAL (COL/100 ML)	11	80.9	155.2	3	540					
STREPTOCOCCI, FECAL (COL/100 ML)	8	55.4	139.4	2	400					
SILICA, DISSOLVED	12	4.84	0.69	3.8	6.0	12	0.0235	1.2923	0.482*	0.63
CALCIUM, DISSOLVED	12	18.00	1.65	14.0	20.0	12	0.0525	10.0856	0.448*	1.55
MAGNESIUM, DISSOLVED	12	3.80	0.43	3.1	4.5	12	0.0178	1.1170	0.589	0.36
SODIUM, DISSOLVED	12	5.37	0.98	3.7	7.2	12	0.0437	-1.2273	0.630	0.80
POTASSIUM, DISSOLVED	12	1.30	0.18	1.0	1.6	12	0.0091	-0.0763	0.733	0.13
BICARBONATE, ION	12	60.0	5.0	52	67	12	0.178	33.160	0.503*	4.5
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	11.92	1.24	10.0	14.0	12	0.0757	0.5038	0.861	0.66
CHLORIDE, DISSOLVED	12	6.07	1.32	4.4	9.0	12	0.0677	-4.1408	0.724	0.96
DISSOLVED SOLIDS, SUM OF CONST	12	81.0	6.1	71	91	12	0.372	24.911	0.860	3.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	84.8	13.0	64	102	12	0.548	2.133	0.597	10.9
HARDNESS, TOTAL	12	60.7	4.9	49	67	12	0.211	28.779	0.606	4.1
HARDNESS, NONCARBONATE	12	11.4	3.5	3	16	12	0.060	2.413	0.242*	3.5
TURBIDITY (JTU)	11	5.5	2.7	2	10	11	0.084	-7.199	0.466*	2.5
FLUORIDE, DISSOLVED	12	0.17	0.16	0.0	0.6	12	0.0017	-0.0971	0.159*	0.16

*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%
	181	168	165	162	160	154	147	132	130	117

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	17.35	8.65	2.67	95	1.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	2	5	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	30	5	0	10
COBALT (CO), UG/L	4	0	2	4	0	2
COPPER (CU), UG/L	4	3	10	4	1	3
IRON (FE), UG/L	4	310	520	5	0	240
LEAD (PB), UG/L	4	0	5	4	0	3
MANGANESE (MN), UG/L	4	20	70	5	0	30
MERCURY (HG), UG/L	2	0.8	1.0	5	0.0	0.6
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	10	110	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	0.600	3.600			

Table 12. 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: 10/01/75 - 09/30/76

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)	21	18.57	6.91	6.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	20	142.1	18.3	92	186					
STREAMFLOW (CUBIC FT/SEC)	21	60942.9	25508.4	19400	119000	20	-770.063	171474.438	-0.548	22070.7
PH (STANDARD UNITS)	19	7.15	0.49	6.1	8.0	19	-0.0069	8.1210	-0.262*	0.49
PHOSPHORUS, TOTAL	11	0.064	0.038	0.02	0.14	11	-0.00098	0.19944	-0.480*	0.035
NITRITE + NITRATE, TOTAL	11	0.385	0.170	0.13	0.60	11	0.00131	0.20238	0.144*	0.177
NITROGEN, KJELDAHL, TOTAL	0									
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1090.5	1482.4	33	4800	11	-46.246	7779.359	-0.532*	1323.5
SEDIMENT SUSPENDED	11	13.1	16.7	4	62					
SEDIMENT, CLAY-SILT (PERCENT)	8	88.5	8.0	76	100					
COLIFORM, FECAL (COL/100 ML)	11	8.8	11.5	<1	36					
STREPTOCOCCI, FECAL (COL/100 ML)	9	7.6	9.2	<1	25					
SILICA, DISSOLVED	11	4.73	0.87	3.3	6.2	11	-0.0248	8.1747	-0.530*	0.78
CALCIUM, DISSOLVED	7	21.14	4.71	15.0	29.0	7	-0.0124	22.9447	-0.057*	5.15
MAGNESIUM, DISSOLVED	7	3.03	0.39	2.4	3.4	7	0.0006	2.9377	0.035*	0.42
SODIUM, DISSOLVED	7	4.30	0.69	3.0	4.9	7	-0.0045	4.9563	-0.143*	0.74
POTASSIUM, DISSOLVED	7	1.43	0.24	1.2	1.9	7	-0.0057	2.2607	-0.528*	0.22
BICARBONATE, ION	0									
CARBONATE, ION	0									
SULFATE, DISSOLVED	11	11.00	3.07	8.0	18.0	11	0.0326	6.4613	0.199*	3.17
CHLORIDE, DISSOLVED	11	6.00	0.63	5.0	7.0	11	0.0051	5.2834	0.152*	0.66
DISSOLVED SOLIDS, SUM OF CONST	0									
DISSOLVED SOLIDS, ROE 180 DEG C	11	87.3	19.0	60	120	11	-0.532	161.397	-0.523*	17.1
HARDNESS, TOTAL	16	62.6	10.4	47	86	16	0.156	40.450	0.307*	10.2
HARDNESS, NONCARBONATE	0									
TURBIDITY (JTU)	11	3.9	2.4	1	9	11	-0.086	15.882	-0.662	1.9
FLUORIDE, DISSOLVED	7	0.19	0.15	0.1	0.5	7	0.0003	0.1388	0.048*	0.16

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 175

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%	[illegible]	[illegible]	80%	95%	99%
	176	152	151	149	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
175	18.73	9.21	2.58	92	1.22

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	<5	<5	4	0	1
CADMIUM (CD), UG/L	3	<1	<1	4	0	1
CHROMIUM (CR), UG/L	3	<5	<5	4	0	2
COBALT (CO), UG/L	0			4	0	0
COPPER (CU), UG/L	3	<10	20	4	0	3
IRON (FE), UG/L	11	100	580	0		
LEAD (PB), UG/L	3	<10	<10	4	0	4
MANGANESE (MN), UG/L	11	10	50	0		
MERCURY (HG), UG/L	3	<0.2	0.4	4	0.0	0.2
SELENIUM (SE), UG/L	3	<2	<2	4	0	0
ZINC (ZN), UG/L	3	<10	60	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	16.00	32.00			
BIOMASS, ASH WT., G/SQ M	4	7.80	20.00			
CHLOROPHYLL A, MG/SQ M	5	42.400	140.000			
CHLOROPHYLL B, MG/SQ M	4	2.100	24.000			
ORGANIC CARBON, MG/L	6	2.900	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.67	7.54	5.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	160.4	15.1	135	190					
STREAMFLOW (CUBIC FT/SEC)	12	55325.0	24655.2	25000	110000	12	664.052	-51200.063	0.408*	23609.4
PH (STANDARD UNITS)	12	7.32	0.70	6.2	8.6	12	-0.0137	9.5279	-0.296*	0.70
PHOSPHORUS, TOTAL	12	0.082	0.019	0.06	0.11	12	0.00041	0.01544	0.329*	0.019
NITRITE + NITRATE, TOTAL	12	0.299	0.172	0.05	0.50	12	0.00741	-0.89011	0.651	0.137
NITROGEN, KJELDAHL, TOTAL	12	0.314	0.118	0.04	0.47	12	-0.00033	0.36637	-0.042*	0.124
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6795.0	5803.2	840	22000	12	-221.797	42374.887	-0.579	4963.2
SEDIMENT SUSPENDED	10	14.9	4.2	9	23					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	24.1	20.8	4	72					
STREPTOCOCCI, FECAL (COL/100 ML)	12	109.3	53.6	13	210					
SILICA, DISSOLVED	4	4.22	1.84	1.9	5.8					
CALCIUM, DISSOLVED	4	20.25	2.22	18.0	23.0					
MAGNESIUM, DISSOLVED	4	3.12	0.51	2.5	3.7					
SODIUM, DISSOLVED	4	5.17	0.61	4.6	5.7					
POTASSIUM, DISSOLVED	6	1.48	0.17	1.3	1.8	6	0.0052	0.6782	0.497*	0.17
BICARBONATE, ION	4	61.0	8.1	49	66					
CARBONATE, ION	3	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	11.75	0.96	11.0	13.0					
CHLORIDE, DISSOLVED	4	6.40	0.22	6.1	6.6					
DISSOLVED SOLIDS, SUM OF CONST	4	82.5	8.6	71	90					
DISSOLVED SOLIDS, ROE 180 DEG C	4	91.8	11.1	78	103					
HARDNESS, TOTAL	4	63.5	6.9	55	70					
HARDNESS, NONCARBONATE	4	13.5	3.1	9	16					
TURBIDITY (JTU)	4	11.3	4.8	5	15					
FLUORIDE, DISSOLVED	4	0.15	0.06	0.1	0.2					

*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%
	182	172	168	164	160	155	150	142	141	137

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	16.93	10.26	2.72	94	1.79

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	4	0	0
CHROMIUM (CR), UG/L	4	<10	20	4	0	4
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	5	7	4	2	5
IRON (FE), UG/L	4	520	880	4	0	50
LEAD (PB), UG/L	4	8	35	4	0	16
MANGANESE (MN), UG/L	4	30	80	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	30	80	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.00	19.00			
BIOMASS, ASH WT., G/SQ M	2	0.00	15.00			
CHLOROPHYLL A, MG/SQ M	2	0.000	27.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	6.000			
ORGANIC CARBON, MG/L	4	1.200	7.300			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.79	8.74	4.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	305.0	29.2	265	360					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	11	7.11	0.46	6.6	8.1	11	0.0058	5.3182	0.346*	0.45
PHOSPHORUS, TOTAL	12	0.140	0.065	0.06	0.25	12	-0.00004	0.15305	-0.019*	0.068
NITRITE + NITRATE, TOTAL	12	0.843	0.357	0.24	1.50	12	0.00433	-0.47613	0.353*	0.350
NITROGEN, KJELDAHL, TOTAL	12	0.597	0.088	0.47	0.76	12	0.00064	0.40341	0.211*	0.090
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	9684.8	11889.6	17	32000	12	41.745	-3047.434	0.102*	12404.3
SEDIMENT SUSPENDED	9	106.7	108.8	27	378					
SEDIMENT, CLAY-SILT (PERCENT)	9	98.9	2.7	92	100					
COLIFORM, FECAL (COL/100 ML)	12	441.1	865.9	6	3100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	760.2	1493.2	42	5400					
SILICA, DISSOLVED	4	4.55	2.79	0.4	6.4					
CALCIUM, DISSOLVED	4	34.00	1.41	33.0	36.0					
MAGNESIUM, DISSOLVED	4	8.10	0.80	7.3	9.2					
SODIUM, DISSOLVED	4	10.55	3.05	8.3	15.0					
POTASSIUM, DISSOLVED	4	2.25	0.26	1.9	2.5					
BICARBONATE, ION	4	83.5	6.9	74	89					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	46.75	6.75	41.0	54.0					
CHLORIDE, DISSOLVED	4	13.50	3.32	11.0	18.0					
DISSOLVED SOLIDS, SUM OF CONST	4	161.0	10.4	153	176					
DISSOLVED SOLIDS, ROE 180 DEG C	4	167.0	8.2	156	176					
HARDNESS, TOTAL	4	120.0	8.2	110	130					
HARDNESS, NONCARBONATE	4	50.0	7.7	43	60					
TURBIDITY (JTU)	4	51.3	24.3	15	65					
FLUORIDE, DISSOLVED	4	0.17	0.05	0.1	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 353

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%
	410	362	345	330	316	300	289	262	245	232

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
354	16.76	10.82	2.66	96	1.53

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	0	1
CADMIUM (CD), UG/L	4	1	7	4	0	6
CHROMIUM (CR), UG/L	4	<10	20	3	0	0
COBALT (CO), UG/L	4	0	6	4	0	0
COPPER (CU), UG/L	4	5	30	4	3	5
IRON (FE), UG/L	4	1100	5800	4	0	20
LEAD (PB), UG/L	4	3	100	4	0	33
MANGANESE (MN), UG/L	4	130	430	4	0	0
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	120	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.00	2.70			
BIOMASS, ASH WT., G/SQ M	2	0.00	1.85			
CHLOROPHYLL A, MG/SQ M	2	0.000	0.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	4	2.200	9.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	8	7.75	6.46	0.0	19.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	91.6	27.1	45	135					
STREAMFLOW (CUBIC FT/SEC)	8	140.6	193.2	2	572	8	-4.498	552.790	-0.632*	161.7
PH (STANDARD UNITS)	8	7.62	0.63	6.4	8.3	8	0.0150	6.2517	0.646*	0.52
PHOSPHORUS, TOTAL	8	0.014	0.015	0.00	0.04	8	-0.00003	0.01693	-0.062*	0.016
NITRITE + NITRATE, TOTAL	8	0.280	0.248	0.00	0.77	8	-0.00226	0.48721	-0.248*	0.259
NITROGEN, KJELDAHL, TOTAL	8	0.671	0.240	0.20	0.95	8	-0.00606	1.22671	-0.686*	0.169
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	972.8	1229.1	42	3300	8	18.071	-683.047	0.399*	1217.3
SEDIMENT SUSPENDED	7	20.7	16.1	1	38					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	7	26.7	45.0	1	126					
STREPTOCOCCI, FECAL (COL/100 ML)	7	53.9	62.4	2	140					
SILICA, DISSOLVED	8	10.22	2.53	6.3	13.0	8	0.0195	8.4361	0.209*	2.68
CALCIUM, DISSOLVED	8	10.89	2.56	6.1	14.0	8	0.0884	2.7847	0.939	0.95
MAGNESIUM, DISSOLVED	8	3.57	0.92	2.0	5.1	8	0.0336	0.4948	0.988	0.16
SODIUM, DISSOLVED	8	3.45	1.22	1.9	6.0	8	0.0418	-0.3823	0.927	0.50
POTASSIUM, DISSOLVED	8	0.51	0.08	0.4	0.6	8	0.0015	0.3750	0.488*	0.08
BICARBONATE, ION	8	38.8	13.3	19	59	8	0.479	-5.149	0.979	2.9
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	9.06	1.54	7.2	12.0	8	0.0136	7.8170	0.240*	1.61
CHLORIDE, DISSOLVED	8	3.55	2.32	1.3	9.0	8	0.0694	-2.8129	0.813	1.46
DISSOLVED SOLIDS, SUM OF CONST	8	60.9	14.2	35	82	8	0.506	14.482	0.969	3.8
DISSOLVED SOLIDS, ROE 180 DEG C	8	76.9	11.2	59	91	8	0.261	52.997	0.631*	9.4
HARDNESS, TOTAL	8	41.9	10.1	23	56	8	0.360	8.916	0.970	2.6
HARDNESS, NONCARBONATE	8	10.1	2.9	5	14	8	-0.034	13.264	-0.315*	3.0
TURBIDITY (JTU)	8	2.8	2.0	1	7	8	-0.040	6.371	-0.541*	1.8
FLUORIDE, DISSOLVED	8	0.17	0.05	0.1	0.2	8	0.0009	0.0946	0.515*	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	1	20	4	0	11
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	1
COPPER (CU), UG/L	4	0	<10	4	0	10
IRON (FE), UG/L	4	60	890	4	20	350
LEAD (PB), UG/L	4	7	200	3	1	42
MANGANESE (MN), UG/L	4	10	30	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
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	2	0.00	2.10			
BIOMASS, ASH WT., G/SQ M	2	0.00	1.70			
CHLOROPHYLL A, MG/SQ M	2	0.000	3.800			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.100			
ORGANIC CARBON, MG/L	4	0.800	19.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 04024000 NAME: ST. LOUIS RIVER AT SCANLON, MINN.

.AT 46D42M12S LONG 092D25M07S
DRAINAGE AREA: 3430 SQ MI (8884 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	10.50	9.44	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	229.8	46.3	145	290					
STREAMFLOW (CUBIC FT/SEC)	9	1161.1	553.0	408	1920	8	-10.222	3437.357	-0.925	209.9
PH (STANDARD UNITS)	8	7.49	0.18	7.1	7.7	8	-0.0009	7.7024	-0.240*	0.19
PHOSPHORUS, TOTAL	8	0.051	0.016	0.02	0.07	8	0.00028	-0.01203	0.821	0.010
NITRITE + NITRATE, TOTAL	8	0.046	0.060	0.00	0.16	8	-0.00039	0.13472	-0.297*	0.062
NITROGEN, KJELDAHL, TOTAL	8	1.110	0.337	0.60	1.50	8	-0.00446	2.13414	-0.613*	0.287
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	9128.6	6128.3	3000	20000	7	-70.034	26066.742	-0.385*	6196.8
SEDIMENT SUSPENDED	8	30.4	26.6	5	81					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	5	197.6	117.6	10	310					
STREPTOCOCCI, FECAL (COL/100 ML)	6	54.7	64.2	8	180					
SILICA, DISSOLVED	8	7.30	2.25	4.6	11.0	8	-0.0112	9.8741	-0.230*	2.37
CALCIUM, DISSOLVED	8	19.63	2.92	14.0	22.0	8	0.0467	8.9020	0.739	2.13
MAGNESIUM, DISSOLVED	8	7.97	1.32	5.8	9.4	8	0.0271	1.7556	0.949	0.45
SODIUM, DISSOLVED	8	14.11	3.93	7.9	21.0	8	0.0800	-4.2589	0.942	1.42
POTASSIUM, DISSOLVED	8	1.74	0.37	1.3	2.5	8	0.0058	0.4026	0.719	0.28
BICARBONATE, ION	8	79.8	14.5	53	97	8	0.304	9.807	0.971	3.7
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	21.50	4.66	15.0	28.0	8	0.0575	8.2848	0.571*	4.13
CHLORIDE, DISSOLVED	8	14.74	5.59	8.6	25.0	8	0.0878	-5.4371	0.727	4.15
DISSOLVED SOLIDS, SUM OF CONST	8	126.6	21.3	85	157	8	0.438	26.091	0.951	7.1
DISSOLVED SOLIDS, ROE 180 DEG C	8	166.0	17.8	133	192	8	0.292	98.913	0.759	12.5
HARDNESS, TOTAL	8	81.9	11.9	59	94	8	0.226	29.876	0.877	6.2
HARDNESS, NONCARBONATE	8	16.4	7.1	5	26	8	-0.017	20.207	-0.109*	7.6
TURBIDITY (JTU)	8	6.6	2.7	2	10	8	-0.027	12.777	-0.464*	2.6
FLUORIDE, DISSOLVED	8	0.14	0.05	0.1	0.2	8	0.0005	0.0322	0.410*	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04024000 -- ST. LOUIS RIVER AT SCANLON, MINN.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	3	4	0	2
CADMIUM (CD), UG/L	4	1	30	4	0	13
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	10	4	0	3
IRON (FE), UG/L	4	240	800	4	120	570
LEAD (PB), UG/L	4	11	300	4	1	150
MANGANESE (MN), UG/L	4	60	140	4	20	100
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	40	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	10.20				
BIOMASS, ASH WT., G/SQ M	1	3.85				
CHLOROPHYLL A, MG/SQ M	1	9.700				
CHLOROPHYLL B, MG/SQ M	1	2.100				
ORGANIC CARBON, MG/L	4	1.400	65.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	9.33	9.09	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	144.6	46.7	60	215					
STREAMFLOW (CUBIC FT/SEC)	29	564.9	1146.7	69	5890	12	-11.418	2139.073	-0.749	495.7
PH (STANDARD UNITS)	10	7.44	0.30	6.7	7.7	10	0.0007	7.3403	0.110*	0.31
PHOSPHORUS, TOTAL	11	0.045	0.023	0.01	0.10	11	-0.00027	0.08211	-0.533*	0.021
NITRITE + NITRATE, TOTAL	11	0.152	0.120	0.01	0.33	11	-0.00054	0.22735	-0.209*	0.124
NITROGEN, KJELDAHL, TOTAL	11	0.404	0.148	0.20	0.68	11	-0.00237	0.73663	-0.748	0.104
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2119.9	3524.9	42	11000	12	-3.279	2594.026	-0.043*	3693.4
SEDIMENT SUSPENDED	28	36.2	97.1	1	514					
SEDIMENT, CLAY-SILT (PERCENT)	8	83.0	24.3	37	100					
COLIFORM, FECAL (COL/100 ML)	12	87.6	203.8	4	730					
STREPTOCOCCI, FECAL (COL/100 ML)	12	110.2	174.0	5	600					
SILICA, DISSOLVED	12	10.38	2.96	5.6	14.0	12	0.0163	8.0246	0.257*	3.00
CALCIUM, DISSOLVED	12	18.14	6.14	6.7	26.0	12	0.1176	1.1320	0.896	2.86
MAGNESIUM, DISSOLVED	12	5.31	1.70	1.7	7.6	12	0.0311	0.8153	0.854	0.93
SODIUM, DISSOLVED	12	2.98	1.04	1.1	4.9	12	0.0168	0.5584	0.756	0.71
POTASSIUM, DISSOLVED	12	0.87	0.25	0.5	1.2	12	0.0019	0.5908	0.362*	0.24
BICARBONATE, ION	12	76.0	29.9	22	123	12	0.581	-7.989	0.909	13.1
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.93	2.81	4.8	13.0	12	-0.0054	8.7088	-0.089*	2.93
CHLORIDE, DISSOLVED	12	3.09	1.89	1.2	8.6	12	0.0012	2.9235	0.029*	1.98
DISSOLVED SOLIDS, SUM OF CONST	12	86.4	24.4	35	116	12	0.464	19.267	0.890	11.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	99.3	20.8	49	130	12	0.373	45.346	0.838	11.9
HARDNESS, TOTAL	12	67.2	22.1	24	96	12	0.420	6.434	0.887	10.7
HARDNESS, NONCARBONATE	12	5.3	3.8	0	14	12	-0.042	11.351	-0.517*	3.4
TURBIDITY (JTU)	12	7.8	9.4	2	35	12	-0.076	18.762	-0.376*	9.1
FLUORIDE, DISSOLVED	12	0.15	0.07	0.1	0.3	12	-0.0003	0.1876	-0.180*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
15	9.61	13.17	2.86	92	2.76

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04027000 -- BAD RIVER NEAR ODANAH, WIS.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED 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	0
CHROMIUM (CR), UG/L	4	<10	10	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	0	12	4	0	0
IRON (FE), UG/L	4	370	920	4	30	280
LEAD (PB), UG/L	4	1	14	4	0	3
MANGANESE (MN), UG/L	4	10	50	4	10	30
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	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.20	6.00			
BIOMASS, ASH WT., G/SQ M	3	0.20	4.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	4.200			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.800			
ORGANIC CARBON, MG/L	4	6.200	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.29	7.63	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	131.0	28.4	91	171					
STREAMFLOW (CUBIC FT/SEC)	12	698.5	669.1	236	2660	11	-11.375	2228.484	-0.824	234.3
PH (STANDARD UNITS)	12	7.73	0.33	7.2	8.2	11	0.0015	7.5007	0.132*	0.34
PHOSPHORUS, TOTAL	12	0.044	0.036	0.01	0.14	11	-0.00047	0.09675	-0.676	0.015
NITRITE + NITRATE, TOTAL	12	0.062	0.060	0.00	0.19	11	-0.00108	0.20093	-0.492*	0.057
NITROGEN, KJELDAHL, TOTAL	12	0.357	0.137	0.13	0.58	11	-0.00368	0.81891	-0.845	0.070
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2045.8	3215.5	150	11000	11	73.623	-7431.031	0.631	2712.7
SEDIMENT SUSPENDED	11	50.7	96.6	11	340					
SEDIMENT, CLAY-SILT (PERCENT)	10	99.1	2.8	91	100					
COLIFORM, FECAL (COL/100 ML)	11	21.7	46.4	<1	160					
STREPTOCOCCI, FECAL (COL/100 ML)	12	42.8	67.4	2	240					
SILICA, DISSOLVED	12	8.91	1.61	6.1	11.0	11	0.0323	4.9311	0.652	1.13
CALCIUM, DISSOLVED	12	19.08	4.50	12.0	24.0	11	0.1113	5.0574	0.740	3.03
MAGNESIUM, DISSOLVED	12	4.96	1.43	2.6	7.2	11	0.0423	-0.3668	0.935	0.48
SODIUM, DISSOLVED	12	2.22	0.55	1.0	3.0	11	0.0119	0.7611	0.808	0.26
POTASSIUM, DISSOLVED	12	1.09	0.22	0.8	1.5	11	-0.0009	1.2301	-0.116*	0.22
BICARBONATE, ION	12	84.8	20.3	52	110	11	0.505	21.653	0.784	12.0
CARBONATE, ION	12	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.31	2.47	2.2	11.0	11	0.0083	5.2879	0.091*	2.71
CHLORIDE, DISSOLVED	12	2.21	0.69	0.7	3.2	11	-0.0057	3.0946	-0.312*	0.52
DISSOLVED SOLIDS, SUM OF CONST	12	86.8	17.0	56	105	11	0.451	30.558	0.674	7.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	91.8	14.7	61	111	11	0.218	65.971	0.533*	10.4
HARDNESS, TOTAL	12	68.0	16.4	43	90	11	0.459	10.205	0.863	8.0
HARDNESS, NONCARBONATE	12	1.0	1.6	0	5	11	-0.000	1.156	-0.009*	1.7
TURBIDITY (JTU)	12	25.3	35.1	1	130	11	-0.196	41.463	-0.446*	11.8
FLUORIDE, DISSOLVED	12	0.17	0.16	0.1	0.6	11	-0.0009	0.3051	-0.161*	0.17

*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%
	173	169	166	161	148	128	103	78	67	54

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
318	9.36	11.53	2.81	95	1.99

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04040000 -- ONTONAGON R NR ROCKLAND, MICH

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED 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	10	4	0	10
COBALT (CO), UG/L	4	0	3	4	0	0
COPPER (CU), UG/L	4	0	14	4	0	10
IRON (FE), UG/L	4	390	2800	4	90	140
LEAD (PB), UG/L	4	2	13	4	0	2
MANGANESE (MN), UG/L	3	30	90	4	0	30
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	3	10	30	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.80	95.80			
BIOMASS, ASH WT., G/SQ M	4	2.10	91.50			
CHLOROPHYLL A, MG/SQ M	4	1.000	8.200			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.400			
ORGANIC CARBON, MG/L	4	6.800	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.63	8.73	0.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	139.7	42.4	51	190					
STREAMFLOW (CUBIC FT/SEC)	12	1018.7	1285.1	214	4720	12	-27.153	4811.094	-0.896	598.0
PH (STANDARD UNITS)	12	7.57	0.39	7.1	8.1	12	0.0052	6.8343	0.568*	0.34
PHOSPHORUS, TOTAL	12	0.026	0.011	0.01	0.05	12	0.00011	0.01007	0.442*	0.010
NITRITE + NITRATE, TOTAL	12	0.092	0.063	0.01	0.17	12	-0.00055	0.16915	-0.367*	0.062
NITROGEN, KJELDAHL. TOTAL	12	0.382	0.187	0.07	0.70	12	-0.00168	0.61718	-0.382*	0.181
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1017.0	2169.9	28	7600	12	22.745	-2159.709	0.445*	2036.4
SEDIMENT SUSPENDED	12	3.9	2.6	1	10					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	11	4.1	5.0	<1	15					
STREPTOCOCCI, FECAL (COL/100 ML)	12	30.5	55.7	<1	160					
SILICA, DISSOLVED	12	6.46	2.33	2.4	9.9	12	0.0248	2.9955	0.451*	2.18
CALCIUM, DISSOLVED	12	20.37	6.43	7.4	28.0	12	0.1458	0.0055	0.962	1.83
MAGNESIUM, DISSOLVED	12	5.45	1.74	2.1	7.5	12	0.0396	-0.0792	0.964	0.49
SODIUM, DISSOLVED	12	1.49	0.44	0.7	2.0	12	0.0073	0.4713	0.701	0.33
POTASSIUM, DISSOLVED	12	0.72	0.11	0.6	0.9	12	0.0003	0.6710	0.124*	0.12
BICARBONATE, ION	12	79.3	28.5	32	119	12	0.645	-10.858	0.960	8.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	12.46	1.59	9.6	15.0	12	0.0213	9.4867	0.569*	1.37
CHLORIDE, DISSOLVED	11	2.25	0.46	1.7	3.3	11	0.0077	1.1982	0.717	0.34
DISSOLVED SOLIDS, SUM OF CONST	11	86.2	24.2	43	117	11	0.553	10.520	0.988	4.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	99.4	22.0	47	122	11	0.519	23.715	0.918	9.2
HARDNESS, TOTAL	12	73.3	23.0	27	100	12	0.527	-0.371	0.970	5.8
HARDNESS, NONCARBONATE	12	8.4	6.3	0	17	12	0.001	8.299	0.006*	6.6
TURBIDITY (JTU)	12	2.3	1.4	1	6	12	0.010	0.877	0.323*	1.4
FLUORIDE, DISSOLVED	12	0.14	0.08	0.0	0.3	12	0.0003	0.0939	0.183*	0.08

*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%
	204	194	168	182	161	148	110	69	47	38

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
325	9.47	11.93	2.70	95	1.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	0	3	0	0
CADMIUM (CD), UG/L	3	0	1	3	0	0
CHROMIUM (CR), UG/L	3	<10	20	3	0	<10
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	2	0	14	3	0	10
IRON (FE), UG/L	3	320	520	3	140	290
LEAD (PB), UG/L	2	7	11	3	2	6
MANGANESE (MN), UG/L	3	20	30	3	0	20
MERCURY (HG), UG/L	3	0.2	<0.5	3	0.0	< 0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	2	20	30	3	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	11.40			
BIOMASS, ASH WT., G/SQ M	4	0.00	9.15			
CHLOROPHYLL A, MG/SQ M	4	0.000	18.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.000			
ORGANIC CARBON, MG/L	3	4.000	17.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.04	6.24	1.5	18.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	86.9	3.5	83	96					
STREAMFLOW (CUBIC FT/SEC)	12	73100.0	7499.1	65000	86500	12	-966.349	157091.813	-0.455*	7005.2
PH (STANDARD UNITS)	12	7.70	0.44	6.9	8.2	12	0.0204	5.9276	0.165*	0.45
PHOSPHORUS, TOTAL	12	0.011	0.007	0.00	0.02	12	-0.00102	0.09918	-0.536*	0.006
NITRITE + NITRATE, TOTAL	12	0.266	0.024	0.23	0.31	12	0.00245	0.05270	0.368*	0.023
NITROGEN, KJELDAHL, TOTAL	12	0.114	0.054	0.00	0.18	12	0.00142	-0.00916	0.093*	0.056
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	617.6	799.4	61	3000	12	-10.747	1551.659	-0.047*	837.5
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1.3	0.6	<1	3					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3.9	8.9	<1	32					
SILICA, DISSOLVED	12	2.27	0.20	1.9	2.5	12	0.0348	-0.7603	0.624	0.16
CALCIUM, DISSOLVED	12	13.67	0.65	13.0	15.0	12	0.1071	4.3561	0.560	0.56
MAGNESIUM, DISSOLVED	12	2.58	0.42	1.5	3.1	12	0.0116	1.5763	0.097*	0.44
SODIUM, DISSOLVED	12	1.12	0.17	0.9	1.4	12	0.0330	-1.7470	0.681	0.13
POTASSIUM, DISSOLVED	12	0.49	0.03	0.4	0.5	12	-0.0001	0.4970	-0.008*	0.03
BICARBONATE, ION	12	58.1	4.7	52	68	12	0.914	-21.321	0.683	3.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.22	0.88	1.9	5.1	12	-0.0773	9.9339	-0.311*	0.88
CHLORIDE, DISSOLVED	10	1.47	0.43	0.8	2.1	10	0.0571	-3.5238	0.475*	0.40
DISSOLVED SOLIDS, SUM OF CONST	10	53.7	2.8	51	60	10	0.657	-3.757	0.835	1.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	49.3	4.6	42	58	12	0.601	-2.933	0.463*	4.3
HARDNESS, TOTAL	12	44.8	2.4	39	48	12	0.335	15.738	0.483*	2.2
HARDNESS, NONCARBONATE	12	0.5	1.2	0	3	12	-0.128	11.609	-0.386*	1.1
TURBIDITY (JTU)	12	0.8	0.6	0	2	12	0.130	-10.518	0.736	0.4
FLUORIDE, DISSOLVED	12	0.09	0.11	0.0	0.4	12	-0.0023	0.2874	-0.073*	0.11

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	90	88	87	87	87	86	85	83	82	81

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.48	8.94	2.25	96	1.35

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	0	3	0	0
CADMIUM (CD), UG/L	3	0	0	3	0	0
CHROMIUM (CR), UG/L	3	<10	10	3	0	<10
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	0	12	3	0	10
IRON (FE), UG/L	3	40	90	3	0	30
LEAD (PB), UG/L	2	5	10	3	0	2
MANGANESE (MN), UG/L	3	0	10	3	0	0
MERCURY (HG), UG/L	3	0.0	<0.5	3	0.0	<0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	40	80	3	30	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.50	39.80			
BIOMASS, ASH WT., G/SQ M	2	2.10	33.80			
CHLOROPHYLL A, MG/SQ M	2	4.200	8.200			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.400			
ORGANIC CARBON, MG/L	3	3.700	5.400			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 04057004 NAME: MANISTIQUE RIVER ABOVE MANISTIQUE, MICH. .

LAT 45058M18S LONG 086014M35S
DRAINAGE AREA: 1445 SQ MI (3743 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	10.17	9.39	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	160.9	48.5	80	250					
STREAMFLOW (CUBIC FT/SEC)	12	2185.3	2106.4	508	8120	10	-35.731	8169.078	-0.770	1520.8
PH (STANDARD UNITS)	12	7.58	0.32	7.2	8.3	10	-0.0001	7.5068	-0.023*	0.24
PHOSPHORUS, TOTAL	12	0.018	0.009	0.01	0.04	10	-0.00002	0.02373	-0.119*	0.010
NITRITE + NITRATE, TOTAL	12	0.112	0.060	0.05	0.25	10	-0.00072	0.22831	-0.546*	0.057
NITROGEN, KJELDAHL, TOTAL	12	0.396	0.110	0.23	0.55	10	-0.00193	0.72216	-0.822	0.069
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7095.8	11395.3	50	41000	10	13.350	4796.926	0.051*	13336.2
SEDIMENT SUSPENDED	11	5.5	2.4	3	12					
SEDIMENT, CLAY-SILT (PERCENT)	11	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	11	15.3	15.6	2	46					
STREPTOCOCCI, FECAL (COL/100 ML)	12	9.0	10.4	<1	33					
SILICA, DISSOLVED	12	6.06	1.24	3.9	7.9	10	0.0186	2.9529	0.685	1.07
CALCIUM, DISSOLVED	12	24.33	5.82	11.0	31.0	10	0.1217	4.2262	0.938	2.31
MAGNESIUM, DISSOLVED	12	5.68	1.41	3.0	7.8	10	0.0248	1.4394	0.883	0.68
SODIUM, DISSOLVED	12	1.40	0.91	0.8	4.2	10	0.0159	-1.1227	0.766	0.69
POTASSIUM, DISSOLVED	12	0.66	0.12	0.4	0.8	10	0.0020	0.3347	0.749	0.09
BICARBONATE, ION	12	86.2	23.4	42	118	10	0.362	23.372	0.774	15.2
CARBONATE, ION	12	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	21.33	5.58	9.0	28.0	10	0.1105	3.0141	0.894	2.85
CHLORIDE, DISSOLVED	12	1.95	0.70	0.7	3.1	10	0.0054	1.2197	0.385*	0.67
DISSOLVED SOLIDS, SUM OF CONST	12	104.2	24.8	52	132	10	0.478	23.664	0.900	11.9
DISSOLVED SOLIDS, ROE 180 DEG C	11	116.0	17.1	82	142	9	0.344	55.944	0.766	12.9
HARDNESS, TOTAL	12	83.7	19.4	40	100	10	0.383	19.429	0.916	8.6
HARDNESS, NONCARBONATE	12	13.3	7.9	0	26	10	0.082	0.976	0.541*	6.6
TURBIDITY (JTU)	12	2.8	0.7	2	4	10	-0.004	3.403	-0.230*	0.8
FLUORIDE, DISSOLVED	12	0.14	0.07	0.1	0.3	10	-0.0001	0.1465	-0.103*	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 338

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	212	206	203	199	192	168	128	104	91

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
338	9.72	11.80	2.67	95	1.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04057004 -- MANISTIQUE RIVER ABOVE 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	3	4	0	0
CADMIUM (CD), UG/L	4	1	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	6	14	4	0	1
IRON (FE), UG/L	4	600	1000	4	240	400
LEAD (PB), UG/L	4	7	19	4	0	7
MANGANESE (MN), UG/L	4	20	30	4	10	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	3	20	120	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.69	11.00			
BIOMASS, ASH WT., G/SQ M	3	0.31	5.50			
CHLOROPHYLL A, MG/SQ M	3	0.100	1.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	4	5.900	13.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 04059000 NAME: ESCANABA RIVER AT CORNELL, MICH. .

LAT 45D54M31S LONG 087D12M49S
DRAINAGE AREA: 870 SQ MI (2253 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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 COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.04	8.24	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	176.2	42.1	95	235					
STREAMFLOW (CUBIC FT/SEC)	12	923.3	1226.2	203	4290	12	-25.040	5334.496	-0.860	656.2
PH (STANDARD UNITS)	12	7.98	0.34	7.2	8.3	12	0.0013	7.7457	0.167*	0.35
PHOSPHORUS, TOTAL	12	0.027	0.023	0.01	0.09	12	0.00012	0.00465	0.222*	0.024
NITRITE + NITRATE, TOTAL	12	0.131	0.102	0.04	0.30	12	0.00018	0.09834	0.076*	0.107
NITROGEN, KJELDAHL, TOTAL	12	0.356	0.119	0.18	0.53	12	-0.00232	0.76486	-0.819	0.072
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	9915.8	31524.0	150	110000	12	134.318	-13746.602	0.179*	32525.6
SEDIMENT SUSPENDED	12	4.7	4.0	0	14					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	5.1	4.6	<1	15					
STREPTOCOCCI, FECAL (COL/100 ML)	12	27.8	29.7	<1	91					
SILICA, DISSOLVED	12	7.27	1.73	4.4	10.0	12	0.0248	2.8989	0.605	1.44
CALCIUM, DISSOLVED	12	21.25	4.49	12.0	26.0	12	0.1000	3.6303	0.937	1.65
MAGNESIUM, DISSOLVED	12	8.67	1.89	4.9	11.0	12	0.0437	0.9661	0.972	0.47
SODIUM, DISSOLVED	12	3.26	1.31	1.2	5.1	12	0.0268	-1.4563	0.861	0.70
POTASSIUM, DISSOLVED	12	1.04	0.33	0.4	1.8	12	0.0045	0.2434	0.580	0.28
BICARBONATE, ION	12	105.7	27.1	56	142	12	0.598	0.349	0.928	10.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.77	2.03	6.3	14.0	12	-0.0121	11.9018	-0.251*	2.06
CHLORIDE, DISSOLVED	12	2.83	0.86	1.1	3.9	12	0.0113	0.8485	0.549*	0.76
DISSOLVED SOLIDS, SUM OF CONST	12	106.4	22.0	66	136	12	0.495	19.269	0.946	7.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	117.1	20.0	84	156	12	0.391	48.231	0.824	11.9
HARDNESS, TOTAL	12	88.5	18.7	50	110	12	0.428	13.046	0.964	5.2
HARDNESS, NONCARBONATE	12	4.3	3.9	0	12	12	-0.022	8.164	-0.239*	4.0
TURBIDITY (JTU)	12	2.4	1.1	1	5	12	0.011	0.564	0.409*	1.0
FLUORIDE, DISSOLVED	12	0.19	0.15	0.1	0.6	12	0.0004	0.1157	0.121*	0.16

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 275

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%
	232	231	229	217	210	202	192	155	148	140

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
280	8.28	12.65	2.68	93	2.27

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	0	4	0	0
CHROMIUM (CR), UG/L	4	<10	10	4	0	10
COBALT (CO), UG/L	2	0	0	4	0	1
COPPER (CU), UG/L	4	0	42	4	0	10
IRON (FE), UG/L	4	410	810	4	200	380
LEAD (PB), UG/L	3	1	17	4	0	7
MANGANESE (MN), UG/L	4	20	60	4	0	10
MERCURY (HG), UG/L	4	0.2	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	2	10	40	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.40	26.00			
BIOMASS, ASH WT., G/SQ M	4	0.20	18.00			
CHLOROPHYLL A, MG/SQ M	4	0.000	9.200			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.500			
ORGANIC CARBON, MG/L	4	4.200	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.00	9.23	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	284.5	55.7	183	350					
STREAMFLOW (CUBIC FT/SEC)	12	322.7	495.8	24	1830	12	-6.805	2258.714	-0.764	335.5
PH (STANDARD UNITS)	12	8.00	0.29	7.6	8.3	12	0.0004	7.8831	0.080*	0.30
PHOSPHORUS, TOTAL	12	0.016	0.010	0.00	0.03	12	-0.00007	0.03591	-0.394*	0.010
NITRITE + NITRATE, TOTAL	12	0.097	0.077	0.01	0.21	12	0.00002	0.09174	0.012*	0.081
NITROGEN, KJELDAHL, TOTAL	12	0.387	0.136	0.25	0.65	12	-0.00180	0.89865	-0.736	0.096
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	9707.8	31588.1	43	110000	12	87.538	-15196.785	0.154*	32733.1
SEDIMENT SUSPENDED	12	4.6	7.0	0	26					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	13.0	11.5	<1	45					
STREPTOCOCCI, FECAL (COL/100 ML)	12	15.8	16.6	1	45					
SILICA, DISSOLVED	12	6.92	2.24	2.9	10.0	12	0.0226	0.4999	0.561*	1.94
CALCIUM, DISSOLVED	12	37.50	7.54	23.0	46.0	12	0.1269	1.4001	0.937	2.76
MAGNESIUM, DISSOLVED	12	17.13	3.90	9.6	21.0	12	0.0675	-2.0571	0.962	1.12
SODIUM, DISSOLVED	12	1.18	0.29	0.7	1.5	12	0.0046	-0.1241	0.896	0.13
POTASSIUM, DISSOLVED	12	0.73	0.22	0.4	1.1	12	0.0008	0.5012	0.208*	0.22
BICARBONATE, ION	12	197.1	42.0	120	252	12	0.714	-5.979	0.947	14.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	13.39	3.85	6.7	19.0	12	0.0160	8.8504	0.231*	3.93
CHLORIDE, DISSOLVED	11	2.35	0.50	1.8	3.4	11	0.0013	1.9811	0.149*	0.52
DISSOLVED SOLIDS, SUM OF CONST	11	174.5	34.8	112	221	11	0.590	8.456	0.970	8.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	179.7	30.1	124	222	12	0.481	42.714	0.890	14.4
HARDNESS, TOTAL	12	164.8	33.2	97	200	12	0.580	-0.259	0.973	8.0
HARDNESS, NONCARBONATE	12	4.8	6.7	0	19	12	0.002	4.178	0.017*	7.0
TURBIDITY (JTU)	12	1.9	1.3	0	5	12	0.008	-0.325	0.334*	1.3
FLUORIDE, DISSOLVED	12	0.16	0.07	0.1	0.3	12	0.0005	0.0035	0.453*	0.06

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 318

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C. THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	356	352	349	338	334	320	284	184	167	160

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
358	9.44	12.36	2.69	91	2.78

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	0	4	0	1
CADMIUM (CD), UG/L	3	0	0	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	<10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	60	220	4	0	100
LEAD (PB), UG/L	4	0	12	4	0	5
MANGANESE (MN), UG/L	4	20	30	4	0	20
MERCURY (HG), UG/L	4	0.1	1.3	4	0.0	0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	2	30	40	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	14.60			
BIOMASS, ASH WT., G/SQ M	4	0.00	5.85			
CHLOROPHYLL A, MG/SQ M	4	0.000	12.400			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.100			
ORGANIC CARBON, MG/L	4	13.000	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.50	10.58	0.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	392.5	33.3	340	455					
STREAMFLOW (CUBIC FT/SEC)	13	4305.4	3713.4	1140	13600	12	-48.961	23765.672	-0.433*	3563.0
PH (STANDARD UNITS)	12	7.76	0.43	7.0	8.3	12	0.0010	7.3490	0.081*	0.45
PHOSPHORUS, TOTAL	12	0.109	0.061	0.03	0.27	12	0.00019	0.03293	0.106*	0.063
NITRITE + NITRATE, TOTAL	12	0.042	0.044	0.01	0.17	12	0.00075	-0.25367	0.570*	0.038
NITROGEN, KJELDAHL, TOTAL	12	1.184	0.480	0.70	2.00	12	0.00095	0.81094	0.066*	0.502
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	157091.6	248135.3	3800	680000	12	-806.223	473534.000	-0.108*	258712.4
SEDIMENT SUSPENDED	11	20.9	10.4	1	36					
SEDIMENT, CLAY-SILT (PERCENT)	10	78.0	23.6	22	100					
COLIFORM, FECAL (COL/100 ML)	12	405.8	267.9	59	770					
STREPTOCOCCI, FECAL (COL/100 ML)	12	544.0	755.7	7	2700					
SILICA, DISSOLVED	12	3.01	2.27	0.1	6.0	12	0.0202	-4.9296	0.297*	2.27
CALCIUM, DISSOLVED	12	37.08	2.50	33.0	41.0	12	0.0297	25.4451	0.395*	2.41
MAGNESIUM, DISSOLVED	12	19.00	1.71	16.0	21.0	12	0.0303	7.1210	0.592	1.44
SODIUM, DISSOLVED	12	11.52	3.47	7.2	17.0	12	0.0466	-6.7831	0.448*	3.25
POTASSIUM, DISSOLVED	12	2.37	0.22	2.0	2.7	12	0.0020	1.5809	0.309*	0.22
BICARBONATE, ION	12	177.7	10.5	165	192	12	0.144	121.322	0.456*	9.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	29.58	4.96	22.0	40.0	12	0.0926	-6.7761	0.622	4.07
CHLORIDE, DISSOLVED	12	15.58	4.27	10.0	24.0	12	0.0755	-14.0339	0.589	3.62
DISSOLVED SOLIDS, SUM OF CONST	12	206.0	16.2	176	232	12	0.371	60.402	0.762	11.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	221.5	17.4	193	247	12	0.348	85.052	0.667	13.6
HARDNESS, TOTAL	12	170.8	11.6	150	190	12	0.215	86.557	0.615	9.6
HARDNESS, NONCARBONATE	12	25.2	10.6	3	46	12	0.081	-6.457	0.253*	10.8
TURBIDITY (JTU)	12	8.7	4.2	3	18	12	-0.018	15.730	-0.143*	4.3
FLUORIDE, DISSOLVED	12	0.23	0.09	0.1	0.4	12	0.0008	-0.0716	0.292*	0.09

*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%
	610	465	440	415	405	390	375	350	345	330

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
357	11.36	13.89	2.71	94	2.48

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	2	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	4	160	410	4	10	70
LEAD (PB), UG/L	4	7	22	4	0	3
MANGANESE (MN), UG/L	4	20	40	4	0	20
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	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	9.31	13.00			
BIOMASS, ASH WT., G/SQ M	2	2.54	9.10			
CHLOROPHYLL A, MG/SQ M	2	2.300	6.700			
CHLOROPHYLL B, MG/SQ M	2	0.100	0.200			
ORGANIC CARBON, MG/L	3	10.000	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.38	9.49	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	720.8	210.4	520	1300					
STREAMFLOW (CUBIC FT/SEC)	12	370.9	524.2	62	1950	12	-0.854	986.823	-0.343*	516.4
PH (STANDARD UNITS)	12	8.02	0.85	5.7	8.8	12	-0.0034	10.4967	-0.848	0.47
PHOSPHORUS, TOTAL	12	0.175	0.074	0.11	0.39	12	0.00032	-0.05692	0.916	0.031
NITRITE + NITRATE, TOTAL	12	0.927	0.918	0.01	2.30	12	0.00249	-0.86858	0.571*	0.790
NITROGEN, KJELDAHL, TOTAL	12	1.032	0.209	0.67	1.30	12	0.00048	0.68737	0.481*	0.192
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	16747.5	20334.7	570	64000	12	-41.017	46313.793	-0.424*	19311.4
SEDIMENT SUSPENDED	12	17.7	9.3	8	37					
SEDIMENT, CLAY-SILT (PERCENT)	11	69.1	32.3	0	100					
COLIFORM, FECAL (COL/100 ML)	12	10208.7	22363.7	40	76000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2866.6	5258.6	12	17000					
SILICA, DISSOLVED	12	4.77	4.32	0.6	12.0	12	0.0146	-5.7408	0.710	3.19
CALCIUM, DISSOLVED	12	61.33	13.21	40.0	84.0	12	0.0426	30.6331	0.678	10.19
MAGNESIUM, DISSOLVED	12	36.92	8.01	23.0	54.0	12	0.0192	23.0581	0.505*	7.25
SODIUM, DISSOLVED	12	37.15	37.30	8.8	150.0	12	0.1580	-76.7737	0.891	17.72
POTASSIUM, DISSOLVED	12	2.84	0.47	2.0	3.5	12	0.0014	1.8415	0.621	0.39
BICARBONATE, ION	12	298.9	59.4	198	411	12	0.185	165.506	0.656	47.0
CARBONATE, ION	12	0.6	2.0	0	7	12	-0.000	0.903	-0.046*	2.1
SULFATE, DISSOLVED	12	46.33	8.71	35.0	63.0	12	0.0233	29.5645	0.562*	7.56
CHLORIDE, DISSOLVED	12	67.50	59.46	33.0	250.0	12	0.2626	-121.7866	0.929	23.05
DISSOLVED SOLIDS, SUM OF CONST	12	405.0	129.6	269	750	12	0.612	-36.198	0.993	15.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	438.9	130.3	288	791	12	0.611	-1.676	0.987	21.7
HARDNESS, TOTAL	12	303.3	64.1	210	430	12	0.189	167.327	0.619	52.9
HARDNESS, NONCARBONATE	12	58.9	19.0	43	99	12	0.034	34.103	0.362*	18.4
TURBIDITY (JTU)	12	5.4	3.3	1	10	12	-0.007	10.738	-0.465*	3.1
FLUORIDE, DISSOLVED	12	0.23	0.11	0.1	0.5	12	-0.0001	0.2797	-0.126*	0.11

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 252

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%
	940	864	823	716	689	642	595	510	478	411

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.88	12.57	2.69	98	1.47

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	11	4	0	4
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	1	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	120	420	4	10	40
LEAD (PB), UG/L	4	5	8	4	2	2
MANGANESE (MN), UG/L	4	20	60	4	0	20
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	30	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.50	29.00			
BIOMASS, ASH WT., G/SQ M	4	1.30	22.50			
CHLOROPHYLL A, MG/SQ M	4	0.600	58.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	8.200			
ORGANIC CARBON, MG/L	4	5.900	22.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.58	9.40	0.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	545.5	70.3	399	627					
STREAMFLOW (CUBIC FT/SEC)	11	2502.7	1956.6	650	7000	11	-25.010	16162.750	-0.942	692.7
PH (STANDARD UNITS)	12	8.08	0.18	7.8	8.4	12	0.0011	7.4961	0.420*	0.17
PHOSPHORUS, TOTAL	12	0.100	0.025	0.07	0.14	12	0.00002	0.08696	0.066*	0.026
NITRITE + NITRATE, TOTAL	12	0.737	0.267	0.28	1.10	12	-0.00174	1.68438	-0.456*	0.249
NITROGEN, KJELDAHL, TOTAL	12	0.830	0.101	0.69	1.00	12	0.00078	0.40296	0.545*	0.089
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	20658.3	18103.0	1200	53000	12	79.333	-22617.738	0.308*	18062.9
SEDIMENT SUSPENDED	11	13.8	7.6	4	27					
SEDIMENT, CLAY-SILT (PERCENT)	11	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	663.0	1712.4	<1	>6000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	95.7	89.7	10	270					
SILICA, DISSOLVED	12	6.00	2.45	1.3	9.7	12	0.0095	0.7938	0.273*	2.48
CALCIUM, DISSOLVED	12	63.75	8.57	44.0	71.0	12	0.1053	6.2963	0.864	4.53
MAGNESIUM, DISSOLVED	12	19.75	2.63	14.0	23.0	12	0.0339	1.2611	0.905	1.17
SODIUM, DISSOLVED	12	17.83	4.75	10.0	28.0	12	0.0552	-12.2808	0.818	2.86
POTASSIUM, DISSOLVED	12	1.98	0.22	1.7	2.3	12	-0.0012	2.6416	-0.377*	0.22
BICARBONATE, ION	11	251.1	32.9	180	288	11	0.395	38.696	0.825	19.7
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	41.92	5.20	31.0	48.0	12	0.0557	11.5466	0.753	3.58
CHLORIDE, DISSOLVED	12	29.00	6.99	17.0	41.0	12	0.0870	-18.4842	0.875	3.55
DISSOLVED SOLIDS, SUM OF CONST	11	302.7	39.8	217	342	11	0.566	-2.060	0.977	9.0
DISSOLVED SOLIDS, RDE 180 DEG C	12	317.8	34.3	245	358	12	0.452	71.287	0.926	13.5
HARDNESS, TOTAL	12	241.7	29.8	170	270	12	0.412	17.090	0.971	7.4
HARDNESS, NONCARBONATE	12	33.9	15.0	17	66	12	0.101	-21.189	0.474*	13.8
TURBIDITY (JTU)	12	6.0	4.9	2	20	12	-0.059	38.312	-0.856	2.6
FLUORIDE, DISSOLVED	12	0.22	0.10	0.1	0.5	12	0.0008	-0.2208	0.547*	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 243

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%
	618	608	600	588	576	549	520	459	431	364

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
243	12.12	12.01	2.75	95	2.12

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	3	4	0	2
CADMIUM (CD), UG/L	3	0	3	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	<10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	11	4	0	2
IRON (FE), UG/L	4	470	550	4	10	100
LEAD (PB), UG/L	4	7	36	4	0	8
MANGANESE (MN), UG/L	4	50	120	4	10	40
MERCURY (HG), UG/L	4	0.1	<0.5	4	0.1	<0.5
SELENIUM (SE), UG/L	3	0	0	4	0	4
ZINC (ZN), UG/L	4	10	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	7.40	32.80			
BIOMASS, ASH WT., G/SQ M	3	5.20	14.00			
CHLOROPHYLL A, MG/SQ M	3	47.000	84.100			
CHLOROPHYLL B, MG/SQ M	3	0.000	9.800			
ORGANIC CARBON, MG/L	3	8.400	14.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.42	8.78	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	315.4	51.0	206	368					
STREAMFLOW (CUBIC FT/SEC)	12	2932.5	1575.2	1280	6010	11	-19.092	9052.781	-0.604	1353.9
PH (STANDARD UNITS)	12	8.12	0.19	7.9	8.4	11	0.0005	7.9486	0.132*	0.21
PHOSPHORUS, TOTAL	12	0.037	0.008	0.02	0.05	11	-0.00002	0.04418	-0.156*	0.008
NITRITE + NITRATE, TOTAL	12	0.254	0.144	0.01	0.49	11	0.00022	0.18655	0.075*	0.159
NITROGEN, KJELDAHL, TOTAL	11	0.448	0.116	0.25	0.71	10	0.00027	0.35711	0.121*	0.127
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3776.7	5474.9	390	18000	11	7.033	1866.704	0.064*	5924.6
SEDIMENT SUSPENDED	12	32.2	18.9	11	69					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	106.8	108.5	3	340					
STREPTOCOCCI, FECAL (COL/100 ML)	12	42.0	41.8	2	130					
SILICA, DISSOLVED	12	5.74	1.65	3.7	7.8	11	0.0176	0.0006	0.564*	1.39
CALCIUM, DISSOLVED	12	39.67	5.63	27.0	45.0	11	0.0997	8.0063	0.869	3.05
MAGNESIUM, DISSOLVED	12	12.04	1.94	7.5	15.0	11	0.0355	0.8653	0.891	0.97
SODIUM, DISSOLVED	12	7.76	1.62	4.4	10.0	11	0.0291	-1.4308	0.674	0.87
POTASSIUM, DISSOLVED	12	1.21	0.20	0.9	1.5	11	0.0003	1.1022	0.070*	0.19
BICARBONATE, ION	12	164.7	22.3	112	182	11	0.397	39.771	0.868	12.2
CARBONATE, ION	12	0.8	2.9	0	10	11	-0.011	4.465	-0.191*	3.1
SULFATE, DISSOLVED	12	15.50	3.00	10.0	21.0	11	0.0457	1.0552	0.742	2.22
CHLORIDE, DISSOLVED	12	14.59	2.98	9.4	19.0	11	0.0510	-1.5436	0.835	1.81
DISSOLVED SOLIDS, SUM OF CONST	12	178.5	25.6	121	201	11	0.464	31.905	0.882	13.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	188.1	28.4	133	228	11	0.485	35.593	0.832	17.4
HARDNESS, TOTAL	12	147.3	21.4	98	170	11	0.387	25.040	0.882	11.1
HARDNESS, NONCARBONATE	12	11.4	6.0	0	22	11	0.070	-11.287	0.620	4.8
TURBIDITY (JTU)	12	2.3	1.2	1	5	11	-0.019	8.328	-0.770	0.9
FLUORIDE, DISSOLVED	12	0.15	0.08	0.1	0.3	11	0.0006	-0.0423	0.429*	0.06

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE — SAMPLE SIZE = 294

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%
	399	389	373	358	351	338	305	226	203	191

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
295	11.16	11.44	2.69	97	1.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04122030 -- MUSKEGON R NR BRIDGETON, MICH. .

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED 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	10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	1
IRON (FE), UG/L	4	120	360	4	10	60
LEAD (PB), UG/L	4	6	18	4	0	8
MANGANESE (MN), UG/L	4	20	40	4	0	10
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	3	10	50	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	98.20			
BIOMASS, ASH WT., G/SQ M	4	0.00	67.30			
CHLOROPHYLL A, MG/SQ M	4	0.000	33.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.800			
ORGANIC CARBON, MG/L	3	8.400	18.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.71	8.50	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	435.2	116.5	295	650					
STREAMFLOW (CUBIC FT/SEC)	12	2893.3	672.0	2030	4090	12	-1.949	3741.362	-0.338*	663.4
PH (STANDARD UNITS)	12	7.95	0.22	7.6	8.3	12	-0.0007	8.2523	-0.376*	0.21
PHOSPHORUS, TOTAL	12	0.032	0.010	0.01	0.05	12	-0.00005	0.05169	-0.521*	0.009
NITRITE + NITRATE, TOTAL	12	0.188	0.088	0.09	0.36	12	0.00018	0.11171	0.232*	0.090
NITROGEN, KJELDAHL, TOTAL	12	0.332	0.151	0.14	0.70	12	-0.00008	0.36587	-0.059*	0.158
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2055.0	1871.6	9	4500	11	-0.219	2152.846	-0.013*	1972.6
SEDIMENT SUSPENDED	12	11.2	15.8	1	60					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	10	116.6	95.7	48	350					
STREPTOCOCCI, FECAL (COL/100 ML)	12	35.4	17.1	3	69					
SILICA, DISSOLVED	11	7.05	1.40	5.0	8.9	11	0.0113	2.3428	0.807	0.87
CALCIUM, DISSOLVED	11	54.55	11.14	38.0	72.0	11	0.1014	12.4092	0.906	4.98
MAGNESIUM, DISSOLVED	11	12.01	1.82	8.1	14.0	11	0.0127	6.7178	0.695	1.38
SODIUM, DISSOLVED	11	13.58	4.52	7.1	24.0	11	0.0341	-0.6011	0.752	3.14
POTASSIUM, DISSOLVED	11	1.39	0.34	1.1	2.0	11	0.0030	0.1574	0.871	0.18
BICARBONATE, ION	12	179.3	19.0	136	200	12	0.092	139.366	0.565*	16.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	12.65	1.87	9.2	16.0	11	0.0086	9.0607	0.459*	1.76
CHLORIDE, DISSOLVED	11	44.09	18.35	22.0	77.0	11	0.1725	-27.6261	0.936	6.81
DISSOLVED SOLIDS, SUM OF CONST	11	233.3	42.9	159	294	11	0.401	66.774	0.930	16.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	249.3	39.6	178	312	11	0.327	113.516	0.821	23.8
HARDNESS, TOTAL	11	186.4	33.8	130	240	11	0.298	62.381	0.877	17.1
HARDNESS, NONCARBONATE	11	39.9	23.7	9	76	11	0.205	-45.435	0.862	12.7
TURBIDITY (JTU)	11	4.0	2.2	2	10	11	-0.009	7.773	-0.404*	2.2
FLUORIDE, DISSOLVED	11	0.14	0.08	0.0	0.3	11	0.0001	0.0938	0.126*	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%
	866	681	582	510	452	403	368	314	289	258

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	11.17	11.07	2.66	97	1.35

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	2
CHROMIUM (CR), UG/L	4	< 10	10	4	0	< 10
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	4	220	410	4	40	50
LEAD (PB), UG/L	4	3	20	4	0	9
MANGANESE (MN), UG/L	4	20	40	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	< 0.5
SELENIUM (SE), UG/L	4	0	.0	4	0	0
ZINC (ZN), UG/L	3	10	30	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.50	55.10			
BIOMASS, ASH WT., G/SQ M	4	0.40	37.70			
CHLOROPHYLL A, MG/SQ M	4	0.100	59.600			
CHLOROPHYLL B, MG/SQ M	4	0.000	5.600			
ORGANIC CARBON, MG/L	3	6.500	9.800			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	9.50	8.09	0.5	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	289.5	26.9	233	334					
STREAMFLOW (CUBIC FT/SEC)	13	1516.9	831.5	320	3700	13	-9.950	4397.902	-0.322*	822.1
PH (STANDARD UNITS)	13	8.12	0.23	7.6	8.4	13	-0.0039	9.2665	-0.467*	0.21
PHOSPHORUS, TOTAL	13	0.017	0.015	0.00	0.06	13	-0.00010	0.04449	-0.172*	0.015
NITRITE + NITRATE, TOTAL	13	0.054	0.040	0.01	0.12	13	0.00021	-0.00614	0.141*	0.041
NITROGEN, KJELDAHL, TOTAL	13	0.241	0.080	0.00	0.30	13	-0.00145	0.66014	-0.485*	0.073
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	2054.6	2005.0	320	7100	13	-12.166	5577.082	-0.163*	2066.0
SEDIMENT SUSPENDED	13	3.9	1.8	2	7					
SEDIMENT, CLAY-SILT (PERCENT)	13	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	13	113.2	137.3	14	400					
STREPTOCOCCI, FECAL (COL/100 ML)	13	72.4	91.7	5	290					
SILICA, DISSOLVED	13	7.20	0.84	6.0	8.4	13	0.0178	2.0470	0.569	0.72
CALCIUM, DISSOLVED	13	43.38	2.90	39.0	47.0	13	0.0635	25.0105	0.589	2.45
MAGNESIUM, DISSOLVED	13	12.85	0.90	11.0	14.0	13	0.0191	7.3211	0.572	0.77
SODIUM, DISSOLVED	13	3.01	0.35	2.2	3.6	13	0.0106	-0.0642	0.806	0.22
POTASSIUM, DISSOLVED	13	0.81	0.09	0.7	0.9	13	-0.0008	1.0324	-0.242*	0.09
BICARBONATE, ION	13	195.2	19.4	162	224	13	0.524	43.616	0.728	13.9
CARBONATE, ION	13	1.1	2.8	0	9	13	-0.008	3.257	-0.074*	2.9
SULFATE, DISSOLVED	13	10.92	1.27	7.3	12.0	13	0.0099	8.0475	0.211*	1.29
CHLORIDE, DISSOLVED	13	4.09	1.03	3.1	6.9	13	0.0125	0.4811	0.327*	1.02
DISSOLVED SOLIDS, SUM OF CONST	13	179.8	12.5	159	198	13	0.387	67.897	0.831	7.3
DISSOLVED SOLIDS, ROE 180 DEG C	13	177.1	11.5	161	198	13	0.243	106.733	0.571	9.8
HARDNESS, TOTAL	13	163.1	8.5	150	180	13	0.242	92.933	0.763	5.8
HARDNESS, NONCARBONATE	13	4.5	5.2	0	14	13	-0.108	35.674	-0.563	4.5
TURBIDITY (JTU)	13	1.5	0.7	1	3	13	-0.006	3.099	-0.231*	0.7
FLUORIDE, DISSOLVED	13	0.33	0.51	0.1	2.0	13	0.0084	-2.0939	0.443*	0.48

*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%
	412	364	331	322	317	291	275	265	260	260

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
359	11.31	12.06	2.52	97	1.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	4	0	0
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	10
COBALT (CO), UG/L	4	0	2	4	0	2
COPPER (CU), UG/L	4	0	12	4	0	2
IRON (FE), UG/L	4	60	120	4	0	50
LEAD (PB), UG/L	4	5	24	4	0	4
MANGANESE (MN), UG/L	4	0	30	4	0	1
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
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	3	2.20	12.00			
BIOMASS, ASH WT., G/SQ M	3	1.20	10.40			
CHLOROPHYLL A, MG/SQ M	3	2.200	4.800			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	4	5.400	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, K	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.75	9.25	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	408.5	38.5	336	461					
STREAMFLOW (CUBIC FT/SEC)	12	264.4	103.0	166	492	12	-1.925	1070.850	-0.720	75.0
PH (STANDARD UNITS)	12	8.12	0.21	7.8	8.4	12	0.0004	7.9784	0.065*	0.22
PHOSPHORUS, TOTAL	12	0.033	0.016	0.01	0.07	12	-0.00002	0.04058	-0.042*	0.017
NITRITE + NITRATE, TOTAL	12	0.130	0.132	0.00	0.32	12	-0.00090	0.49718	-0.262*	0.134
NITROGEN, KJELDAHL, TOTAL	12	0.377	0.217	0.00	0.60	12	-0.00434	2.15232	-0.772	0.145
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1637.3	1489.0	150	5500	11	0.763	1320.896	0.017*	1569.3
SEDIMENT SUSPENDED	12	16.4	10.3	2	42					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	85.4	116.5	5	380					
STREPTOCOCCI, FECAL (COL/100 ML)	12	37.9	39.3	5	130					
SILICA, DISSOLVED	12	7.10	1.81	5.1	11.0	12	0.0240	-2.6862	0.510*	1.63
CALCIUM, DISSOLVED	12	55.42	6.58	39.0	63.0	12	0.1449	-3.7662	0.848	3.66
MAGNESIUM, DISSOLVED	12	14.67	1.72	11.0	17.0	12	0.0389	-1.2057	0.869	0.89
SODIUM, DISSOLVED	12	10.00	1.55	6.6	12.0	12	0.0350	-4.2978	0.868	0.81
POTASSIUM, DISSOLVED	12	1.12	0.26	0.8	1.8	12	-0.0043	2.8837	-0.647	0.20
BICARBONATE, ION	12	220.0	22.0	174	250	12	0.458	32.631	0.802	13.8
CARBONATE, ION	12	1.7	5.8	0	20	12	-0.026	12.415	-0.176*	6.0
SULFATE, DISSOLVED	12	28.08	2.81	22.0	31.0	12	0.0481	8.4490	0.659	2.22
CHLORIDE, DISSOLVED	12	16.17	2.21	11.0	19.0	12	0.0509	-4.6299	0.888	1.06
DISSOLVED SOLIDS, SUM OF CONST	12	242.7	24.7	185	275	12	0.541	21.803	0.845	13.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	250.3	19.7	210	284	12	0.470	58.119	0.919	8.2
HARDNESS, TOTAL	12	199.2	21.1	150	230	12	0.471	6.823	0.861	11.3
HARDNESS, NONCARBONATE	12	16.2	10.8	0	36	12	0.136	-39.549	0.489*	9.8
TURBIDITY (JTU)	12	3.2	1.3	1	5	12	-0.022	12.215	-0.634	1.1
FLUORIDE, DISSOLVED	12	0.19	0.09	0.1	0.4	12	0.0006	-0.0426	0.245*	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 307

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%
	458	452	445	437	430	412	387	344	288	236

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
307	10.36	11.80	2.75	93	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	3	4	0	2
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	0	9	4	0	0
IRON (FE), UG/L	4	200	750	4	20	70
LEAD (PB), UG/L	3	2	18	4	0	15
MANGANESE (MN), UG/L	3	20	40	4	0	30
MERCURY (HG), UG/L	4	0.1	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	3	10	60	4	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	3.10	360,00			
BIOMASS, ASH WT., G/SQ M	4	2.20	340.00			
CHLOROPHYLL A, MG/SQ M	4	0.800	25.000			
CHLOROPHYLL B, MG/SQ M	4	0.100	0.200			
ORGANIC CARBON, MG/L	3	6.000	8.900			

Table 12. 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: 10/01/75 - 09/30/76

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)	14	12.36	9.97	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	713.9	167.3	378	960					
STREAMFLOW (CUBIC FT/SEC)	12	8616.7	10063.0	1300	32800	10	-34.910	32078.199	-0.693	7044.8
PH (STANDARD UNITS)	12	7.98	0.23	7.6	8.3	12	0.0005	7.5978	0.395*	0.22
PHOSPHORUS, TOTAL	12	0.228	0.082	0.11	0.38	12	0.00031	0.00783	0.632	0.066
NITRITE + NITRATE, TOTAL	12	0.846	0.361	0.28	1.40	12	-0.00102	1.57613	-0.474*	0.333
NITROGEN, KJELDAHL, TOTAL	12	1.171	0.327	0.68	1.70	12	0.00120	0.31606	0.613	0.270
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	25590.0	26049.8	390	69000	11	29.774	3424.719	0.155*	27125.1
SEDIMENT SUSPENDED	14	33.2	20.6	2	70					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	2533.3	3069.2	120	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	381.5	447.6	38	1200					
SILICA, DISSOLVED	12	4.68	2.64	0.5	9.0	12	0.0035	2.2130	0.219*	2.70
CALCIUM, DISSOLVED	12	73.25	12.85	40.0	87.0	12	0.0630	28.3020	0.820	7.72
MAGNESIUM, DISSOLVED	12	21.00	3.95	12.0	25.0	12	0.0215	5.6202	0.911	1.71
SODIUM, DISSOLVED	12	32.25	14.36	10.0	61.0	12	0.0742	-20.7531	0.865	7.56
POTASSIUM, DISSOLVED	12	3.02	0.50	2.4	4.1	12	0.0021	1.5155	0.703	0.37
BICARBONATE, ION	12	243.0	40.8	152	300	12	0.163	126.396	0.670	31.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	52.08	10.73	31.0	73.0	12	0.0512	15.5246	0.798	6.78
CHLORIDE, DISSOLVED	12	70.00	30.96	22.0	130.0	12	0.1595	-43.8886	0.862	16.46
DISSOLVED SOLIDS, SUM OF CONST	12	376.3	78.9	197	480	12	0.457	50.297	0.968	20.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	415.2	96.0	235	590	12	0.521	43.165	0.908	42.3
HARDNESS, TOTAL	12	269.2	47.4	150	320	12	0.244	94.642	0.863	25.1
HARDNESS, NONCARBONATE	12	70.3	25.7	25	130	12	0.113	-10.334	0.735	18.3
TURBIDITY (JTU)	12	16.2	10.9	2	30	12	-0.042	46.300	-0.647	8.7
FLUORIDE, DISSOLVED	12	0.25	0.10	0.1	0.5	12	0.0001	0.1664	0.196*	0.10

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 267

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%
	985	861	830	774	734	676	572	413	390	322

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
298	12.04	12.65	2.73	96	1.87

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	3	4	0	3
CADMIUM (CD), UG/L	4	0	4	4	0	1
CHROMIUM (CR), UG/L	4	<10	10	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	4
IRON (FE), UG/L	4	460	1500	4	10	40
LEAD (PB), UG/L	4	7	62	4	0	2
MANGANESE (MN), UG/L	4	60	100	4	10	50
MERCURY (HG), UG/L	4	0.1	<0.5	4	0.1	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	70	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	10.000	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.63	9.35	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	721.6	156.6	355	960					
STREAMFLOW (CUBIC FT/SEC)	12	959.8	1344.7	250	5110	12	-6.715	5806.352	-0.763	677.5
PH (STANDARD UNITS)	12	7.93	0.12	7.6	8.2	12	0.0002	7.7938	0.246*	0.13
PHOSPHORUS, TOTAL	12	0.238	0.063	0.13	0.40	12	0.00009	0.17690	0.160*	0.086
NITRITE + NITRATE, TOTAL	12	2.333	0.605	1.50	3.50	12	0.00085	1.72291	0.219*	0.619
NITROGEN, KJELDAHL, TOTAL	12	0.883	0.262	0.19	1.20	12	0.00074	0.35167	0.441*	0.246
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4169.2	3435.4	560	13000	12	8.192	-1743.199	0.374*	3341.8
SEDIMENT SUSPENDED	11	38.7	59.5	11	213					
SEDIMENT, CLAY-SILT (PERCENT)	11	99.2	2.7	91	100					
COLIFORM, FECAL (COL/100 ML)	11	2308.2	4330.7	30	12000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	893.3	1013.7	60	2800					
SILICA, DISSOLVED	12	5.13	1.31	3.1	7.3	12	0.0039	2.3485	0.462*	1.22
CALCIUM, DISSOLVED	11	70.91	13.03	48.0	90.0	11	0.0644	24.5856	0.811	8.04
MAGNESIUM, DISSOLVED	11	19.64	3.41	12.0	23.0	11	0.0169	7.4811	0.813	2.10
SODIUM, DISSOLVED	11	42.09	12.45	22.0	65.0	11	0.0475	7.9350	0.626	10.24
POTASSIUM, DISSOLVED	11	3.93	0.72	2.9	5.2	11	0.0004	3.6055	0.102*	0.76
BICARBONATE, ION	12	238.3	41.6	152	280	12	0.199	94.494	0.751	28.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	55.25	12.15	36.0	76.0	12	0.0350	29.9906	0.451*	11.37
CHLORIDE, DISSOLVED	12	61.92	21.36	11.0	90.0	12	-0.0163	73.7036	-0.120*	22.24
DISSOLVED SOLIDS, SUM OF CONST	11	380.3	55.9	248	464	11	0.258	194.579	0.758	38.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	369.8	116.6	51	477	12	-0.045	402.330	-0.061*	122.0
HARDNESS, TOTAL	11	257.3	46.3	170	320	11	0.226	94.459	0.803	29.1
HARDNESS, NONCARBONATE	11	62.2	19.1	40	98	11	0.065	15.385	0.558*	16.7
TURBIDITY (JTU)	11	15.0	14.6	4	45	11	-0.056	55.469	-0.630	12.0
FLUORIDE, DISSOLVED	12	0.62	1.07	0.0	4.0	12	0.0039	-2.1553	0.563*	0.93

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 314

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%
	1510	1020	973	882	750	688	646	560	440	342

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
308	11.97	11.50	2.73	93	2.24

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	3	4	0	2
CADMIUM (CD), UG/L	3	0	3	4	0	2
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	10	11	4	0	10
IRON (FE), UG/L	4	540	3100	4	30	260
LEAD (PB), UG/L	4	8	54	4	1	8
MANGANESE (MN), UG/L	4	40	160	4	40	100
MERCURY (HG), UG/L	4	0.1	<0.5	4	0.1	<0.5
SELENIUM (SE), UG/L	4	0	2	4	0	0
ZINC (ZN), UG/L	4	40	80	4	10	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	16.00	91.70			
BIOMASS, ASH WT., G/SQ M	3	11.00	62.60			
CHLOROPHYLL A, MG/SQ M	3	5.900	110.000			
CHLOROPHYLL B, MG/SQ M	3	0.500	10.800			
ORGANIC CARBON, MG/L	4	8.500	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	8	15.36	6.63	1.9	21.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	214.3	36.6	160	296					
STREAMFLOW (CUBIC FT/SEC)	12	227999.9	11401.7	204000	242000	10	-207.221	271626.250	-0.599*	9857.0
PH (STANDARD UNITS)	12	7.92	0.16	7.7	8.2	10	-0.0030	8.5772	-0.554*	0.16
PHOSPHORUS, TOTAL	11	0.015	0.005	0.01	0.02	9	-0.00008	0.03405	-0.533*	0.005
NITRITE + NITRATE, TOTAL	11	0.287	0.053	0.21	0.40	9	-0.00041	0.37607	-0.235*	0.061
NITROGEN, KJELDAHL, TOTAL	11	0.203	0.074	0.11	0.35	9	0.00148	-0.13442	0.638*	0.065
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3326.7	2026.6	560	6900	10	24.114	-1691.938	0.398*	1980.3
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	6.4	9.8	<1	32					
STREPTOCOCCI, FECAL (COL/100 ML)	12	13.7	28.6	<1	100					
SILICA, DISSOLVED	11	0.68	0.25	0.3	0.9	9	0.0002	0.7093	0.033*	0.23
CALCIUM, DISSOLVED	11	27.91	1.45	25.0	30.0	9	0.0310	20.7557	0.699	1.15
MAGNESIUM, DISSOLVED	11	6.91	0.99	4.0	7.5	9	0.0013	6.9043	0.175*	0.26
SODIUM, DISSOLVED	11	4.00	0.50	3.0	4.6	9	0.0050	2.7757	0.345*	0.50
POTASSIUM, DISSOLVED	11	1.03	0.32	0.7	1.9	9	0.0029	0.2934	0.687	0.11
BICARBONATE, ION	12	104.2	3.2	100	110	10	0.015	100.564	0.143*	3.6
CARBONATE, ION	12	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	16.64	3.35	11.0	25.0	9	0.0139	12.4651	0.241*	2.02
CHLORIDE, DISSOLVED	11	7.42	1.03	5.8	9.8	9	0.0100	4.8960	0.475*	0.67
DISSOLVED SOLIDS, SUM OF CONST	11	116.0	5.0	108	127	9	0.076	97.494	0.754	2.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	113.8	14.0	90	134	9	0.026	109.333	0.072*	13.3
HARDNESS, TOTAL	11	98.0	5.3	89	110	9	0.125	70.964	0.867	2.6
HARDNESS, NONCARBONATE	11	12.5	6.7	2	26	9	0.108	-10.424	0.575*	5.6
TURBIDITY (JTU)	10	2.9	2.8	0	9	8	-0.023	7.477	-0.386*	2.0
FLUORIDE, DISSOLVED	11	0.13	0.06	0.0	0.2	9	0.0008	-0.0540	0.402*	0.07

*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%
	252	235	228	224	220	214	210	206	204	201

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	10.55	10.96	2.52	98	1.20

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0
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	2
COPPER (CU), UG/L	4	0	12	4	0	10
IRON (FE), UG/L	4	40	370	4	0	10
LEAD (PB), UG/L	4	2	12	4	0	11
MANGANESE (MN), UG/L	4	0	10	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.70	35.30			
BIOMASS, ASH WT., G/SQ M	3	0.60	30.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	13.900			
CHLOROPHYLL B, MG/SQ M	3	0.000	1.100			
ORGANIC CARBON, MG/L	4	2.600	8.600			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	12.61	8.47	0.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	567.1	130.4	310	730					
STREAMFLOW (CUBIC FT/SEC)	14	15169.1	23942.5	268	67600	12	-112.684	73298.750	-0.769	12622.1
PH (STANDARD UNITS)	12	8.15	0.86	6.4	9.0	12	0.0039	5.9187	0.596	0.72
PHOSPHORUS, TOTAL	12	0.376	0.499	0.12	1.90	12	-0.00208	1.55788	-0.544*	0.439
NITRITE + NITRATE, TOTAL	12	3.174	3.062	0.01	11.00	12	0.00012	3.10567	0.005*	3.211
NITROGEN, KJELDAHL, TOTAL	12	1.690	0.882	0.51	3.50	12	-0.00418	4.06155	-0.619	0.726
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	59818.3	52382.6	520	140000	12	147.859	-24030.043	0.368*	51080.1
SEDIMENT SUSPENDED	14	318.4	478.3	8	1350					
SEDIMENT, CLAY-SILT (PERCENT)	3	97.0	1.7	96	99					
COLIFORM, FECAL (COL/100 ML)	12	831.1	2160.7	6	7500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1595.7	3991.3	8	14000					
SILICA, DISSOLVED	4	2.57	3.47	0.1	7.7					
CALCIUM, DISSOLVED	4	61.75	12.84	51.0	80.0					
MAGNESIUM, DISSOLVED	4	22.25	2.87	20.0	26.0					
SODIUM, DISSOLVED	4	26.25	4.11	21.0	31.0					
POTASSIUM, DISSOLVED	4	4.30	1.04	3.1	5.4					
BICARBONATE, ION	4	177.0	40.2	150	236					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	94.50	3.51	91.0	98.0					
CHLORIDE, DISSOLVED	4	42.00	6.16	34.0	49.0					
DISSOLVED SOLIDS, SUM OF CONST	4	341.5	40.4	320	402					
DISSOLVED SOLIDS, ROE 180 DEG C	4	372.8	49.2	331	442					
HARDNESS, TOTAL	4	245.0	43.6	220	310					
HARDNESS, NONCARBONATE	4	100.0	6.7	96	110					
TURBIDITY (JTU)	4	14.5	14.1	3	35					
FLUORIDE, DISSOLVED	4	0.37	0.10	0.3	0.5					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	14.34	11.30	2.74	93	2.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04193500 -- MAUMEE R AT WATERVILLE OH

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	8	4	0	4
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	7	4	0	2
COPPER (CU), UG/L	4	10	20	4	10	20
IRON (FE), UG/L	4	320	1000	4	20	390
LEAD (PB), UG/L	4	1	9	4	0	4
MANGANESE (MN), UG/L	4	30	90	4	10	30
MERCURY (HG), UG/L	4	0.5	1.9	4	0.5	0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	420	4	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	6.30				
BIOMASS, ASH WT., G/SQ M	1	5.20				
CHLOROPHYLL A, MG/SQ M	1	17.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	6.600	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	12.92	7.82	0.5	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	818.8	219.7	600	1240					
STREAMFLOW (CUBIC FT/SEC)	12	638.3	246.6	212	1050	12	-0.694	1206.563	-0.618	203.2
PH (STANDARD UNITS)	12	7.75	0.18	7.3	7.9	12	0.0001	7.6626	0.132*	0.19
PHOSPHORUS, TOTAL	12	0.476	0.134	0.31	0.70	12	0.00024	0.28173	0.390*	0.129
NITRITE + NITRATE, TOTAL	12	2.400	0.531	1.70	3.60	12	0.00122	1.40395	0.503*	0.481
NITROGEN, KJELDAHL, TOTAL	12	1.304	0.443	0.35	2.10	12	0.00078	0.66529	0.367*	0.429
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	14841.7	18024.1	1100	56000	12	47.074	-23700.301	0.574*	15481.6
SEDIMENT SUSPENDED	12	36.4	34.3	4	109					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	6416.7	8470.2	1000	32000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1405.8	1712.0	90	5200					
SILICA, DISSOLVED	4	7.55	2.24	4.2	8.9					
CALCIUM, DISSOLVED	4	61.00	5.83	55.0	66.0					
MAGNESIUM, DISSOLVED	4	14.25	1.50	13.0	16.0					
SODIUM, DISSOLVED	4	92.75	31.70	72.0	140.0					
POTASSIUM, DISSOLVED	4	4.85	0.31	4.6	5.3					
BICARBONATE, ION	4	142.0	11.7	130	158					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	89.25	9.32	77.0	99.0					
CHLORIDE, DISSOLVED	4	142.50	51.88	110.0	220.0					
DISSOLVED SOLIDS, SUM OF CONST	4	483.0	90.8	426	617					
DISSOLVED SOLIDS, ROE 180 DEG C	4	536.8	93.6	468	670					
HARDNESS, TOTAL	4	212.5	17.1	190	230					
HARDNESS, NONCARBONATE	4	93.3	11.6	76	100					
TURBIDITY (JTU)	4	5.8	3.3	2	10					
FLUORIDE, DISSOLVED	4	0.27	0.05	0.2	0.3					

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	12.78	10.24	2.71	93	2.36

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	3	4	0	2
CADMIUM (CD), UG/L	4	1	3	4	1	3
CHROMIUM (CR), UG/L	4	10	30	4	<10	30
COBALT (CO), UG/L	4	1	6	4	1	6
COPPER (CU), UG/L	4	10	20	4	0	20
IRON (FE), UG/L	4	720	950	4	50	280
LEAD (PB), UG/L	4	6	15	4	0	6
MANGANESE (MN), UG/L	4	90	160	4	40	140
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	30	40	4	20	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	5.20	27.00			
BIOMASS, ASH WT., G/SQ M	4	2.80	23.00			
CHLOROPHYLL A, MG/SQ M	4	7.000	28.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	4.900			
ORGANIC CARBON, MG/L	4	6.500	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	8	16.02	5.43	8.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	340.8	46.3	310	430					
STREAMFLOW (CUBIC FT/SEC)	3	250666.6	2309.4	248000	252000					
PH (STANDARD UNITS)	8	7.71	0.45	6.8	8.2	8	0.0042	6.2862	0.426*	0.44
PHOSPHORUS, TOTAL	8	0.035	0.016	0.00	0.06	8	-0.00004	0.05024	-0.117*	0.019
NITRITE + NITRATE, TOTAL	8	0.201	0.118	0.07	0.42	8	-0.00076	0.45910	-0.297*	0.122
NITROGEN, KJELDAHL, TOTAL	8	0.394	0.075	0.30	0.53	8	-0.00058	0.59056	-0.358*	0.075
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	3315.0	3536.6	190	9100	8	15.209	-1867.609	0.199*	3743.5
SEDIMENT SUSPENDED	8	14.0	13.0	3	43					
SEDIMENT, CLAY-SILT (PERCENT)	8	81.0	13.2	56	95					
COLIFORM, FECAL (COL/100 ML)	8	96.9	117.9	11	370					
STREPTOCOCCI, FECAL (COL/100 ML)	8	79.9	182.9	3	530					
SILICA, DISSOLVED	8	0.17	0.07	0.1	0.3	8	-0.0004	0.3103	-0.260*	0.07
CALCIUM, DISSOLVED	8	38.63	1.30	37.0	41.0	8	0.0022	37.8915	0.076*	1.40
MAGNESIUM, DISSOLVED	8	8.25	0.40	7.8	8.9	8	0.0063	6.0894	0.727	0.30
SODIUM, DISSOLVED	8	11.13	1.55	10.0	14.0	8	0.0034	9.9593	0.102*	1.67
POTASSIUM, DISSOLVED	8	1.40	0.09	1.3	1.6	8	-0.0007	1.6275	-0.334*	0.09
BICARBONATE, ION	8	114.4	2.8	111	119	8	0.025	105.897	0.407*	2.8
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	26.13	2.53	24.0	32.0	8	-0.0098	29.4628	-0.179*	2.69
CHLORIDE, DISSOLVED	8	23.25	1.98	21.0	27.0	8	-0.0087	26.2182	-0.203*	2.10
DISSOLVED SOLIDS, SUM OF CONST	8	165.5	5.1	159	173	8	0.003	164.431	0.028*	5.5
DISSOLVED SOLIDS, ROE 180 DEG C	8	180.9	34.4	106	214	8	0.193	115.239	0.259*	35.9
HARDNESS, TOTAL	8	130.0	0.0	130	130	8	0.000	130.000	0.000*	0.0
HARDNESS, NONCARBONATE	8	36.6	2.4	33	40	8	0.014	31.957	0.259*	2.6
TURBIDITY (JTU)	8	3.9	4.8	1	15	8	-0.017	9.703	-0.166*	5.1
FLUORIDE, DISSOLVED	8	0.12	0.05	0.1	0.2	8	0.0002	0.0465	0.230*	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 163

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%
	327	313	310	307	301	292	286	278	273	270

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
170	10.74	10.73	2.40	96	1.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	0	3	0	0
CADMIUM (CD), UG/L	3	0	2	3	0	2
CHROMIUM (CR), UG/L	3	<10	<10	3	<10	<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	300	3	10	20
LEAD (PB), UG/L	3	20	38	3	5	14
MANGANESE (MN), UG/L	3	0	10	3	0	3
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	12.00	16.50			
BIOMASS, ASH WT., G/SQ M	2	3.77	13.40			
CHLOROPHYLL A, MG/SQ M	2	13.700	18.900			
CHLOROPHYLL B, MG/SQ M	2	1.400	4.300			
ORGANIC CARBON, MG/L	3	2.100	5.500			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 04232006 NAME: GENESEE RIVER(CHARLOTTE DOCKS)AT ROCHESTER NY

LAT 43D13M26S LONG 077D36M59S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	18.76	5.04	11.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	596.1	132.6	380	810					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	7	7.44	0.35	6.8	7.8	7	0.0013	6.6652	0.534*	0.32
PHOSPHORUS, TOTAL	7	0.121	0.041	0.07	0.17	7	0.00026	-0.03786	0.922	0.017
NITRITE + NITRATE, TOTAL	7	0.696	0.156	0.52	1.00	7	-0.00016	0.79504	-0.151*	0.169
NITROGEN, KJELDAHL, TOTAL	7	1.030	0.355	0.48	1.60	7	0.00199	-0.17541	0.805	0.231
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	7080.0	6264.2	690	17000	7	31.699	-12364.039	0.677*	5405.4
SEDIMENT SUSPENDED	8	43.1	14.7	22	65					
SEDIMENT, CLAY-SILT (PERCENT)	8	92.1	12.3	62	99					
COLIFORM, FECAL (COL/100 ML)	7	440.0	338.1	140	1100					
STREPTOCOCCI, FECAL (COL/100 ML)	7	109.0	134.1	5	380					
SILICA, DISSOLVED	7	2.76	1.19	1.1	4.3	7	0.0039	0.3890	0.473*	1.15
CALCIUM, DISSOLVED	7	62.14	9.19	44.0	72.0	7	0.0525	30.4112	0.819	5.78
MAGNESIUM, DISSOLVED	7	12.79	1.73	9.5	15.0	7	0.0086	7.5601	0.717*	1.32
SODIUM, DISSOLVED	7	30.29	10.95	14.0	47.0	7	0.0567	-3.9730	0.742*	8.04
POTASSIUM, DISSOLVED	7	2.77	0.56	1.8	3.5	7	0.0035	0.6577	0.897	0.27
BICARBONATE, ION	7	154.1	17.5	118	168	7	0.080	106.094	0.650*	14.6
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	7	75.43	17.14	49.0	100.0	7	0.0928	19.3365	0.777	11.82
CHLORIDE, DISSOLVED	7	50.00	19.18	21.0	79.0	7	0.1022	-11.7412	0.764	13.57
DISSOLVED SOLIDS, SUM OF CONST	7	312.6	59.3	200	366	7	0.360	94.748	0.871	31.9
DISSOLVED SOLIDS, RDE 180 DEG C	7	352.6	77.8	218	428	7	0.479	63.305	0.882	40.2
HARDNESS, TOTAL	7	208.6	29.1	150	240	7	0.160	111.830	0.788	19.6
HARDNESS, NONCARBONATE	7	81.9	18.7	52	110	7	0.102	20.144	0.784	12.7
TURBIDITY (JTU)	7	16.6	10.0	1	30	7	-0.020	28.636	-0.285*	10.5
FLUORIDE, DISSOLVED	7	0.26	0.24	0.1	0.8	7	0.0013	-0.5087	0.745*	0.18

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04232006 -- GENESEE RIVER(CHARLOTTE DOCKS)AT ROCHESTER NY

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	3	3	0	2
CADMIUM (CD), UG/L	3	1	2	3	0	1
CHROMIUM (CR), UG/L	3	<10	20	3	<10	<10
COBALT (CO), UG/L	3	1	1	3	0	1
COPPER (CU), UG/L	3	0	20	3	0	10
IRON (FE), UG/L	3	1000	1700	3	20	50
LEAD (PB), UG/L	3	13	21	3	1	8
MANGANESE (MN), UG/L	3	70	90	3	20	50
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	30	40	3	20	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	18.20	33.20			
BIOMASS, ASH WT., G/SQ M	2	13.50	27.40			
CHLOROPHYLL A, MG/SQ M	2	27.000	58.100			
CHLOROPHYLL B, MG/SQ M	2	1.200	7.800			
ORGANIC CARBON, MG/L	3	6.400	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	13.46	8.86	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	799.2	148.9	570	1000					
STREAMFLOW (CUBIC FT/SEC)	13	10606.2	6192.9	3000	22500	13	-34.622	38276.667	-0.833	3562.1
PH (STANDARD UNITS)	11	7.69	0.24	7.2	8.0	11	0.0009	6.9203	0.594*	0.20
PHOSPHORUS, TOTAL	11	0.085	0.013	0.06	0.10	11	-0.00002	0.10107	-0.222*	0.013
NITRITE + NITRATE, TOTAL	11	0.546	0.266	0.21	1.00	11	-0.00062	1.05547	-0.352*	0.262
NITROGEN, KJELDAHL, TOTAL	11	0.985	0.288	0.54	1.50	11	0.00008	0.91993	0.042*	0.303
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	23153.1	25064.9	590	76000	13	71.360	-33880.125	0.424*	23709.1
SEDIMENT SUSPENDED	13	19.9	9.3	4	36					
SEDIMENT, CLAY-SILT (PERCENT)	13	82.8	10.8	62	97					
COLIFORM, FECAL (COL/100 ML)	11	447.1	953.8	53	3300					
STREPTOCOCCI, FECAL (COL/100 ML)	11	83.6	71.6	8	190					
SILICA, DISSOLVED	11	2.03	1.53	0.5	4.6	11	0.0002	1.8257	0.024*	1.61
CALCIUM, DISSOLVED	11	77.27	15.72	59.0	110.0	11	0.0869	5.9931	0.833	9.17
MAGNESIUM, DISSOLVED	11	12.00	1.48	10.0	15.0	11	0.0084	5.1259	0.852	0.82
SODIUM, DISSOLVED	11	59.09	14.63	40.0	84.0	11	0.0868	-12.0837	0.894	6.91
POTASSIUM, DISSOLVED	11	2.58	0.35	2.0	3.2	11	0.0017	1.1670	0.740	0.25
BICARBONATE, ION	11	141.2	12.0	124	165	11	0.046	103.333	0.579*	10.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	58.82	8.75	44.0	70.0	11	0.0468	18.7974	0.841	5.00
CHLORIDE, DISSOLVED	11	140.18	40.48	93.0	220.0	11	0.2229	-42.6720	0.830	23.79
DISSOLVED SOLIDS, SUM OF CONST	11	421.7	81.1	319	564	11	0.480	28.275	0.891	38.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	502.6	125.3	345	708	11	0.740	-104.850	0.891	60.0
HARDNESS, TOTAL	11	242.7	42.4	190	320	11	0.246	40.524	0.875	21.6
HARDNESS, NONCARBONATE	11	128.3	41.8	83	220	11	0.220	-52.378	0.795	26.7
TURBIDITY (JTU)	11	5.6	3.9	1	15	11	-0.017	19.612	-0.658	3.1
FLUORIDE, DISSOLVED	11	0.12	0.06	0.0	0.2	11	0.0003	-0.1052	0.661	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 252

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	1150	1050	931	890	773	668	589	567	541

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
295	11.39	11.60	2.58	96	1.67

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

04249000 -- OSWEGO RIVER AT LOCK 7 AT OSWEGO NY

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	0	1	2	0	0
CADMIUM (CD), UG/L	2	0	1	2	0	1
CHROMIUM (CR), UG/L	2	<10	<10	2	<10	<10
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	290	2	10	30
LEAD (PB), UG/L	2	8	9	2	2	7
MANGANESE (MN), UG/L	2	50	50	2	0	10
MERCURY (HG), UG/L	2	< 0.5	< 0.5	2	<0.5	<0.5
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	10	10	2	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.08	2.38			
BIOMASS, ASH WT., G/SQ M	2	1.69	1.92			
CHLOROPHYLL A, MG/SQ M	2	2.300	6.400			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.800			
ORGANIC CARBON, MG/L	2	6.500	9.800			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.58	8.43	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	66.1	23.1	54	130					
STREAMFLOW (CUBIC FT/SEC)	16	5220.0	2298.0	2350	8950	12	-3.285	5964.441	-0.031*	2568.2
PH (STANDARD UNITS)	12	6.81	0.25	6.4	7.2	12	0.0017	6.6607	0.161*	0.26
PHOSPHORUS, TOTAL	12	0.046	0.018	0.02	0.08	12	0.00047	0.00560	0.603	0.015
NITRITE + NITRATE, TOTAL	12	0.353	0.185	0.16	0.71	12	0.00356	0.04721	0.445*	0.173
NITROGEN, KJELDAHL, TOTAL	12	0.377	0.094	0.26	0.56	12	0.00016	0.36385	0.039*	0.098
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	956.7	606.8	50	1900	12	2.329	756.159	0.089*	633.9
SEDIMENT SUSPENDED	15	7.6	8.3	1	32					
SEDIMENT, CLAY-SILT (PERCENT)	15	78.2	17.0	30	95					
COLIFORM, FECAL (COL/100 ML)	12	434.8	522.0	27	1500					
STREPTOCOCCI, FECAL (COL/100 ML)	12	188.7	220.5	30	800					
SILICA, DISSOLVED	12	5.54	1.01	3.8	7.3	12	0.0243	3.4528	0.558*	0.88
CALCIUM, DISSOLVED	11	12.47	3.01	8.3	18.0	11	0.1128	2.4369	0.817	1.83
MAGNESIUM, DISSOLVED	11	1.20	0.35	0.8	2.0	11	0.0116	0.1708	0.728	0.25
SODIUM, DISSOLVED	11	1.91	0.59	1.1	2.7	11	0.0088	1.1269	0.324*	0.59
POTASSIUM, DISSOLVED	11	0.71	0.17	0.5	1.1	11	0.0028	0.4640	0.353*	0.17
BICARBONATE, ION	12	35.1	9.5	18	52	12	0.367	3.515	0.897	4.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.52	2.24	5.7	13.0	12	0.0494	5.2662	0.510*	2.02
CHLORIDE, DISSOLVED	12	1.95	0.80	0.4	3.2	12	0.0296	-0.6015	0.860	0.43
DISSOLVED SOLIDS, SUM OF CONST	11	52.2	9.5	38	69	11	0.382	18.199	0.881	4.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	63.2	18.2	29	95	12	0.423	26.738	0.537*	16.1
HARDNESS, TOTAL	11	36.1	8.9	25	52	11	0.337	6.112	0.825	5.3
HARDNESS, NONCARBONATE	11	6.3	3.9	0	15	11	0.065	0.490	0.361*	3.9
TURBIDITY (JTU)	12	2.9	1.8	1	7	12	0.019	1.275	0.247*	1.8
FLUORIDE, DISSOLVED	12	0.13	0.07	0.1	0.3	12	0.0021	-0.0507	0.759	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	10.67	11.36	2.77	94	2.24

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	0
CADMIUM (CD), UG/L	4	0	3	4	0	1
CHROMIUM (CR), UG/L	4	10	20	3	0	20
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	4	430	1100	4	100	200
LEAD (PB), UG/L	4	4	16	4	1	7
MANGANESE (MN), UG/L	4	40	50	4	20	20
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	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.23	3.69			
BIOMASS, ASH WT., G/SQ M	2	0.15	2.54			
CHLOROPHYLL A, MG/SQ M	2	0.300	9.300			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.400			
ORGANIC CARBON, MG/L	3	5.000	7.800			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	9.33	8.09	0.0	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	336.5	17.7	315	380					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.61	0.14	7.4	7.9	12	-0.0020	8.2876	-0.248*	0.15
PHOSPHORUS, TOTAL	12	0.031	0.012	0.01	0.05	12	-0.00000	0.03132	-0.002*	0.012
NITRITE + NITRATE, TOTAL	12	0.189	0.077	0.07	0.32	12	0.00167	-0.37362	0.385*	0.074
NITROGEN, KJELDAHL, TOTAL	12	0.310	0.116	0.07	0.46	12	-0.00234	1.09580	-0.357*	0.114
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2228.2	1888.0	510	6900	11	-9.085	5290.668	-0.089*	1982.3
SEDIMENT SUSPENDED	8	5.0	3.3	1	12					
SEDIMENT, CLAY-SILT (PERCENT)	8	72.6	19.7	44	100					
COLIFORM, FECAL (COL/100 ML)	12	6.3	7.1	0	27					
STREPTOCOCCI, FECAL (COL/100 ML)	11	8.7	22.3	<1	76					
SILICA, DISSOLVED	12	0.37	0.14	0.2	0.6	12	-0.0003	0.4644	-0.037*	0.14
CALCIUM, DISSOLVED	12	36.08	1.73	34.0	40.0	12	-0.0219	45.4537	-0.224*	1.77
MAGNESIUM, DISSOLVED	12	7.82	0.98	5.3	9.1	12	-0.0046	9.3506	-0.082*	1.03
SODIUM, DISSOLVED	12	12.58	0.79	11.0	14.0	12	0.0060	9.8988	0.178*	0.82
POTASSIUM, DISSOLVED	12	1.47	0.08	1.4	1.6	12	0.0004	1.3535	0.085*	0.08
BICARBONATE, ION	12	110.8	3.0	106	116	12	0.110	73.703	0.659	2.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	27.33	1.97	24.0	31.0	12	-0.0574	46.6623	-0.516*	1.77
CHLORIDE, DISSOLVED	12	26.58	1.16	24.0	28.0	12	-0.0065	28.7798	-0.099*	1.22
DISSOLVED SOLIDS, SUM OF CONST	12	169.0	3.7	162	174	12	-0.034	180.519	-0.164*	3.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	188.1	17.9	140	213	12	-0.222	262.715	-0.219*	18.4
HARDNESS, TOTAL	12	127.5	4.5	120	130	12	0.013	123.107	0.051*	4.7
HARDNESS, NONCARBONATE	12	36.5	5.7	27	44	12	-0.157	89.215	-0.490*	5.2
TURBIDITY (JTU)	12	1.5	1.1	0	4	12	-0.040	15.069	-0.657	0.9
FLUORIDE, DISSOLVED	12	0.15	0.08	0.0	0.3	12	0.0010	-0.1818	0.219*	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%
	370	360	350	345	340	340	330	320	310	310

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	9.91	10.03	2.40	66	5.12

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	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	0	0	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	60	120	4	0	20
LEAD (PB), UG/L	4	1	4	3	1	2
MANGANESE (MN), UG/L	4	10	10	4	0	0
MERCURY (HG), UG/L	4	<0.5	1.0	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	20	40	3	20	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.46	85.20			
BIOMASS, ASH WT., G/SQ M	3	1.31	63.00			
CHLOROPHYLL A, MG/SQ M	3	1.000	23.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	2.700			
ORGANIC CARBON, MG/L	3	2.700	3.900			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	9.00	8.36	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	71.0	13.1	55	97					
STREAMFLOW (CUBIC FT/SEC)	12	1381.5	868.2	219	3410	12	-27.874	3360.539	-0.420*	826.5
PH (STANDARD UNITS)	12	6.63	0.28	6.0	7.1	12	0.0079	6.0702	0.374*	0.27
PHOSPHORUS, TOTAL	12	0.035	0.012	0.02	0.06	12	-0.00035	0.05995	-0.393*	0.011
NITRITE + NITRATE, TOTAL	12	0.224	0.173	0.05	0.54	12	0.00174	0.10054	0.132*	0.180
NITROGEN, KJELDAHL, TOTAL	12	0.391	0.143	0.24	0.78	12	-0.00412	0.68346	-0.376*	0.139
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	640.8	523.5	120	1900	12	-18.067	1923.596	-0.451*	490.0
SEDIMENT SUSPENDED	8	4.3	3.7	1	13					
SEDIMENT, CLAY-SILT (PERCENT)	8	64.3	12.2	44	84					
COLIFORM, FECAL (COL/100 ML)	12	139.1	209.2	16	690					
STREPTOCOCCI, FECAL (COL/100 ML)	12	46.8	39.7	3	120					
SILICA, DISSOLVED	12	6.52	1.56	3.8	9.3	12	0.0888	0.2168	0.742	1.10
CALCIUM, DISSOLVED	12	8.54	2.03	6.0	12.0	12	0.1137	0.4702	0.732	1.45
MAGNESIUM, DISSOLVED	12	2.62	0.63	1.7	3.7	12	0.0392	-0.1614	0.820	0.38
SODIUM, DISSOLVED	12	1.27	0.29	0.8	1.7	12	0.0130	0.3442	0.591	0.24
POTASSIUM, DISSOLVED	12	0.39	0.12	0.2	0.6	12	0.0030	0.1762	0.341*	0.11
BICARBONATE, ION	11	28.0	8.8	13	40	11	0.452	-4.465	0.686	6.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.67	2.48	6.8	13.0	12	0.0668	4.9345	0.352*	2.44
CHLORIDE, DISSOLVED	12	1.69	0.30	1.3	2.4	12	0.0074	1.1661	0.326*	0.29
DISSOLVED SOLIDS, SUM OF CONST	11	45.1	9.1	32	57	11	0.563	4.633	0.828	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	57.4	9.7	42	72	11	0.580	16.130	0.822	5.8
HARDNESS, TOTAL	12	32.2	7.2	22	42	12	0.444	0.674	0.810	4.4
HARDNESS, NONCARBONATE	12	11.3	6.4	2	24	12	-0.017	12.460	-0.035*	6.7
TURBIDITY (JTU)	12	1.2	0.4	1	2	12	-0.013	2.112	-0.447*	0.4
FLUORIDE, DISSOLVED	12	0.14	0.05	0.1	0.2	12	0.0005	0.1076	0.122*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	9.47	11.61	2.66	93	2.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	3	0	0
CADMIUM (CD), UG/L	4	0	1	2	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	1	3	0	0
COPPER (CU), UG/L	4	0	10	4	0	10
IRON (FE), UG/L	4	270	790	4	130	440
LEAD (PB), UG/L	4	3	7	2	2	3
MANGANESE (MN), UG/L	4	0	40	3	0	20
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	3	3.31	4.85			
BIOMASS, ASH WT., G/SQ M	3	1.85	2.85			
CHLOROPHYLL A, MG/SQ M	3	7.700	15.400			
CHLOROPHYLL B, MG/SQ M	3	0.000	2.100			
ORGANIC CARBON, MG/L	4	5.800	14.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 04295000 NAME: RICHELIEU RIVER AT ROUSES POINT, N.Y.

LAT 44D59M45S LONG 073021M40S
DRAINAGE AREA: 8277 SQ MI (21437 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	8	14.44	5.82	6.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	144.4	5.6	138	153					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	8	7.17	0.28	6.8	7.6	8	-0.0201	10.0636	-0.401*	0.28
PHOSPHORUS, TOTAL	8	0.025	0.005	0.02	0.03	8	-0.00007	0.03486	-0.072*	0.006
NITRITE + NITRATE, TOTAL	8	0.130	0.070	0.05	0.26	8	0.00273	-0.26402	0.219*	0.073
NITROGEN, KJELDAHL, TOTAL	8	0.319	0.083	0.20	0.46	8	-0.00408	0.90722	-0.277*	0.066
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	1839.0	1986.6	52	5700	8	75.597	-9075.387	0.210*	2096.4
SEDIMENT SUSPENDED	7	15.9	25.5	1	73					
SEDIMENT, CLAY-SILT (PERCENT)	7	45.7	19.5	26	82					
COLIFORM, FECAL (COL/100 ML)	8	12.3	14.9	2	46					
STREPTOCOCCI, FECAL (COL/100 ML)	8	5.1	6.0	<1	15					
SILICA, DISSOLVED	8	0.77	0.24	0.4	1.2	8	0.0249	-2.8194	0.573*	0.22
CALCIUM, DISSOLVED	8	16.88	2.17	15.0	20.0	8	0.0972	2.8397	0.251*	2.27
MAGNESIUM, DISSOLVED	8	3.90	0.35	3.3	4.3	8	0.0318	-0.6970	0.503*	0.33
SODIUM, DISSOLVED	8	4.51	0.38	4.0	5.1	8	-0.0020	4.8010	-0.030*	0.41
POTASSIUM, DISSOLVED	8	1.10	0.13	0.9	1.3	8	0.0109	-0.4755	0.467*	0.13
BICARBONATE, ION	8	54.4	3.1	50	58	8	0.359	2.584	0.655*	2.5
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	12.50	1.41	11.0	15.0	8	0.0478	5.6055	0.169*	1.50
CHLORIDE, DISSOLVED	8	6.92	0.82	6.2	8.7	8	-0.0354	12.0318	-0.242*	0.86
DISSOLVED SOLIDS, SUM OF CONST	8	73.5	5.7	67	82	8	0.325	26.551	0.321*	5.8
DISSOLVED SOLIDS, ROE 180 DEG C	8	81.4	4.8	73	86	8	0.136	61.758	0.157*	5.2
HARDNESS, TOTAL	8	58.1	6.3	51	67	8	0.376	3.672	0.334*	6.4
HARDNESS, NONCARBONATE	8	13.6	4.9	8	22	8	0.073	3.037	0.084*	5.2
TURBIDITY (JTU)	8	0.9	0.6	0	2	8	0.011	-0.684	0.094*	0.7
FLUORIDE, DISSOLVED	8	0.10	0.00	0.1	0.1	8	-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 (1976 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	3	0	1	3	0	0
CADMIUM (CD), UG/L	3	0	1	2	0	0
CHROMIUM (CR), UG/L	3	10	10	3	<10	10
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	0	10	3	0	0
IRON (FE), UG/L	3	40	90	3	0	10
LEAD (PB), UG/L	3	4	8	3	1	7
MANGANESE (MN), UG/L	3	0	10	3	0	3
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	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.92	12.80			
BIOMASS, ASH WT., G/SQ M	3	0.31	5.85			
CHLOROPHYLL A, MG/SQ M	3	3.300	40.700			
CHLOROPHYLL B, MG/SQ M	3	0.100	1.500			
ORGANIC CARBON, MG/L	3	3.800	4.800			

Table 12. 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: 10/01/75 - 09/30/76

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)	10	9.88	8.67	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	126.4	22.0	83	149					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	9	6.51	0.31	5.9	6.8	9	-0.0020	6.7607	-0.150*	0.32
PHOSPHORUS, TOTAL	10	0.037	0.012	0.02	0.06	10	0.00032	-0.00299	0.601*	0.010
NITRITE + NITRATE, TOTAL	10	0.259	0.164	0.12	0.52	10	0.00336	-0.16587	0.452*	0.155
NITROGEN, KJELDAHL, TOTAL	10	0.323	0.051	0.25	0.39	10	-0.00045	0.38036	-0.197*	0.053
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2323.0	2822.7	120	9400	10	21.605	-407.823	0.169*	2951.0
SEDIMENT SUSPENDED	10	10.2	12.6	1	36					
SEDIMENT, CLAY-SILT (PERCENT)	10	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	10	79.0	52.4	20	190					
STREPTOCOCCI, FECAL (COL/100 ML)	10	290.3	711.1	5	2300					
SILICA, DISSOLVED	3	4.77	0.78	3.9	5.4					
CALCIUM, DISSOLVED	3	14.67	3.51	11.0	18.0					
MAGNESIUM, DISSOLVED	3	1.40	0.26	1.1	1.6					
SODIUM, DISSOLVED	3	2.90	0.61	2.2	3.3					
POTASSIUM, DISSOLVED	3	1.00	0.26	0.8	1.3					
BICARBONATE, ION	3	41.0	10.4	29	48					
CARBONATE, ION	3	0.0	0.0	0	0					
SULFATE, DISSOLVED	3	8.07	1.80	6.2	9.8					
CHLORIDE, DISSOLVED	3	4.93	0.74	4.1	5.5					
DISSOLVED SOLIDS, SUM OF CONST	3	58.3	12.9	44	69					
DISSOLVED SOLIDS, ROE 180 DEG C	3	64.0	12.0	52	76					
HARDNESS, TOTAL	3	42.3	9.6	32	51					
HARDNESS, NONCARBONATE	3	8.7	3.1	6	12					
TURBIDITY (JTU)	3	1.7	0.6	1	2					
FLUORIDE, DISSOLVED	3	0.07	0.06	0.0	0.1					

*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%
	170	158	155	149	146	138	129	95	90	86

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
344	9.84	11.94	2.57	64	6.36

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0
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	1	3	0	3
COPPER (CU), UG/L	3	0	0	3	0	10
IRON (FE), UG/L	3	180	200	3	30	70
LEAD (PB), UG/L	3	0	4	3	0	2
MANGANESE (MN), UG/L	3	20	30	3	0	10
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	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	12.00				
BIOMASS, ASH WT., G/SQ M	1	8.80				
CHLOROPHYLL A, MG/SQ M	1	32.000				
CHLOROPHYLL B, MG/SQ M	1	4.900				
ORGANIC CARBON, MG/L	3	4.200	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	9.46	9.23	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	567.3	137.0	395	940					
STREAMFLOW (CUBIC FT/SEC)	13	274.7	193.5	2	700	13	-0.856	777.679	-0.606	160.8
PH (STANDARD UNITS)	13	8.05	0.18	7.8	8.3	13	-0.0004	8.2532	-0.274*	0.18
PHOSPHORUS, TOTAL	13	0.774	0.997	0.20	3.00	13	0.00603	-2.76891	0.829	0.583
NITRITE + NITRATE, TOTAL	12	0.723	0.860	0.03	2.50	12	0.00409	-1.67356	0.680	0.661
NITROGEN, KJELDAHL, TOTAL	12	1.617	0.625	0.50	2.60	12	-0.00003	1.63408	-0.007*	0.655
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	7820.0	8649.2	460	31000	13	7.881	3191.629	0.125*	8963.1
SEDIMENT SUSPENDED	13	51.9	39.2	5	122					
SEDIMENT, CLAY-SILT (PERCENT)	13	79.8	21.3	42	98					
COLIFORM, FECAL (COL/100 ML)	11	2133.6	2571.3	5	>8000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2076.3	3243.6	75	10000					
SILICA, DISSOLVED	13	8.83	3.71	2.8	15.0	13	0.0018	7.7621	0.067*	3.86
CALCIUM, DISSOLVED	13	47.92	6.05	40.0	58.0	13	0.0264	32.4046	0.598	5.06
MAGNESIUM, DISSOLVED	13	33.31	3.61	26.0	40.0	13	0.0190	22.1508	0.720	2.62
SODIUM, DISSOLVED	13	27.15	21.02	13.0	82.0	13	0.1414	-55.8758	0.921	8.53
POTASSIUM, DISSOLVED	13	6.42	2.13	4.4	12.0	13	0.0140	-1.8119	0.901	0.96
BICARBONATE, ION	13	265.4	33.6	182	321	13	0.059	230.958	0.239*	34.1
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	75.62	43.38	32.0	180.0	13	0.2850	-91.7896	0.900	19.76
CHLORIDE, DISSOLVED	13	16.31	13.48	8.4	55.0	13	0.0891	-36.0138	0.905	5.98
DISSOLVED SOLIDS, SUM OF CONST	13	347.8	83.6	268	575	13	0.599	-4.151	0.982	16.4
DISSOLVED SOLIDS, ROE 180 DEG C	13	361.9	84.6	280	579	13	0.590	15.675	0.954	26.5
HARDNESS, TOTAL	13	255.4	29.9	210	310	13	0.150	167.088	0.689	22.6
HARDNESS, NONCARBONATE	13	39.3	22.4	11	80	13	0.096	-16.990	0.587	18.9
TURBIDITY (JTU)	13	16.9	12.5	4	41	13	0.031	-1.139	0.336*	12.3
FLUORIDE, DISSOLVED	13	0.24	0.13	0.1	0.6	13	0.0007	-0.1838	0.743	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	9.37	12.69	2.90	94	2.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	4	7	5	3	7
CADMIUM (CD), UG/L	5	0	<10	5	1	2
CHROMIUM (CR), UG/L	5	<10	12	5	0	<10
COBALT (CO), UG/L	5	1	<50	5	0	1
COPPER (CU), UG/L	5	10	120	5	4	140
IRON (FE), UG/L	5	310	1200	5	0	60
LEAD (PB), UG/L	5	23	<100	5	1	9
MANGANESE (MN), UG/L	5	90	220	6	10	160
MERCURY (HG), UG/L	5	0.0	<0.5	5	0.1	<0.5
SELENIUM (SE), UG/L	5	0	0	5	0	0
ZINC (ZN), UG/L	5	20	40	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	4.70	61.80			
BIOMASS, ASH WT., G/SQ M	4	3.50	48.20			
CHLOROPHYLL A, MG/SQ M	4	0.000	97.500			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.400			
ORGANIC CARBON, MG/L	4	10.000	18.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.75	9.68	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	522.5	94.2	380	670					
STREAMFLOW (CUBIC FT/SEC)	12	1887.8	1166.9	584	5060	12	4.666	-549.997	0.377*	1133.7
PH (STANDARD UNITS)	12	8.16	0.36	7.4	8.8	12	-0.0000	8.1837	-0.012*	0.40
PHOSPHORUS, TOTAL	12	0.162	0.065	0.08	0.28	12	0.00026	0.02421	0.385*	0.063
NITRITE + NITRATE, TOTAL	12	0.174	0.197	0.00	0.61	12	0.00070	-0.18903	0.332*	0.195
NITROGEN, KJELDAHL, TOTAL	12	1.372	0.618	0.78	2.50	12	0.00230	0.16986	0.351*	0.607
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	17016.4	27916.3	460	97000	11	-58.232	46661.859	-0.179*	28949.4
SEDIMENT SUSPENDED	10	72.1	59.8	6	157					
SEDIMENT, CLAY-SILT (PERCENT)	10	83.4	17.7	46	98					
COLIFORM, FECAL (COL/100 ML)	10	308.2	293.4	12	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	224.5	235.2	20	790					
SILICA, DISSOLVED	12	5.88	2.35	0.9	9.6	12	-0.0068	9.4443	-0.273*	2.37
CALCIUM, DISSOLVED	12	52.83	7.40	43.0	64.0	12	0.0504	26.4874	0.642	5.95
MAGNESIUM, DISSOLVED	12	23.25	4.20	17.0	29.0	12	0.0431	0.7194	0.966	1.13
SODIUM, DISSOLVED	12	20.17	8.26	10.0	40.0	12	0.0794	-21.3068	0.906	3.67
POTASSIUM, DISSOLVED	12	4.31	1.00	3.0	5.9	12	0.0102	-1.0023	0.959	0.29
BICARBONATE, ION	12	238.2	31.6	200	285	12	0.170	149.276	0.507*	28.5
CARBONATE, ION	12	0.6	2.0	0	7	12	0.011	-4.946	0.493*	1.8
SULFATE, DISSOLVED	12	57.17	31.53	20.0	130.0	12	0.2983	-98.7137	0.891	15.01
CHLORIDE, DISSOLVED	12	16.37	7.87	8.4	37.0	12	0.0583	-14.0919	0.697	5.92
DISSOLVED SOLIDS, SUM OF CONST	12	300.9	60.2	206	413	12	0.619	-22.561	0.969	15.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	324.8	68.3	217	433	12	0.721	-51.936	0.995	7.1
HARDNESS, TOTAL	12	228.3	33.0	180	260	12	0.304	69.294	0.869	17.1
HARDNESS, NONCARBONATE	12	32.0	27.3	0	100	12	0.154	-48.323	0.530*	24.3
TURBIDITY (JTU)	12	23.4	16.9	5	60	12	-0.063	56.282	-0.350*	16.6
FLUORIDE, DISSOLVED	12	0.16	0.07	0.0	0.2	12	0.0001	0.1195	0.105*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	9.96	12.98	2.77	95	2.40

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	1	5	6	0	3
CADMIUM (CD), UG/L	6	0	<10	6	0	2
CHROMIUM (CR), UG/L	6	0	10	6	0	<10
COBALT (CO), UG/L	6	2	<50	6	0	3
COPPER (CU), UG/L	6	<10	20	6	3	10
IRON (FE), UG/L	6	320	2400	6	10	30
LEAD (PB), UG/L	6	12	100	6	0	15
MANGANESE (MN), UG/L	6	70	1200	6	0	60
MERCURY (HG), UG/L	6	0.0	<0.5	6	0.0	< 0.5
SELENIUM (SE), UG/L	6	0	2	6	0	1
ZINC (ZN), UG/L	6	0	30	6	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	1.85	27.00			
BIOMASS, ASH WT., G/SQ M	5	0.85	24.90			
CHLOROPHYLL A, MG/SQ M	5	0.900	9.700			
CHLOROPHYLL B, MG/SQ M	5	0.000	0.100			
ORGANIC CARBON, MG/L	6	11.000	33.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	10.00	9.63	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	464.2	137.0	324	710					
STREAMFLOW (CUBIC FT/SEC)	10	77.3	99.1	5	265	10	-0.392	259.073	-0.541*	68.4
PH (STANDARD UNITS)	9	8.06	0.57	7.3	8.8	9	-0.0023	9.1915	-0.567*	0.50
PHOSPHORUS, TOTAL	9	0.070	0.042	0.02	0.14	9	-0.00007	0.10148	-0.215*	0.044
NITRITE + NITRATE, TOTAL	9	0.078	0.116	0.00	0.28	9	-0.00008	0.11662	-0.097*	0.124
NITROGEN, KJELDAHL, TOTAL	9	1.497	0.438	0.87	2.20	9	0.00280	0.16062	0.883	0.220
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	10413.1	18574.2	35	41000	8	72.676	-25334.595	0.550*	16759.0
SEDIMENT SUSPENDED	6	61.0	29.8	20	116					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	18.6	19.3	0	49					
STREPTOCOCCI, FECAL (COL/100 ML)	9	38.7	35.2	2	98					
SILICA, DISSOLVED	9	8.79	6.24	0.7	17.0	9	0.0336	-7.2357	0.745	4.45
CALCIUM, DISSOLVED	9	56.67	16.48	40.0	84.0	9	0.1171	0.7760	0.983	3.23
MAGNESIUM, DISSOLVED	9	25.00	6.22	17.0	34.0	9	0.0434	4.2927	0.964	1.77
SODIUM, DISSOLVED	9	7.78	2.52	4.4	11.0	9	0.0172	-0.4286	0.943	0.89
POTASSIUM, DISSOLVED	9	2.38	0.81	1.0	3.5	9	0.0047	0.1575	0.798	0.52
BICARBONATE, ION	9	292.2	91.0	198	436	9	0.653	-19.535	0.993	11.7
CARBONATE, ION	9	0.9	2.7	0	8	9	-0.006	3.868	-0.324*	2.7
SULFATE, DISSOLVED	9	15.42	5.15	9.3	21.0	9	0.0129	9.2562	0.347*	5.16
CHLORIDE, DISSOLVED	9	2.74	1.04	1.3	4.2	9	0.0063	-0.2599	0.835	0.61
DISSOLVED SOLIDS, SUM OF CONST	9	264.0	77.1	188	384	9	0.553	-0.061	0.995	9.7
DISSOLVED SOLIDS, ROE 180 DEG C	9	301.3	76.1	219	417	9	0.543	42.286	0.967	13.0
HARDNESS, TOTAL	9	243.3	64.8	180	350	9	0.466	20.903	0.995	7.1
HARDNESS, NONCARBONATE	9	5.2	6.3	0	17	9	-0.033	21.107	-0.731	4.6
TURBIDITY (JTU)	7	12.7	14.8	3	45	7	-0.060	41.635	-0.607*	12.9
FLUORIDE, DISSOLVED	9	0.14	0.07	0.1	0.3	9	0.0004	-0.0564	0.801	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	3	4	1	3
CADMIUM (CD), UG/L	4	0	<10	4	1	8
CHROMIUM (CR), UG/L	4	0	<10	4	0	<10
COBALT (CO), UG/L	4	1	<50	4	0	3
COPPER (CU), UG/L	4	0	10	4	2	10
IRON (FE), UG/L	10	120	1500	4	40	300
LEAD (PB), UG/L	4	6	100	4	1	84
MANGANESE (MN), UG/L	10	20	710	4	7	710
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	10	4	0	7
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.00	0.20			
BIOMASS, ASH WT., G/SQ M	2	0.00	0.10			
CHLOROPHYLL A, MG/SQ M	2	0.000	0.200			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	4	17.000	24.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	9.42	9.99	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	856.0	267.9	440	1410					
STREAMFLOW (CUBIC FT/SEC)	24	1590.9	2997.2	90	11500	24	-5.759	6520.500	-0.515	2627.3
PH (STANDARD UNITS)	24	8.15	0.59	7.3	9.0	24	-0.0013	9.2927	-0.605	0.48
PHOSPHORUS, TOTAL	24	0.231	0.093	0.05	0.42	24	-0.00012	0.33358	-0.345*	0.089
NITRITE + NITRATE, TOTAL	24	0.188	0.255	0.00	0.91	24	0.00029	-0.05918	0.303*	0.249
NITROGEN, KJELDAHL, TOTAL	24	2.065	0.852	0.87	4.00	24	0.00089	1.30140	0.261*	0.836
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	37544.5	48896.2	590	120000	11	-58.913	88852.063	-0.339*	48483.4
SEDIMENT SUSPENDED	13	36.9	40.9	3	148					
SEDIMENT, CLAY-SILT (PERCENT)	12	81.9	16.5	50	99					
COLIFORM, FECAL (COL/100 ML)	24	48.3	105.0	1	405					
STREPTOCOCCI, FECAL (COL/100 ML)	24	69.7	100.1	1	305					
SILICA, DISSOLVED	12	6.14	3.02	1.8	10.0	12	0.0081	-0.7638	0.732	2.16
CALCIUM, DISSOLVED	11	60.73	17.54	33.0	92.0	11	0.0611	7.4992	0.981	3.59
MAGNESIUM, DISSOLVED	12	34.17	11.28	16.0	58.0	12	0.0406	-0.5822	0.985	2.07
SODIUM, DISSOLVED	12	79.00	29.94	32.0	140.0	12	0.1055	-11.2952	0.964	8.38
POTASSIUM, DISSOLVED	12	12.26	2.97	7.5	17.0	12	0.0063	6.8850	0.578	2.54
BICARBONATE, ION	12	327.1	98.3	144	519	12	0.353	25.249	0.981	20.1
CARBONATE, ION	11	3.7	5.0	0	15	11	-0.007	9.897	-0.399*	4.8
SULFATE, DISSOLVED	11	175.55	64.25	81.0	290.0	11	0.2252	-20.5770	0.987	10.91
CHLORIDE, DISSOLVED	12	18.44	8.89	8.4	38.0	12	0.0317	-8.6744	0.975	2.06
DISSOLVED SOLIDS, SUM OF CONST	11	558.5	183.2	266	903	11	0.647	-5.098	0.995	19.7
DISSOLVED SOLIDS, ROE 180 DEG C	24	575.7	178.9	287	946	24	0.665	6.465	0.996	17.0
HARDNESS, TOTAL	12	290.8	88.7	150	470	12	0.322	15.405	0.993	11.2
HARDNESS, NONCARBONATE	12	17.6	15.7	0	43	12	0.039	-15.586	0.674	12.2
TURBIDITY (JTU)	23	14.7	16.4	1	80	23	-0.013	26.020	-0.213*	16.4
FLUORIDE, DISSOLVED	12	0.20	0.07	0.1	0.3	12	0.0001	0.0960	0.450*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
24	9.21	13.12	2.91	91	3.09

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	3	7	4	2	10
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	60	4	0	3
COPPER (CU), UG/L	4	<10	40	4	0	1
IRON (FE), UG/L	4	270	1900	4	20	30
LEAD (PB), UG/L	4	<100	100	4	0	3
MANGANESE (MN), UG/L	4	0	420	4	0	420
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	3	4	0	0
ZINC (ZN), UG/L	4	10	60	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.60	8.31			
BIOMASS, ASH WT., G/SQ M	3	0.20	5.92			
CHLOROPHYLL A, MG/SQ M	3	1.000	30.500			
CHLOROPHYLL B, MG/SQ M	3	0.000	3.400			
ORGANIC CARBON, MG/L	22	1.200	50.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	40	8.66	6.89	0.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	40	124.2	42.4	90	250					
STREAMFLOW (CUBIC FT/SEC)	10	1718.2	2430.8	63	7130	10	-32.687	7369.828	-0.712	1809.5
PH (STANDARD UNITS)	8	7.74	0.27	7.4	8.2	8	-0.0011	7.9502	-0.223*	0.28
PHOSPHORUS, TOTAL	8	0.042	0.021	0.02	0.08	8	-0.00018	0.07647	-0.463*	0.020
NITRITE + NITRATE, TOTAL	8	0.120	0.112	0.01	0.30	8	0.00044	0.03832	0.204*	0.118
NITROGEN, KJELDAHL, TOTAL	8	0.972	0.559	0.20	1.70	8	-0.00835	2.52053	-0.775	0.382
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1320.0	1461.7	150	4000	7	-5.739	2428.434	-0.200*	1568.8
SEDIMENT SUSPENDED	7	102.6	90.9	27	279					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	30.1	30.7	<1	84					
STREPTOCOCCI, FECAL (COL/100 ML)	7	16.6	22.1	<1	64					
SILICA, DISSOLVED	8	8.41	3.81	3.1	14.0	8	0.0220	4.3332	0.300*	3.93
CALCIUM, DISSOLVED	8	23.25	6.27	13.0	32.0	8	0.1173	1.4958	0.971	1.61
MAGNESIUM, DISSOLVED	8	7.80	2.07	3.9	10.0	8	0.0360	1.1216	0.904	0.96
SODIUM, DISSOLVED	8	3.50	1.47	1.5	5.4	8	0.0247	-1.0894	0.875	0.77
POTASSIUM, DISSOLVED	8	1.57	0.42	1.0	2.1	8	0.0058	0.5001	0.723	0.31
BICARBONATE, ION	8	101.0	34.0	46	142	8	0.641	-17.843	0.978	7.7
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	9.62	1.78	7.0	12.0	8	0.0247	5.0514	0.718	1.34
CHLORIDE, DISSOLVED	8	2.29	0.60	1.7	3.5	8	-0.0003	2.3449	-0.027*	0.65
DISSOLVED SOLIDS, SUM OF CONST	8	106.6	30.0	57	144	8	0.551	4.338	0.956	9.5
DISSOLVED SOLIDS, ROE 180 DEG C	8	135.3	18.8	103	154	8	0.317	76.525	0.875	9.8
HARDNESS, TOTAL	8	90.0	23.2	49	120	8	0.428	10.640	0.957	7.3
HARDNESS, NONCARBONATE	8	7.9	4.5	0	12	8	-0.074	21.574	-0.849	2.6
TURBIDITY (JTU)	6	11.8	9.0	7	30	6	-0.125	34.362	-0.764*	6.5
FLUORIDE, DISSOLVED	8	0.10	0.05	0.0	0.2	8	0.0006	-0.0109	0.581*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
40	9.35	14.73	2.66	89	2.31

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

05131500 -- LITTLE FORK RIVER AT LITTLEFORK, MINNESDTA

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	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	0	10	4	0	4
IRON (FE), UG/L	8	380	2200	4	80	560
LEAD (PB), UG/L	4	8	<100	4	2	8
MANGANESE (MN), UG/L	8	30	90	4	0	30
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	60	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.20				
BIOMASS, ASH WT., G/SQ M	1	0.20				
CHLOROPHYLL A, MG/SQ M	1	0.100				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	14.000	35.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	8	10.56	11.33	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	8	243.8	63.3	134	320					
STREAMFLOW (CUBIC FT/SEC)	8	560.3	721.0	84	2240	8	-8.523	2637.640	-0.748	517.1
PH (STANDARD UNITS)	8	7.89	0.35	7.5	8.4	8	-0.0006	8.0392	-0.112*	0.38
PHOSPHORUS, TOTAL	8	0.029	0.011	0.02	0.05	8	-0.00014	0.06201	-0.767	0.008
NITRITE + NITRATE, TOTAL	8	0.107	0.107	0.01	0.34	8	0.00107	-0.15431	0.634*	0.089
NITROGEN, KJELDAHL, TOTAL	8	0.964	0.348	0.54	1.40	8	-0.00298	1.68964	-0.541*	0.317
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1615.7	1343.0	60	3300	7	-8.855	3866.050	-0.399*	1349.1
SEDIMENT SUSPENDED	8	9.5	9.6	2	31					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	8	9.8	6.2	3	20					
STREPTOCOCCI, FECAL (COL/100 ML)	7	13.0	13.6	0	38					
SILICA, DISSOLVED	8	7.84	3.83	3.3	13.0	8	0.0352	-0.7463	0.582*	3.36
CALCIUM, DISSOLVED	8	33.88	8.49	18.0	43.0	8	0.1309	1.9568	0.975	2.02
MAGNESIUM, DISSOLVED	8	10.35	2.47	5.9	13.0	8	0.0352	1.7747	0.901	1.16
SODIUM, DISSOLVED	8	3.05	0.80	2.3	4.2	8	0.0097	0.6787	0.773	0.55
POTASSIUM, DISSOLVED	8	1.56	0.47	0.9	2.3	8	0.0054	0.2474	0.719	0.36
BICARBONATE, ION	8	149.0	44.2	73	196	8	0.687	-18.495	0.983	8.9
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	6.77	1.99	4.1	9.9	8	-0.0043	7.8276	-0.137*	2.13
CHLORIDE, DISSOLVED	8	1.80	0.69	1.4	3.1	8	-0.0044	2.8730	-0.404*	0.68
DISSOLVED SOLIDS, SUM OF CONST	8	139.0	35.5	77	178	8	0.546	5.888	0.972	9.0
DISSOLVED SOLIDS, ROE 180 DEG C	8	162.3	28.1	111	196	8	0.421	59.618	0.948	9.6
HARDNESS, TOTAL	8	128.6	32.1	69	160	8	0.488	9.600	0.963	9.4
HARDNESS, NONCARBONATE	8	6.4	4.9	0	15	8	-0.062	21.432	-0.793	3.2
TURBIDITY (JTU)	8	4.3	3.1	1	11	8	-0.027	10.912	-0.565*	2.7
FLUORIDE, DISSOLVED	8	0.10	0.05	0.0	0.2	8	0.0006	-0.0445	0.701*	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	< 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	0	< 10	4	0	1
IRON (FE), UG/L	4	130	410	4	30	200
LEAD (PB), UG/L	4	14	< 100	4	1	3
MANGANESE (MN), UG/L	4	40	100	4	30	50
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	10	50	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.20	1.50			
BIOMASS, ASH WT., G/SQ M	2	0.10	0.80			
CHLOROPHYLL A, MG/SQ M	2	0.100	0.300			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	4	14.000	21.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	9.65	10.27	0.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	301.0	30.8	240	333					
STREAMFLOW (CUBIC FT/SEC)	12	2920.8	1377.9	836	4610	11	-12.061	6580.707	-0.211*	1482.4
PH (STANDARD UNITS)	11	8.20	0.38	7.7	8.8	11	-0.0041	9.4444	-0.272*	0.38
PHOSPHORUS, TOTAL	11	0.047	0.021	0.02	0.06	11	0.00005	0.03154	0.062*	0.022
NITRITE + NITRATE, TOTAL	11	0.103	0.108	0.00	0.28	11	0.00272	-0.73192	0.635	0.088
NITROGEN, KJELDAHL, TOTAL	11	1.004	1.135	0.00	4.30	11	0.00272	0.16878	0.061*	1.194
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	15133.3	16302.2	1100	41000	9	-169.503	67622.688	-0.226*	16978.8
SEDIMENT SUSPENDED	11	33.7	21.4	11	91					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	916.2	2227.5	13	7200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	234.1	324.5	4	1000					
SILICA, DISSOLVED	11	7.52	2.50	2.9	11.0	11	0.0495	-7.6577	0.500*	2.28
CALCIUM, DISSOLVED	11	39.09	4.68	32.0	46.0	11	0.1224	1.5627	0.660	3.71
MAGNESIUM, DISSOLVED	11	13.45	1.21	11.0	15.0	11	0.0282	4.8121	0.586*	1.04
SODIUM, DISSOLVED	11	5.85	1.55	4.3	9.2	11	0.0077	3.5068	0.125*	1.62
POTASSIUM, DISSOLVED	11	1.89	0.21	1.6	2.3	11	-0.0014	2.3081	-0.166*	0.22
BICARBONATE, ION	10	180.0	18.7	156	207	10	0.537	16.656	0.717	13.8
CARBONATE, ION	10	0.5	1.6	0	5	10	-0.021	6.998	-0.337*	1.6
SULFATE, DISSOLVED	11	8.63	2.97	3.5	13.0	11	0.0587	-9.3562	0.498*	2.72
CHLORIDE, DISSOLVED	11	3.57	0.96	2.6	5.0	11	0.0088	0.8898	0.231*	0.98
DISSOLVED SOLIDS, SUM OF CONST	11	170.2	16.0	142	190	11	0.520	10.809	0.819	9.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	183.1	15.3	159	204	11	0.464	40.998	0.762	10.5
HARDNESS, TOTAL	11	152.7	14.2	130	170	11	0.424	22.871	0.752	9.9
HARDNESS, NONCARBONATE	11	3.7	2.9	0	8	11	0.029	-5.222	0.257*	2.9
TURBIDITY (JTU)	11	3.1	1.5	1	6	11	-0.009	5.720	-0.143*	1.6
FLUORIDE, DISSOLVED	11	0.15	0.05	0.1	0.2	11	0.0006	-0.0342	0.283*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	10.22	13.49	2.80	89	3.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	2
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	0	10	4	0	7
IRON (FE), UG/L	4	240	410	4	10	90
LEAD (PB), UG/L	4	4	<100	4	1	4
MANGANESE (MN), UG/L	4	70	200	4	10	50
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<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	4	3.30	22.00			
BIOMASS, ASH WT., G/SQ M	4	2.60	17.00			
CHLOROPHYLL A, MG/SQ M	4	2.400	38.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	2.000			
ORGANIC CARBON, MG/L	4	8.200	44.000			

Table 12. 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: 10/01/75 - 09/30/76

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	11.73	10.02	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	862.3	128.1	625	1080					
STREAMFLOW (CUBIC FT/SEC)	13	926.5	1105.4	174	3550	12	-6.862	6884.129	-0.768	768.0
PH (STANDARD UNITS)	12	8.09	0.31	7.4	8.4	12	-0.0011	9.0069	-0.440*	0.29
PHOSPHORUS, TOTAL	12	0.262	0.135	0.12	0.65	12	-0.00067	0.84169	-0.639	0.109
NITRITE + NITRATE, TOTAL	12	0.683	0.970	0.00	3.30	12	-0.00183	2.26442	-0.242*	0.987
NITROGEN, KJELDAHL, TOTAL	12	2.017	0.923	1.20	4.60	12	-0.00496	6.29375	-0.688	0.703
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	107118.1	100977.0	370	270000	11	-72.717	169852.938	-0.097*	105938.6
SEDIMENT SUSPENDED	11	160.7	100.9	77	410					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	84.1	189.3	<1	680					
STREPTOCOCCI, FECAL (COL/100 ML)	12	764.8	831.0	<1	2600					
SILICA, DISSOLVED	12	10.22	5.22	0.5	19.0	12	0.0200	-7.0260	0.491*	4.77
CALCIUM, DISSOLVED	12	84.83	21.67	60.0	120.0	12	0.1304	-27.6293	0.771	14.47
MAGNESIUM, DISSOLVED	12	39.75	6.69	22.0	49.0	12	0.0458	0.2692	0.877	3.37
SODIUM, DISSOLVED	12	39.33	12.09	17.0	55.0	12	0.0724	-23.1260	0.767	8.13
POTASSIUM, DISSOLVED	12	6.10	0.78	5.5	7.9	12	0.0010	5.2648	0.159*	0.81
BICARBONATE, ION	11	310.6	82.8	178	443	11	0.557	-163.786	0.865	43.8
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	144.17	22.75	100.0	180.0	12	0.1156	44.5310	0.651	18.11
CHLORIDE, DISSOLVED	12	37.75	13.03	17.0	58.0	12	0.0671	-20.0983	0.659	10.28
DISSOLVED SOLIDS, SUM OF CONST	12	521.5	97.8	341	684	12	0.720	-99.072	0.942	34.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	544.6	96.4	366	704	12	0.692	-51.995	0.920	39.6
HARDNESS, TOTAL	12	376.7	74.6	250	500	12	0.503	-57.328	0.864	39.4
HARDNESS, NONCARBONATE	12	114.3	25.4	74	150	12	0.064	58.834	0.325*	25.1
TURBIDITY (JTU)	12	21.3	27.1	2	100	12	-0.161	159.771	-0.759	18.5
FLUORIDE, DISSOLVED	12	0.27	0.05	0.2	0.3	12	0.0002	0.1310	0.409*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
98	12.22	15.25	2.76	91	2.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	3	8	4	1	3
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	1	<50	4	0	1
COPPER (CU), UG/L	4	<10	10	4	0	2
IRON (FE), UG/L	4	270	1300	4	10	20
LEAD (PB), UG/L	4	9	100	4	3	4
MANGANESE (MN), UG/L	4	280	540	4	10	270
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
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	4	7.20	40.90			
BIOMASS, ASH WT., G/SQ M	4	5.90	35.10			
CHLOROPHYLL A, MG/SQ M	4	1.300	33.200			
CHLOROPHYLL B, MG/SQ M	4	0.000	5.600			
ORGANIC CARBON, MG/L	4	6.900	18.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	14	13.25	11.01	0.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	463.3	56.7	364	560					
STREAMFLOW (CUBIC FT/SEC)	12	6055.8	4789.9	1060	15000	12	-36.334	22887.430	-0.430*	4534.6
PH (STANDARD UNITS)	12	8.15	0.32	7.6	8.5	12	-0.0040	10.0148	-0.719	0.23
PHOSPHORUS, TOTAL	10	0.182	0.087	0.06	0.33	10	0.00082	-0.19040	0.514*	0.080
NITRITE + NITRATE, TOTAL	12	0.433	0.522	0.01	1.90	12	0.00277	-0.85125	0.301*	0.522
NITROGEN, KJELDAHL, TOTAL	12	1.550	0.452	1.10	2.50	12	0.00143	0.88878	0.179*	0.467
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	35963.0	51578.8	770	140000	10	108.641	-15587.156	0.109*	54381.4
SEDIMENT SUSPENDED	13	123.5	137.8	44	564					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	464.2	262.9	220	950					
STREPTOCOCCI, FECAL (COL/100 ML)	11	417.7	835.6	1	2900					
SILICA, DISSOLVED	10	7.15	2.79	2.0	11.0	10	0.0234	-3.4426	0.458*	2.63
CALCIUM, DISSOLVED	12	51.33	3.63	42.0	55.0	12	0.0472	29.4746	0.738	2.57
MAGNESIUM, DISSOLVED	12	19.00	2.30	14.0	22.0	12	0.0298	5.1993	0.736	1.63
SODIUM, DISSOLVED	12	13.99	3.62	7.1	20.0	12	0.0560	-11.9316	0.877	1.83
POTASSIUM, DISSOLVED	12	2.97	0.49	2.1	4.2	12	0.0046	0.8327	0.531*	0.44
BICARBONATE, ION	12	219.3	19.5	183	252	12	0.253	101.895	0.738	13.8
CARBONATE, ION	12	0.2	0.6	0	2	12	-0.004	2.083	-0.407*	0.6
SULFATE, DISSOLVED	12	33.58	5.92	21.0	42.0	12	0.0479	11.4074	0.459*	5.51
CHLORIDE, DISSOLVED	12	16.52	5.36	8.2	27.0	12	0.0797	-20.4203	0.845	3.01
DISSOLVED SOLIDS, SUM OF CONST	10	251.0	25.8	200	282	10	0.435	54.184	0.922	10.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	270.3	29.8	215	309	12	0.464	55.574	0.882	14.7
HARDNESS, TOTAL	12	205.8	17.8	160	220	12	0.254	87.939	0.810	10.9
HARDNESS, NONCARBONATE	12	26.3	9.5	12	39	12	0.041	7.030	0.247*	9.7
TURBIDITY (JTU)	12	8.6	5.0	2	19	12	-0.006	11.550	-0.072*	5.2
FLUORIDE, DISSOLVED	12	0.17	0.05	0.1	0.2	12	0.0002	0.0890	0.233*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	13.57	14.81	2.78	98	1.58

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	6	4	0	3
CADMIUM (CD), UG/L	4	0	10	4	0	2
CHROMIUM (CR), UG/L	4	0	30	4	0	10
COBALT (CO), UG/L	4	0	60	4	0	3
COPPER (CU), UG/L	4	10	20	4	0	3
IRON (FE), UG/L	4	450	910	4	0	30
LEAD (PB), UG/L	4	8	100	4	0	8
MANGANESE (MN), UG/L	4	120	280	4	0	100
MERCURY (HG), UG/L	4	0.0	1.0	4	0.0	<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	1.50	71.00			
BIOMASS, ASH WT., G/SQ M	5	1.50	62.00			
CHLOROPHYLL A, MG/SQ M	5	0.200	147.000			
CHLOROPHYLL B, MG/SQ M	5	0.000	19.300			
ORGANIC CARBON, MG/L	4	8.900	28.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.63	9.92	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	180.0	34.6	100	230					
STREAMFLOW (CUBIC FT/SEC)	12	4680.0	3233.5	1330	12600	12	-51.426	13936.660	-0.550*	2832.6
PH (STANDARD UNITS)	11	7.71	0.36	7.1	8.3	11	0.0002	7.6669	0.023*	0.38
PHOSPHORUS, TOTAL	12	0.048	0.014	0.02	0.07	12	0.00002	0.04491	0.047*	0.015
NITRITE + NITRATE, TOTAL	12	0.184	0.172	0.01	0.47	12	0.00135	-0.05811	0.271*	0.173
NITROGEN, KJELDAHL, TOTAL	12	0.502	0.131	0.32	0.75	12	-0.00243	0.93901	-0.641	0.105
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	12134.2	15357.5	190	49000	12	-50.791	21276.574	-0.114*	16001.3
SEDIMENT SUSPENDED	10	4.4	3.5	1	11					
SEDIMENT, CLAY-SILT (PERCENT)	9	92.7	16.6	51	100					
COLIFORM, FECAL (COL/100 ML)	12	19.0	20.5	3	77					
STREPTOCOCCI, FECAL (COL/100 ML)	12	101.8	150.4	4	480					
SILICA, DISSOLVED	12	11.88	3.13	8.0	16.0	12	0.0520	2.5276	0.574*	2.69
CALCIUM, DISSOLVED	12	21.85	4.70	9.2	26.0	12	0.1075	2.4948	0.792	3.01
MAGNESIUM, DISSOLVED	12	7.22	1.28	3.6	8.4	12	0.0323	1.4146	0.870	0.66
SODIUM, DISSOLVED	12	3.01	0.56	1.6	3.7	12	0.0122	0.8164	0.756	0.38
POTASSIUM, DISSOLVED	12	0.95	0.13	0.7	1.1	12	0.0001	0.9295	0.030*	0.14
BICARBONATE, ION	12	99.2	19.9	44	117	12	0.474	13.821	0.823	11.9
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.72	1.72	2.7	7.9	12	0.0024	5.2873	0.049*	1.80
CHLORIDE, DISSOLVED	12	3.13	0.91	2.1	5.1	12	0.0086	1.5935	0.326*	0.90
DISSOLVED SOLIDS, SUM OF CONST	12	102.9	18.6	55	122	12	0.451	21.746	0.636	10.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	116.1	17.2	79	138	12	0.395	45.042	0.795	10.9
HARDNESS, TOTAL	12	84.4	16.6	38	100	12	0.401	12.280	0.833	9.7
HARDNESS, NONCARBONATE	12	3.7	3.8	0	13	12	0.007	2.435	0.063*	4.0
TURBIDITY (JTU)	12	2.3	0.8	1	4	12	0.005	1.444	0.220*	0.8
FLUORIDE, DISSOLVED	12	0.15	0.05	0.1	0.2	12	0.0009	-0.0143	0.604	0.04

*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%
	255	240	215	205	195	185	170	150	135	105

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
202	10.81	13.96	2.83	95	1.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	10	4	0	10
COBALT (CO), UG/L	4	0	1	4	0	1
COPPER (CU), UG/L	4	0	24	4	0	0
IRON (FE), UG/L	4	300	630	4	50	370
LEAD (PB), UG/L	4	2	7	4	0	3
MANGANESE (MN), UG/L	4	20	92	4	2	20
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	50	4	1	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.00	26.00			
BIOMASS, ASH WT., G/SQ M	3	0.00	19.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	22.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.700			
ORGANIC CARBON, MG/L	4	6.400	16.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 05369500   NAME: CHIPPEWA RIVER AT DURAND, WIS.

LAT 44037M40S LONG 091D58M10S
DRAINAGE AREA: 9010 SQ MI (23336 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	17	12.88	9.73	0.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	166.9	43.1	85	230					
STREAMFLOW (CUBIC FT/SEC)	18	10784.4	14279.6	2630	61300	13	-92.148	22228.488	-0.861	2453.2
PH (STANDARD UNITS)	11	7.65	0.58	7.0	8.8	11	0.0068	6.5682	0.498*	0.53
PHOSPHORUS, TOTAL	12	0.122	0.041	0.08	0.23	12	0.00012	0.10135	0.134*	0.042
NITRITE + NITRATE, TOTAL	12	0.425	0.218	0.21	0.79	12	-0.00083	0.56050	-0.166*	0.225
NITROGEN, KJELDAHL, TOTAL	12	0.696	0.175	0.54	1.10	12	-0.00036	0.75479	-0.090*	0.183
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	22128.1	26250.5	97	74000	12	315.896	-29731.504	0.528*	23388.3
SEDIMENT SUSPENDED	9	62.9	95.9	5	295					
SEDIMENT, CLAY-SILT (PERCENT)	9	56.0	33.4	8	88					
COLIFORM, FECAL (COL/100 ML)	12	413.8	710.2	17	2500					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1017.9	1710.8	18	5100					
SILICA, DISSOLVED	12	9.92	2.17	7.0	13.0	12	0.0202	6.6075	0.407*	2.08
CALCIUM, DISSOLVED	12	15.09	3.65	7.6	20.0	12	0.0805	1.8684	0.966	0.99
MAGNESIUM, DISSOLVED	12	5.71	1.48	2.8	7.9	12	0.0314	0.5518	0.928	0.58
SODIUM, DISSOLVED	12	2.89	0.71	1.6	4.0	12	0.0154	0.3648	0.952	0.23
POTASSIUM, DISSOLVED	12	1.32	0.22	1.1	1.7	12	-0.0001	1.3270	-0.013*	0.23
BICARBONATE, ION	12	63.6	16.6	30	86	12	0.359	4.718	0.949	5.5
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.76	1.34	5.4	10.0	12	0.0127	5.6690	0.416*	1.28
CHLORIDE, DISSOLVED	12	4.41	1.33	2.0	7.6	12	0.0216	0.8591	0.714	0.98
DISSOLVED SOLIDS, SUM OF CONST	12	78.7	16.5	47	104	12	0.356	20.260	0.943	5.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	92.5	14.7	65	113	12	0.258	50.103	0.772	9.8
HARDNESS, TOTAL	12	61.3	14.9	31	82	12	0.328	7.380	0.964	4.2
HARDNESS, NONCARBONATE	12	8.9	3.1	3	13	12	0.038	2.672	0.540*	2.7
TURBIDITY (JTU)	12	3.4	2.4	2	10	12	-0.001	3.656	-0.027*	2.5
FLUORIDE, DISSOLVED	12	0.17	0.09	0.1	0.3	12	0.0004	0.1033	0.191*	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 172

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	275	250	230	215	160	135	95	85	75

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
160	10.88	14.78	2.70	90	2.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	2	4	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	100	4	0	10
COBALT (CO), UG/L	4	0	2	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	4	450	610	4	80	250
LEAD (PB), UG/L	4	3	5	4	0	4
MANGANESE (MN), UG/L	4	40	110	4	10	50
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	60	4	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	13.80			
BIOMASS, ASH WT., G/SQ M	4	0.00	8.85			
CHLOROPHYLL A, MG/SQ M	4	0.000	18.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.500			
ORGANIC CARBON, MG/L	4	5.000	15.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	12.15	10.67	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	309.9	40.4	236	360					
STREAMFLOW (CUBIC FT/SEC)	11	30421.8	33395.6	5200	116000	10	-600.613	212593.936	-0.750	22721.3
PH (STANDARD UNITS)	10	8.25	0.55	7.7	9.2	10	-0.0019	8.8504	-0.142*	0.58
PHOSPHORUS, TOTAL	10	0.152	0.047	0.10	0.27	10	0.00058	-0.02839	0.499*	0.043
NITRITE + NITRATE, TOTAL	9	0.430	0.432	0.00	0.99	9	-0.00192	1.02430	-0.191*	0.453
NITROGEN, KJELDAHL, TOTAL	9	1.470	0.581	0.83	2.70	9	-0.00534	3.12049	-0.393*	0.571
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	60822.0	100866.1	490	330000	10	1166.384	-300640.250	0.467*	94590.9
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	136.8	127.5	19	310					
STREPTOCOCCI, FECAL (COL/100 ML)	9	169.0	187.4	4	600					
SILICA, DISSOLVED	10	6.71	4.70	0.7	12.0	10	0.0335	-3.6603	0.288*	4.78
CALCIUM, DISSOLVED	10	34.80	4.16	28.0	42.0	10	0.0751	11.5157	0.730	3.01
MAGNESIUM, DISSOLVED	10	12.74	1.68	9.4	15.0	10	0.0372	1.1983	0.898	0.78
SODIUM, DISSOLVED	10	8.55	1.67	5.1	11.0	10	0.0391	-3.5805	0.945	0.56
POTASSIUM, DISSOLVED	10	2.18	0.18	1.9	2.5	10	-0.0013	2.5686	-0.280*	0.18
BICARBONATE, ION	10	150.0	22.2	109	176	10	0.421	19.424	0.767	15.1
CARBONATE, ION	10	0.8	1.7	0	4	10	-0.008	3.314	-0.194*	1.8
SULFATE, DISSOLVED	10	18.00	2.45	12.0	20.0	10	0.0057	16.2280	0.094*	2.59
CHLORIDE, DISSOLVED	10	10.41	2.64	6.2	15.0	10	0.0597	-8.1026	0.914	1.14
DISSOLVED SOLIDS, SUM OF CONST	10	168.3	20.7	135	193	10	0.449	29.216	0.874	10.7
DISSOLVED SOLIDS, ROE 180 DEG C	10	182.4	23.2	147	226	10	0.436	47.280	0.758	16.1
HARDNESS, TOTAL	10	139.0	15.2	110	160	10	0.308	43.673	0.816	9.4
HARDNESS, NONCARBONATE	10	15.1	5.5	6	23	10	0.013	11.069	0.095*	5.9
TURBIDITY (JTU)	6	8.7	1.9	5	10	6	-0.005	10.114	-0.123*	2.1
FLUORIDE, DISSOLVED	10	0.15	0.05	0.1	0.2	10	0.0007	-0.0767	0.561*	0.05

*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%
	380	360	340	330	320	303	280	240	220	210

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
279	11.42	13.57	2.76	95	1.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	1	3	0	1
CADMIUM (CD), UG/L	3	0	<10	3	0	0
CHROMIUM (CR), UG/L	3	0	110	3	0	<10
COBALT (CO), UG/L	3	0	<50	3	0	1
COPPER (CU), UG/L	3	<10	40	3	0	4
IRON (FE), UG/L	10	250	940	3	10	150
LEAD (PB), UG/L	3	12	100	3	2	18
MANGANESE (MN), UG/L	10	80	150	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	10	20	3	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	19.00	94.00			
BIOMASS, ASH WT., G/SQ M	2	16.00	93.00			
CHLOROPHYLL A, MG/SQ M	2	46.000	110.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.400			
ORGANIC CARBON, MG/L	2	7.100	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	12.75	9.74	0.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	227.9	44.5	155	290					
STREAMFLOW (CUBIC FT/SEC)	15	9316.0	5651.5	2400	19300	14	-67.664	24025.145	-0.589	4305.5
PH (STANDARD UNITS)	14	7.75	0.74	6.8	8.8	14	0.0037	6.6957	0.226*	0.75
PHOSPHORUS, TOTAL	12	0.099	0.022	0.07	0.13	12	-0.00003	0.10526	-0.051*	0.023
NITRITE + NITRATE, TOTAL	12	0.332	0.299	0.00	0.78	12	0.00046	0.22565	0.067*	0.313
NITROGEN, KJELDAHL, TOTAL	12	0.694	0.254	0.60	1.50	12	-0.00148	1.24049	-0.256*	0.258
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	59333.3	91386.9	420	290000	12	284.547	-7416.605	0.137*	94941.4
SEDIMENT SUSPENDED	8	22.1	12.5	4	49					
SEDIMENT, CLAY-SILT (PERCENT)	8	55.6	23.6	30	90					
COLIFORM, FECAL (COL/100 ML)	11	82.3	123.0	2	400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	94.3	88.5	14	270					
SILICA, DISSOLVED	12	5.08	3.31	0.7	9.8	12	0.0183	0.7883	0.243*	3.37
CALCIUM, DISSOLVED	12	22.33	3.68	15.0	28.0	12	0.0693	6.0878	0.829	2.15
MAGNESIUM, DISSOLVED	12	9.92	2.00	5.7	13.0	12	0.0402	0.4900	0.886	0.97
SODIUM, DISSOLVED	12	5.69	1.49	3.3	7.9	12	0.0279	-0.8426	0.821	0.89
POTASSIUM, DISSOLVED	12	1.86	0.35	1.5	2.7	12	-0.0008	2.0422	-0.098*	0.37
BICARBONATE, ION	12	99.3	21.0	59	140	12	0.370	12.435	0.776	13.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	13.72	2.60	8.6	17.0	12	0.0306	6.5373	0.519*	2.33
CHLORIDE, DISSOLVED	12	8.33	2.10	4.7	12.0	12	0.0362	-0.1670	0.758	1.44
DISSOLVED SOLIDS, SUM OF CONST	12	116.2	19.0	79	139	12	0.405	21.215	0.936	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	134.9	22.6	93	164	12	0.462	26.447	0.902	10.2
HARDNESS, TOTAL	12	96.8	16.9	61	120	12	0.335	18.268	0.874	8.6
HARDNESS, NONCARBONATE	12	15.3	4.0	9	24	12	0.035	6.930	0.395*	3.8
TURBIDITY (JTU)	12	5.3	2.5	2	10	12	-0.026	11.287	-0.455*	2.3
FLUORIDE, DISSOLVED	12	0.18	0.07	0.1	0.3	12	-0.0000	0.1843	-0.002*	0.08

*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%
	290	275	255	245	240	220	200	155	150	125

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
268	11.77	9.57	2.71	81	2.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

05407000 -- WISCONSIN RIVER AT MUSCODA, WIS.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED 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	<10	20	4	0	10
COBALT (CO), UG/L	4	0	3	4	0	3
COPPER (CU), UG/L	4	0	11	4	0	1
IRON (FE), UG/L	4	420	1100	4	120	460
LEAD (PB), UG/L	4	2	18	4	0	6
MANGANESE (MN), UG/L	4	40	140	4	10	30
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	30	4	7	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	16.50	28.70			
BIOMASS, ASH WT., G/SQ M	4	13.50	20.30			
CHLOROPHYLL A, MG/SQ M	4	0.700	31.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	4.500			
ORGANIC CARBON, MG/L	4	9.800	29.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.00	9.16	2.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	290.0	43.8	210	360					
STREAMFLOW (CUBIC FT/SEC)	12	47533.3	37959.9	16100	156000	11	96.041	9820.781	0.242*	17760.2
PH (STANDARD UNITS)	11	8.46	0.57	7.6	9.6	11	0.0031	7.5576	0.240*	0.58
PHOSPHORUS, TOTAL	11	0.162	0.041	0.11	0.23	10	-0.00067	0.35774	-0.719	0.032
NITRITE + NITRATE, TOTAL	11	0.419	0.382	0.04	1.00	10	-0.00056	0.55481	-0.065*	0.415
NITROGEN, KJELDAHL, TOTAL	11	0.965	0.284	0.67	1.50	10	-0.00303	1.81491	-0.481*	0.267
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	17716.7	14221.7	1400	44000	11	-85.312	41703.969	-0.255*	14945.0
SEDIMENT SUSPENDED	12	79.4	72.7	14	290					
SEDIMENT, CLAY-SILT (PERCENT)	2	95.0	4.2	92	98					
COLIFORM, FECAL (COL/100 ML)	10	299.1	307.7	53	1000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	164.8	146.3	4	450					
SILICA, DISSOLVED	12	5.07	4.47	0.2	11.0	11	-0.0003	4.7757	-0.003*	4.74
CALCIUM, DISSOLVED	12	35.42	6.99	22.0	44.0	11	0.0547	20.4133	0.361*	6.52
MAGNESIUM, DISSOLVED	12	14.44	3.54	9.3	20.0	11	0.0083	12.4924	0.111*	3.46
SODIUM, DISSOLVED	12	7.84	2.07	4.0	12.0	11	0.0057	6.3842	0.123*	2.14
POTASSIUM, DISSOLVED	12	2.49	0.52	1.4	3.5	11	-0.0047	3.8595	-0.375*	0.54
BICARBONATE, ION	12	147.1	24.1	103	185	11	0.274	71.492	0.583*	17.7
CARBONATE, ION	11	0.8	2.7	0	9	10	0.037	-9.613	0.511*	2.6
SULFATE, DISSOLVED	12	19.00	3.69	12.0	28.0	11	-0.0057	20.6615	-0.065*	4.07
CHLORIDE, DISSOLVED	12	9.97	2.69	5.3	16.0	11	0.0137	6.2034	0.223*	2.78
DISSOLVED SOLIDS, SUM OF CONST	12	167.9	26.1	130	208	11	0.231	104.301	0.416*	23.4
DISSOLVED SOLIDS, RCE 180 DEG C	11	187.2	34.2	148	248	10	0.144	149.619	0.197*	34.7
HARDNESS, TOTAL	12	148.8	31.5	96	190	11	0.165	105.544	0.250*	29.4
HARDNESS, NONCARBONATE	12	28.7	15.3	0	59	11	-0.081	52.957	-0.226*	16.1
TURBIDITY (JTU)	12	15.8	12.1	3	43	11	-0.154	61.436	-0.555*	10.7
FLUORIDE, DISSOLVED	12	0.26	0.08	0.2	0.4	11	0.0003	0.1700	0.166*	0.07

*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%
	380	360	360	330	320	290	280	260	240	220

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	12.88	12.46	2.75	97	1.67

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	3	3	0	3
CADMIUM (CD), UG/L	3	0	3	3	0	1
CHROMIUM (CR), UG/L	3	<10	20	3	0	0
COBALT (CO), UG/L	3	0	0	3	0	1
COPPER (CU), UG/L	3	4	14	3	5	10
IRON (FE), UG/L	3	440	1400	3	160	530
LEAD (PB), UG/L	3	8	19	3	4	10
MANGANESE (MN), UG/L	3	60	160	3	30	140
MERCURY (HG), UG/L	3	0.0	0.9	3	0.0	0.2
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	30	60	3	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	21.80	37.00			
BIOMASS, ASH WT., G/SQ M	3	16.50	33.00			
CHLOROPHYLL A, MG/SQ M	3	11.100	76.400			
CHLOROPHYLL B, MG/SQ M	3	0.800	13.800			
ORGANIC CARBON, MG/L	1	4.600				

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	11.74	9.42	0.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	637.3	103.9	480	840					
STREAMFLOW (CUBIC FT/SEC)	21	7438.1	6926.6	1960	28300	13	3.871	2990.565	0.121*	3446.4
PH (STANDARD UNITS)	13	8.12	0.36	7.7	8.7	13	-0.0015	9.0852	-0.436*	0.34
PHOSPHORUS, TOTAL	13	0.395	0.173	0.21	0.90	13	0.00110	-0.30907	0.661	0.136
NITRITE + NITRATE, TOTAL	13	2.140	1.459	0.04	4.90	13	0.00884	-3.49496	0.629	1.185
NITROGEN, KJELDAHL, TOTAL	13	1.750	0.534	0.85	2.90	13	0.00030	1.56163	0.057*	0.557
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	58376.9	55270.0	1400	160000	13	-250.511	218029.188	-0.471*	50931.4
SEDIMENT SUSPENDED	13	128.2	56.7	18	217					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	1403.5	3306.1	20	11500					
STREPTOCOCCI, FECAL (COL/100 ML)	13	8569.9	30476.2	15	110000					
SILICA, DISSOLVED	13	4.13	3.84	0.0	9.6	13	0.0194	-8.2188	0.523*	3.42
CALCIUM, DISSOLVED	13	56.69	12.66	39.0	84.0	13	0.0985	-6.0836	0.808	7.79
MAGNESIUM, DISSOLVED	13	34.69	4.27	26.0	40.0	13	-0.0071	39.2015	-0.172*	4.39
SODIUM, DISSOLVED	13	18.53	8.36	9.9	43.0	13	0.0436	-9.2624	0.542*	7.34
POTASSIUM, DISSOLVED	13	3.01	0.78	2.4	4.9	13	0.0027	1.2806	0.361*	0.76
BICARBONATE, ION	13	276.1	35.8	233	364	13	0.154	178.108	0.446*	33.5
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	45.85	19.60	35.0	110.0	13	0.0960	-15.3560	0.509*	17.63
CHLORIDE, DISSOLVED	13	30.85	11.14	21.0	64.0	13	0.0628	-9.2079	0.586	9.43
DISSOLVED SOLIDS, SUM OF CONST	13	329.9	48.1	285	460	13	0.392	79.825	0.848	26.6
DISSOLVED SOLIDS, ROE 180 DEG C	13	366.8	56.7	294	505	13	0.413	103.605	0.756	38.7
HARDNESS, TOTAL	13	285.4	26.7	250	340	13	0.223	143.388	0.868	13.8
HARDNESS, NONCARBONATE	13	58.2	20.4	41	120	13	0.095	-2.535	0.485*	16.6
TURBIDITY (JTU)	13	21.9	17.1	2	50	13	-0.017	32.695	-0.102*	17.8
FLUORIDE, DISSOLVED	12	0.22	0.07	0.1	0.4	12	0.0002	0.1209	0.227*	0.07

*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%
	670	640	630	610	600	580	560	525	480	425

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	12.81	12.94	2.78	95	2.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

05446500 -- ROCK RIVER NEAR JOSLIN, IL

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	0	3	5	0	2
CADMIUM (CD), UG/L	5	0	1	5	0	1
CHROMIUM (CR), UG/L	5	0	10	5	0	< 10
COBALT (CO), UG/L	5	1	3	5	0	1
COPPER (CU), UG/L	4	0	60	5	0	10
IRON (FE), UG/L	5	690	2100	5	10	70
LEAD (PB), UG/L	5	7	36	5	0	3
MANGANESE (MN), UG/L	5	50	230	5	0	40
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	70	5	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	51.80				
BIOMASS, ASH WT., G/SQ M	1	1.92				
CHLOROPHYLL A, MG/SQ M	2	2.400	38.000			
CHLOROPHYLL B, MG/SQ M	2	0.700	0.800			
ORGANIC CARBON, MG/L	5	7.100	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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, M	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.71	9.34	1.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	384.2	183.9	250	950					
STREAMFLOW (CUBIC FT/SEC)	12	60291.7	39866.1	18500	170000	12	-72.502	88144.688	-0.334*	39403.2
PH (STANDARD UNITS)	12	8.46	0.47	7.8	9.3	12	0.0003	8.3313	0.130*	0.49
PHOSPHORUS, TOTAL	12	0.217	0.066	0.15	0.35	12	-0.00011	0.25965	-0.312*	0.066
NITRITE + NITRATE, TOTAL	12	0.883	0.799	0.03	2.50	12	-0.00094	1.24559	-0.217*	0.818
NITROGEN, KJELDAHL, TOTAL	12	1.125	0.336	0.70	1.90	12	-0.00035	1.25814	-0.190*	0.346
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	10864.5	9758.2	510	29000	11	-20.277	18662.000	-0.401*	9423.5
SEDIMENT SUSPENDED	11	80.8	105.1	6	363					
SEDIMENT, CLAY-SILT (PERCENT)	1	97.0	0.0	97						
COLIFORM, FECAL (COL/100 ML)	11	181.1	117.8	40	360					
STREPTOCOCCI, FECAL (COL/100 ML)	11	164.6	230.1	10	800					
SILICA, DISSOLVED	12	4.58	3.98	0.0	10.0	12	-0.0060	6.8879	-0.277*	4.01
CALCIUM, DISSOLVED	12	42.92	5.71	31.0	52.0	12	-0.0052	44.9256	-0.168*	5.91
MAGNESIUM, DISSOLVED	12	17.17	2.62	11.0	21.0	12	0.0017	16.5248	0.117*	2.73
SODIUM, DISSOLVED	12	9.83	2.06	7.1	14.0	12	-0.0001	9.8805	-0.011*	2.16
POTASSIUM, DISSOLVED	12	2.47	0.24	2.1	2.9	12	-0.0003	2.5780	-0.204*	0.25
BICARBONATE, ION	12	172.1	25.5	110	205	12	0.014	166.585	0.103*	26.6
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	26.25	4.58	17.0	32.0	12	-0.0034	27.5741	-0.139*	4.75
CHLORIDE, DISSOLVED	12	13.98	2.76	9.8	18.0	12	-0.0025	14.9385	-0.166*	2.85
DISSOLVED SOLIDS, SUM OF CONST	12	202.4	24.9	147	241	12	-0.009	205.876	-0.067*	26.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	223.9	25.3	176	274	12	-0.014	229.137	-0.099*	26.4
HARDNESS, TOTAL	12	178.3	23.7	120	210	12	-0.001	178.867	-0.011*	24.8
HARDNESS, NONCARBONATE	12	36.6	11.2	24	63	12	-0.017	43.118	-0.279*	11.3
TURBIDITY (JTU)	12	19.5	19.2	3	60	12	-0.029	30.780	-0.281*	19.3
FLUORIDE, DISSOLVED	12	0.32	0.11	0.2	0.6	12	0.0001	0.2618	0.236*	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%
	450	438	422	415	410	388	363	326	310	281

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	13.13	12.53	2.71	97	1.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	2	4	5	1	4
CADMIUM (CD), UG/L	5	0	1	5	0	4
CHROMIUM (CR), UG/L	5	<10	20	5	0	5
COBALT (CO), UG/L	5	0	3	5	0	2
COPPER (CU), UG/L	5	4	7	5	4	71
IRON (FE), UG/L	5	460	4100	5	80	180
LEAD (PB), UG/L	5	0	10	5	0	410
MANGANESE (MN), UG/L	5	90	200	5	10	80
MERCURY (HG), UG/L	5	0.0	1.5	5	0.0	0.3
SELENIUM (SE), UG/L	5	0	0	5	0	0
ZINC (ZN), UG/L	5	10	30	5	10	200
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	6.90	9.70			
BIOMASS, ASH WT., G/SQ M	2	2.40	3.97			
CHLOROPHYLL A, MG/SQ M	2	17.400	92.000			
CHLOROPHYLL B, MG/SQ M	2	0.900	19.000			
ORGANIC CARBON, MG/L	4	3.700	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT. B	CONSTANT. B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE. WATER (DEG C)	12	13.54	10.31	1.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	576.7	134.4	435	925					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	8.50	0.35	8.0	9.0	12	0.0012	7.8120	0.456*	0.33
PHOSPHORUS. TOTAL	11	0.186	0.106	0.04	0.37	11	0.00029	0.01580	0.388*	0.103
NITRITE + NITRATE. TOTAL	11	3.150	3.636	0.00	12.00	11	-0.00190	4.25550	-0.073*	3.822
NITROGEN. KJELDAHL. TOTAL	11	1.246	0.533	0.72	2.60	11	-0.00018	1.34828	-0.046*	0.562
PHYTOPLANKTON. TOTAL (CELLS/ML)	12	51150.0	45623.8	8500	140000	12	-42.536	75678.813	-0.125*	47475.1
SEDIMENT SUSPENDED	12	175.9	140.1	0	430					
SEDIMENT. CLAY-SILT (PERCENT)	12	70.6	22.8	37	100					
COLIFORM. FECAL (COL/100 ML)	12	287.9	307.6	44	1100					
STREPTOCOCCI. FECAL (COL/100 ML)	12	1763.2	5430.3	28	19000					
SILICA. DISSOLVED	12	6.66	4.46	0.4	13.0	12	0.0021	5.4667	0.062*	4.69
CALCIUM. DISSOLVED	12	65.83	20.85	35.0	110.0	12	0.1391	-14.3775	0.897	9.69
MAGNESIUM, DISSOLVED	12	24.50	5.44	18.0	35.0	12	0.0330	5.4729	0.816	3.20
SODIUM, DISSOLVED	12	16.77	6.60	9.1	30.0	12	0.0392	-5.8452	0.799	4.16
POTASSIUM, DISSOLVED	12	3.85	0.97	2.9	6.6	12	0.0063	0.2071	0.871	0.50
BICARBONATE, ION	12	194.2	55.9	116	330	12	0.364	-16.007	0.876	28.3
CARBONATE, ION	12	6.8	8.0	0	24	12	0.018	-3.829	0.312*	7.9
SULFATE. DISSOLVED	12	82.58	27.26	48.0	130.0	12	0.1425	0.4277	0.702	20.35
CHLORIDE, DISSOLVED	12	22.08	6.84	14.0	39.0	12	0.0464	-4.6455	0.910	2.97
DISSOLVED SOLIDS, SUM OF CONST	12	325.3	83.8	236	530	12	0.607	-25.046	0.974	20.0
DISSOLVED SOLIDS. ROE 180 DEG C	12	355.3	74.2	266	532	12	0.533	48.057	0.965	20.5
HARDNESS, TOTAL	12	265.8	67.8	190	420	12	0.481	-11.760	0.955	21.1
HARDNESS, NONCARBONATE	12	94.4	24.4	55	140	12	0.160	2.034	0.882	12.0
TURBIDITY (JTU)	12	34.1	37.4	2	130	12	-0.119	102.969	-0.429*	35.5
FLUORIDE. DISSOLVED	12	0.37	0.08	0.2	0.5	12	0.0001	0.3184	0.175*	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%
	910	815	770	660	610	545	485	425	384	305

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
353	13.69	12.25	2.76	92	2.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

05490600 -- DES MOINES RIVER AT ST. FRANCISVILLE. MO.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	4	0	2
CADMIUM (CD), UG/L	4	1	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	30	4	0	0
COBALT (CO), UG/L	4	0	5	4	0	0
COPPER (CU), UG/L	4	9	20	4	2	4
IRON (FE), UG/L	4	250	11000	4	0	50
LEAD (PB), UG/L	4	6	22	4	0	12
MANGANESE (MN), UG/L	4	60	360	4	0	20
MERCURY (HG). UG/L	2	0.0	0.1	4	0.0	0.1
SELENIUM (SE). UG/L	3	1	2	4	0	1
ZINC (ZN), UG/L	4	20	70	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	1.69	143.00			
BIOMASS, ASH WT., G/SQ M	5	1.46	122.00			
CHLOROPHYLL A, MG/SQ M	5	0.400	9.900			
CHLOROPHYLL B, MG/SQ M	5	0.000	0.700			
ORGANIC CARBON, MG/L	4	5.400	19.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	14.69	9.26	0.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	795.8	86.5	700	960					
STREAMFLOW (CUBIC FT/SEC)	13	8600.0	8346.8	2610	33300	13	-25.424	28833.668	-0.263*	8410.1
PH (STANDARD UNITS)	13	7.48	0.22	7.0	7.8	13	0.0001	7.4366	0.020*	0.23
PHOSPHORUS, TOTAL	13	0.635	0.303	0.28	1.30	13	0.00129	-0.39138	0.368*	0.294
NITRITE + NITRATE, TOTAL	13	4.223	1.477	2.00	6.30	13	-0.00166	5.54421	-0.097*	1.535
NITROGEN, KJELDAHL, TOTAL	13	2.015	0.867	1.00	4.00	13	-0.00137	3.10790	-0.137*	0.697
PHYTOPLANKTON, TOTAL (CELLS/ML)	14	20672.1	44978.4	590	170000	13	-180.026	165473.250	-0.335*	45693.1
SEDIMENT SUSPENDED	13	90.1	70.6	24	279					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	379.6	669.1	13	2000					
STREPTOCOCCI, FECAL (COL/100 ML)	13	395.7	907.3	3	3100					
SILICA, DISSOLVED	13	6.61	1.41	4.8	10.0	13	0.0001	6.5566	0.004*	1.47
CALCIUM, DISSOLVED	13	67.92	5.53	58.0	76.0	13	0.0155	55.5683	0.243*	5.60
MAGNESIUM, DISSOLVED	13	25.54	6.35	18.0	44.0	13	0.0103	17.3595	0.140*	6.56
SODIUM, DISSOLVED	13	41.38	16.55	17.0	69.0	13	0.0872	-26.0133	0.456*	15.38
POTASSIUM, DISSOLVED	13	4.55	1.66	2.4	8.0	13	0.0078	-1.6775	0.408*	1.58
BICARBONATE, ION	13	215.9	50.2	177	375	13	0.176	75.715	0.304*	49.9
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	97.92	19.41	48.0	120.0	13	-0.0035	100.6919	-0.016*	20.27
CHLORIDE, DISSOLVED	13	57.85	17.38	31.0	83.0	13	0.1057	-26.2667	0.526*	15.44
DISSOLVED SOLIDS, SUM OF CONST	13	408.8	32.6	367	476	13	0.309	162.982	0.819	19.5
DISSOLVED SOLIDS, ROE 180 DEG C	13	453.7	35.5	406	513	13	0.148	335.591	0.361*	34.6
HARDNESS, TOTAL	13	274.6	37.8	220	370	13	0.083	208.807	0.189*	38.7
HARDNESS, NONCARBONATE	13	98.2	19.7	56	120	13	-0.064	149.540	-0.283*	19.8
TURBIDITY (JTU)	13	18.0	16.0	3	65	13	-0.055	61.535	-0.296*	16.0
FLUORIDE, DISSOLVED	13	0.55	0.26	0.2	1.2	13	0.0009	-0.1784	0.303*	0.26

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 303

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%
	920	860	830	795	775	730	690	600	570	510

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.73	12.65	2.72	94	2.33

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	5	5	0	4
CADMIUM (CD), UG/L	5	0	2	5	0	1
CHROMIUM (CR), UG/L	5	0	20	5	0	<10
COBALT (CO), UG/L	5	0	4	5	0	1
COPPER (CU), UG/L	5	0	40	5	0	0
IRON (FE), UG/L	5	240	1500	5	20	60
LEAD (PB), UG/L	5	5	40	5	0	4
MANGANESE (MN), UG/L	5	50	90	5	0	60
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	30	60	5	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	15.80				
BIOMASS, ASH WT., G/SQ M	1	9.38				
CHLOROPHYLL A, MG/SQ M	2	16.900	49.400			
CHLOROPHYLL B, MG/SQ M	2	3.800	12.200			
ORGANIC CARBON, MG/L	5	5.500	17.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	13.85	10.28	0.5	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	703.4	94.2	540	880					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.99	0.19	7.6	8.3	12	0.0012	7.1207	0.632	0.16
PHOSPHORUS, TOTAL	11	0.473	0.181	0.31	0.88	11	0.00066	0.00014	0.321*	0.180
NITRITE + NITRATE, TOTAL	11	4.200	1.493	2.20	6.50	11	-0.00219	5.77210	-0.129*	1.561
NITROGEN, KJELDAHL, TOTAL	11	1.266	0.694	0.15	2.90	11	-0.00084	1.87240	-0.107*	0.727
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	33800.0	51131.6	2400	150000	11	20.453	19121.836	0.035*	53863.3
SEDIMENT SUSPENDED	11	300.6	252.0	102	973					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	994.9	1370.1	96	5000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	8434.6	27272.7	11	95000					
SILICA, DISSOLVED	12	5.75	2.17	0.8	9.1	12	0.0034	3.3670	0.154*	2.25
CALCIUM, DISSOLVED	12	65.92	8.51	51.0	80.0	12	0.0609	23.1128	0.704	6.34
MAGNESIUM, DISSOLVED	12	27.67	3.11	24.0	34.0	12	0.0160	16.4170	0.506*	2.82
SODIUM, DISSOLVED	12	31.25	10.20	17.0	47.0	12	0.0737	-20.5285	0.711	7.53
POTASSIUM, DISSOLVED	12	3.84	0.89	2.6	5.1	12	0.0048	0.4424	0.534*	0.79
BICARBONATE, ION	12	233.6	34.0	184	308	12	0.321	8.168	0.929	13.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	84.58	11.87	62.0	100.0	12	0.0867	23.6652	0.718	8.67
CHLORIDE, DISSOLVED	12	44.83	12.29	28.0	68.0	12	0.0968	-23.1772	0.775	8.15
DISSOLVED SOLIDS, SUM OF CONST	12	379.5	52.0	287	463	12	0.501	27.203	0.948	17.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	427.3	55.6	351	510	12	0.454	108.247	0.803	34.8
HARDNESS, TOTAL	12	278.3	30.1	230	340	12	0.221	122.911	0.723	21.8
HARDNESS, NONCARBONATE	12	86.3	11.8	56	100	12	-0.044	116.860	-0.364*	11.5
TURBIDITY (JTU)	12	59.0	47.5	9	180	12	0.104	-14.194	0.215*	48.7
FLUORIDE, DISSOLVED	12	0.42	0.12	0.2	0.6	12	0.0008	-0.1060	0.612	0.10

*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%
	935	851	800	750	720	679	617	564	539	480

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	14.80	12.08	2.78	96	1.81

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

05586100 -- ILLINOIS RIVER AT VALLEY CITY, IL

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	6	4	0	2
CADMIUM (CD), UG/L	4	0	5	4	0	1
CHROMIUM (CR), UG/L	4	10	20	4	10	< 10
COBALT (CO), UG/L	4	0	9	4	0	2
COPPER (CU), UG/L	4	20	40	4	0	10
IRON (FE), UG/L	4	1600	12000	4	10	70
LEAD (PB), UG/L	4	41	120	4	1	5
MANGANESE (MN), UG/L	4	70	540	4	0	10
MERCURY (HG), UG/L	4	<0.5	<0.5	4	<0.5	<0.5
SELENIUM (SE), UG/L	4	1	13	4	1	7
ZINC (ZN), UG/L	4	30	100	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	5.85	145.00			
BIOMASS, ASH WT., G/SQ M	3	4.00	129.00			
CHLOROPHYLL A, MG/SQ M	3	13.700	85.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.600			
ORGANIC CARBON, MG/L	3	10.000	17.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 05587550   NAME: MISSISSIPPI RIVER BELOW ALTON,ILL

LAT 38D51M41S LONG 090D08M15S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	15.92	10.04	1.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	440.8	83.0	330	590					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	8.14	0.27	7.6	8.6	12	-0.0003	8.2575	-0.079*	0.29
PHOSPHORUS, TOTAL	12	0.242	0.136	0.14	0.64	12	-0.00040	0.41929	-0.245*	0.138
NITRITE + NITRATE, TOTAL	12	1.806	1.353	0.56	4.50	12	0.00403	0.02814	0.247*	1.374
NITROGEN, KJELDAHL, TOTAL	12	1.352	0.891	0.77	4.00	12	-0.00140	1.96993	-0.130*	0.927
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	18008.3	16550.3	4100	69000	12	9.142	13978.297	0.046*	17339.6
SEDIMENT SUSPENDED	12	209.4	290.7	30	1030					
SEDIMENT, CLAY-SILT (PERCENT)	12	76.5	20.0	28	95					
COLIFORM, FECAL (COL/100 ML)	10	485.0	637.0	60	2200					
STREPTOCOCCI, FECAL (COL/100 ML)	10	552.5	1290.8	40	4200					
SILICA, DISSOLVED	12	4.69	3.50	0.2	9.4	12	0.0098	0.3726	0.232*	3.57
CALCIUM, DISSOLVED	12	49.00	7.17	40.0	62.0	12	0.0791	14.1367	0.915	3.04
MAGNESIUM, DISSOLVED	12	19.58	3.23	13.0	24.0	12	0.0255	8.4424	0.649	2.58
SODIUM, DISSOLVED	12	15.96	5.48	8.9	29.0	12	0.0460	-4.3243	0.697	4.12
POTASSIUM, DISSOLVED	12	3.08	0.32	2.6	3.6	12	-0.0010	3.5218	-0.257*	0.33
BICARBONATE, ION	12	185.8	28.5	148	240	12	0.266	59.553	0.833	16.6
CARBONATE, ION	12	1.0	3.5	0	12	12	-0.018	8.741	-0.421*	3.3
SULFATE, DISSOLVED	12	44.00	7.42	33.0	55.0	12	0.0828	7.4780	0.926	2.93
CHLORIDE, DISSOLVED	12	22.17	7.42	14.0	42.0	12	0.0732	-10.0969	0.818	4.47
DISSOLVED SOLIDS, SUM OF CONST	12	251.4	39.2	200	338	12	0.441	57.190	0.933	14.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	276.3	53.0	198	370	12	0.573	23.605	0.897	24.6
HARDNESS, TOTAL	12	200.8	30.3	150	250	12	0.304	67.016	0.832	17.6
HARDNESS, NONCARBONATE	12	47.8	16.4	12	83	12	0.093	6.877	0.468*	15.2
TURBIDITY (JTU)	12	34.5	54.7	2	200	12	-0.166	107.690	-0.252*	55.5
FLUORIDE, DISSOLVED	12	0.41	0.17	0.2	0.7	12	0.0006	0.1295	0.303*	0.17

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 245

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%
	600	580	570	540	530	510	485	440	420	390

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
242	15.62	12.43	2.78	93	2.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	3	15	3	1	3
CADMIUM (CD), UG/L	3	0	2	3	0	1
CHROMIUM (CR), UG/L	2	10	20	3	0	10
COBALT (CO), UG/L	3	0	10	3	0	0
COPPER (CU), UG/L	3	22	44	3	8	15
IRON (FE), UG/L	3	640	23000	3	0	380
LEAD (PB), UG/L	3	9	26	3	0	8
MANGANESE (MN), UG/L	3	100	830	3	10	30
MERCURY (HG), UG/L	2	0.0	0.6	3	0.0	0.6
SELENIUM (SE), UG/L	2	0	1	3	0	0
ZINC (ZN), UG/L	3	60	150	3	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	23.00				
BIOMASS, ASH WT., G/SQ M	1	20.00				
CHLOROPHYLL A, MG/SQ M	1	1.800				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	1	4.000				

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, A	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	14.27	8.00	1.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	511.0	99.3	385	660					
STREAMFLOW (CUBIC FT/SEC)	15	1240.5	1371.2	86	4570	12	-3.525	3037.326	-0.235*	1520.0
PH (STANDARD UNITS)	12	7.95	0.36	7.3	8.3	12	0.0004	7.7325	0.119*	0.37
PHOSPHORUS, TOTAL	11	0.201	0.065	0.11	0.32	11	0.00024	0.07742	0.375*	0.063
NITRITE + NITRATE, TOTAL	11	1.002	0.875	0.04	2.60	11	0.00131	0.32270	0.152*	0.911
NITROGEN, KJELDAHL, TOTAL	11	1.033	0.318	0.58	1.50	11	0.00199	0.00129	0.636	0.259
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	29941.7	30238.1	5200	110000	12	142.114	-68228.500	0.631	24598.2
SEDIMENT SUSPENDED	12	217.7	228.7	15	805					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	658.8	1963.1	18	7000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	10733.5	35986.6	82	125000					
SILICA, DISSOLVED	12	3.98	1.25	2.2	6.1	12	0.0002	3.8770	0.016*	1.31
CALCIUM, DISSOLVED	12	47.67	8.66	32.0	66.0	12	0.0814	6.0629	0.913	3.78
MAGNESIUM, DISSOLVED	12	22.00	4.13	14.0	27.0	12	0.0348	4.2317	0.836	2.38
SODIUM, DISSOLVED	12	24.17	9.40	17.0	45.0	12	0.0797	-16.5711	0.843	5.31
POTASSIUM, DISSOLVED	12	3.76	0.74	3.1	5.4	12	0.0021	2.6602	0.290*	0.74
BICARBONATE, ION	12	194.1	35.0	126	267	12	0.290	45.823	0.824	20.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	56.25	16.36	38.0	92.0	12	0.1578	-24.3876	0.958	4.91
CHLORIDE, DISSOLVED	12	32.17	9.82	24.0	59.0	12	0.0784	-7.8960	0.793	6.28
DISSOLVED SOLIDS, SUM OF CONST	12	285.9	58.1	211	464	12	0.575	-8.004	0.983	11.2
DISSOLVED SOLIDS, RDE 180 DEG C	12	306.8	61.2	238	421	12	0.598	1.309	0.971	15.4
HARDNESS, TOTAL	12	208.3	37.9	140	280	12	0.345	32.015	0.905	16.9
HARDNESS, NONCARBONATE	12	50.4	13.5	33	70	12	0.110	-5.774	0.808	8.3
TURBIDITY (JTU)	12	28.6	19.5	6	70	12	0.041	7.398	0.211*	20.0
FLUORIDE, DISSOLVED	12	0.26	0.05	0.2	0.3	12	-0.0001	0.3172	-0.222*	0.05

*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%
	675	651	625	557	541	510	465	380	360	295

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
349	15.15	12.68	2.82	96	1.96

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	2	4	0	1
CADMIUM (CD), UG/L	4	1	1	4	1	2
CHROMIUM (CR), UG/L	4	<10	<10	4	0	<10
COBALT (CO), UG/L	4	2	2	4	0	0
COPPER (CU), UG/L	4	20	80	4	0	10
IRON (FE), UG/L	4	1800	3500	4	20	100
LEAD (PB), UG/L	4	28	320	4	1	9
MANGANESE (MN), UG/L	4	210	760	4	30	610
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	20	40	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	17.90			
BIOMASS, ASH WT., G/SQ M	4	0.00	10.70			
CHLOROPHYLL A, MG/SQ M	4	0.000	2.400			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.000			
ORGANIC CARBON, MG/L	4	8.400	15.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, A	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	14.28	8.73	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	706.8	227.6	345	1060					
STREAMFLOW (CUBIC FT/SEC)	2	898.0	1063.5	146	1650					
PH (STANDARD UNITS)	16	7.41	0.20	7.1	7.8	16	0.0006	7.0024	0.580	0.17
PHOSPHORUS, TOTAL	12	0.257	0.102	0.13	0.43	12	-0.00034	0.50942	-0.703	0.076
NITRITE + NITRATE, TOTAL	12	0.567	0.411	0.10	1.70	12	-0.00102	1.32901	-0.525*	0.367
NITROGEN, KJELDAHL, TOTAL	12	1.058	0.191	0.82	1.30	12	-0.00040	1.35906	-0.447*	0.179
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	28408.3	23415.4	2400	63000	12	67.965	-22509.027	0.617	19328.6
SEDIMENT SUSPENDED	12	261.3	234.9	18	678					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	1835.2	5362.5	67	18000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6854.4	21475.1	43	75000					
SILICA, DISSOLVED	12	5.44	1.44	3.6	7.8	12	-0.0027	7.4570	-0.397*	1.39
CALCIUM, DISSOLVED	12	65.50	19.84	37.0	100.0	12	0.0892	-1.3132	0.955	6.14
MAGNESIUM, DISSOLVED	12	28.25	9.55	15.0	48.0	12	0.0424	-3.5093	0.943	3.34
SODIUM, DISSOLVED	12	47.42	16.21	24.0	84.0	12	0.0701	-5.0631	0.919	6.71
POTASSIUM, DISSOLVED	12	4.88	0.93	3.8	7.1	.12	0.0010	4.1025	0.237*	0.95
BICARBONATE, ION	16	102.6	34.4	59	164	16	0.152	-8.510	0.951	11.0
CARBONATE, ION	16	0.0	0.0	0	0	16	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	16	248.13	97.52	120.0	420.0	16	0.4388	-71.9546	0.965	26.45
CHLORIDE, DISSOLVED	16	26.69	7.13	16.0	36.0	16	0.0291	5.4443	0.876	3.57
DISSOLVED SOLIDS, SUM OF CONST	12	487.9	153.6	258	766	12	0.704	-39.711	0.974	36.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	528.8	161.8	274	817	12	0.726	-15.267	0.954	51.1
HARDNESS, TOTAL	12	279.2	89.5	150	450	12	0.402	-22.092	0.955	27.8
HARDNESS, NONCARBONATE	12	193.2	66.9	98	330	12	0.294	-27.164	0.934	25.0
TURBIDITY (JTU)	12	44.2	42.4	10	160	12	-0.146	153.228	-0.730	30.3
FLUORIDE, DISSOLVED	12	0.22	0.08	0.1	0.4	12	0.0001	0.1561	0.206*	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%
	1820	1140	1080	922	867	740	600	420	355	270

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	15.23	11.01	2.80	87	2.98

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	2	10	8	0	2
CADMIUM (CD), UG/L	4	1	2	4	1	2
CHROMIUM (CR), UG/L	4	<10	10	8	0	< 10
COBALT (CO), UG/L	4	2	7	4	0	2
COPPER (CU), UG/L	4	0	30	8	0	10
IRON (FE), UG/L	4	1500	14000	8	10	500
LEAD (PB), UG/L	4	9	35	4	2	5
MANGANESE (MN), UG/L	4	830	1900	8	250	1800
MERCURY (HG), UG/L	4	<0.5	1.2	8	<0.5	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	30	60	8	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.20	5.40			
BIOMASS, ASH WT., G/SQ M	4	1.90	4.80			
CHLOROPHYLL A, MG/SQ M	4	0.200	1.200			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.500			
ORGANIC CARBON, MG/L	7	8.700	15.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	7.96	7.25	0.0	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	368.3	77.6	209	446					
STREAMFLOW (CUBIC FT/SEC)	12	7955.8	5383.2	4160	19400	12	-66.866	32584.805	-0.964	1495.7
PH (STANDARD UNITS)	12	8.35	0.18	8.0	8.6	12	0.0006	8.1127	0.280*	0.18
PHOSPHORUS, TOTAL	12	0.067	0.069	0.01	0.20	12	-0.00074	0.34074	-0.836	0.040
NITRITE + NITRATE, TOTAL	12	0.180	0.096	0.02	0.32	12	0.00033	0.05865	0.266*	0.097
NITROGEN, KJELDAHL, TOTAL	12	0.507	0.362	0.22	1.20	12	-0.00212	1.28898	-0.455*	0.338
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3658.3	2912.2	1100	11000	12	-16.846	9863.152	-0.449*	2729.0
SEDIMENT SUSPENDED	12	90.0	90.9	12	290					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	162.8	315.0	6	1100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	109.3	187.1	4	570					
SILICA, DISSOLVED	12	21.08	2.78	17.0	24.0	12	0.0240	12.2452	0.670	2.16
CALCIUM, DISSOLVED	12	39.92	8.02	24.0	49.0	12	0.0971	4.1439	0.941	2.86
MAGNESIUM, DISSOLVED	12	11.67	2.38	7.4	14.0	12	0.0290	0.9885	0.944	0.82
SODIUM, DISSOLVED	12	18.19	4.00	9.3	22.0	12	0.0486	0.2921	0.942	1.40
POTASSIUM, DISSOLVED	12	3.73	0.54	2.4	4.4	12	0.0061	1.4688	0.887	0.26
BICARBONATE, ION	12	164.8	31.6	103	197	12	0.393	19.910	0.967	8.5
CARBONATE, ION	11	1.5	2.5	0	7	11	0.004	0.218	0.116*	2.6
SULFATE, DISSOLVED	12	38.92	12.25	15.0	54.0	12	0.1371	-11.5635	0.868	6.37
CHLORIDE, DISSOLVED	12	9.39	2.55	4.2	12.0	12	0.0285	-1.0876	0.866	1.34
DISSOLVED SOLIDS, SUM OF CONST	12	226.5	44.9	141	272	12	0.568	17.175	0.983	8.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	225.2	39.4	141	270	12	0.504	39.642	0.991	5.5
HARDNESS, TOTAL	12	147.6	31.2	91	180	12	0.374	9.835	0.930	12.0
HARDNESS, NONCARBONATE	12	10.2	5.1	0	16	12	0.032	-1.670	0.491*	4.6
TURBIDITY (JTU)	12	11.3	11.4	3	30	12	-0.130	59.111	-0.886	5.5
FLUORIDE, DISSOLVED	12	0.84	0.27	0.4	1.3	12	0.0022	0.0242	0.635	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%
	421	413	407	398	389	372	335	230	204	190

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.41	9.39	2.79	93	1.87

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	12	40	4	8	32
CADMIUM (CD), UG/L	4	2	10	4	0	0
CHROMIUM (CR), UG/L	3	0	10	4	0	<10
COBALT (CO), UG/L	4	2	50	4	0	0
COPPER (CU), UG/L	4	10	20	3	0	7
IRON (FE), UG/L	4	180	3000	4	0	130
LEAD (PB), UG/L	4	14	100	4	0	3
MANGANESE (MN), UG/L	4	30	130	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.10	5.77			
BIOMASS, ASH WT., G/SQ M	3	0.00	1.62			
CHLOROPHYLL A, MG/SQ M	4	0.200	26.700			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.700			
ORGANIC CARBON, MG/L	4	2.300	7.600			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.33	6.68	0.0	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	447.4	51.0	378	530					
STREAMFLOW (CUBIC FT/SEC)	12	12550.0	6287.0	7840	30400	12	-35.415	28395.156	-0.287*	6315.5
PH (STANDARD UNITS)	11	8.45	0.18	8.2	8.6	11	-0.0006	8.7116	-0.180*	0.18
PHOSPHORUS, TOTAL	12	0.071	0.043	0.02	0.16	12	-0.00045	0.27064	-0.536*	0.038
NITRITE + NITRATE, TOTAL	12	0.168	0.137	0.00	0.41	12	0.00193	-0.69340	0.716	0.101
NITROGEN, KJELDAHL, TOTAL	12	0.432	0.300	0.00	0.96	12	0.00053	0.19589	0.090*	0.313
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	13116.4	24474.1	400	82000	11	-182.797	94427.750	-0.393*	23716.7
SEDIMENT SUSPENDED	10	73.7	72.2	22	267					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	49.5	52.8	<1	120					
STREPTOCOCCI, FECAL (COL/100 ML)	12	44.0	45.8	2	170					
SILICA, DISSOLVED	12	13.00	1.35	10.0	15.0	12	0.0053	10.6414	0.200*	1.39
CALCIUM, DISSOLVED	12	44.92	4.58	36.0	50.0	12	0.0611	17.5909	0.680	3.52
MAGNESIUM, DISSOLVED	12	16.17	1.75	14.0	18.0	12	0.0295	2.9496	0.862	0.93
SODIUM, DISSOLVED	12	20.67	3.96	14.0	27.0	12	0.0659	-8.8341	0.849	2.19
POTASSIUM, DISSOLVED	12	3.00	0.34	2.5	3.4	12	0.0057	0.4649	0.861	0.18
BICARBONATE, ION	12	165.7	12.6	149	188	12	0.118	112.752	0.477*	11.7
CARBONATE, ION	11	0.2	0.6	0	2	11	-0.003	1.586	-0.276*	0.6
SULFATE, DISSOLVED	12	75.50	16.04	53.0	100.0	12	0.2581	-39.9857	0.821	9.59
CHLORIDE, DISSOLVED	12	6.76	0.74	5.7	8.0	12	0.0046	4.6836	0.322*	0.73
DISSOLVED SOLIDS, SUM OF CONST	12	262.3	29.2	217	305	12	0.486	44.883	0.848	16.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	269.3	27.0	231	301	12	0.463	62.005	0.875	13.7
HARDNESS, TOTAL	12	179.2	17.8	150	200	12	0.291	46.988	0.833	10.3
HARDNESS, NONCARBONATE	12	42.6	13.9	12	61	12	0.181	-38.204	0.661	11.0
TURBIDITY (JTU)	12	16.9	17.8	6	70	12	-0.149	83.388	-0.425*	16.9
FLUORIDE, DISSOLVED	12	0.57	0.08	0.5	0.7	12	0.0002	0.4668	0.143*	0.08

*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%
	600	511	498	479	470	436	408	394	384	365

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
332	9.36	10.47	2.74	94	1.76

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	9	17	4	9	17
CADMIUM (CD), UG/L	4	0	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	0	<100	4	0	1
COPPER (CU), UG/L	4	20	30	4	5	10
IRON (FE), UG/L	4	440	1100	4	0	20
LEAD (PB), UG/L	4	8	100	4	0	3
MANGANESE (MN), UG/L	4	20	70	4	0	10
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	10	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.77	7.92			
BIOMASS, ASH WT., G/SQ M	2	3.92	5.00			
CHLOROPHYLL A, MG/SQ M	1	3.200				
CHLOROPHYLL B, MG/SQ M	1	0.100				
ORGANIC CARBON, MG/L	4	2.100	4.200			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.54	9.28	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1668.3	359.4	1000	2260					
STREAMFLOW (CUBIC FT/SEC)	12	456.3	534.3	193	2060	12	-1.037	2206.825	-0.697	401.5
PH (STANDARD UNITS)	12	8.26	0.24	7.8	8.6	12	0.0003	7.7297	0.463*	0.23
PHOSPHORUS, TOTAL	12	0.127	0.257	0.00	0.91	12	-0.00052	0.99909	-0.723	0.186
NITRITE + NITRATE, TOTAL	12	0.167	0.161	0.00	0.43	12	0.00013	-0.05003	0.287*	0.162
NITROGEN, KJELDAHL, TOTAL	12	0.781	0.888	0.10	3.50	12	-0.00156	3.41955	-0.632	0.722
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3331.5	2796.6	48	8300	12	-4.470	10876.711	-0.574*	2400.8
SEDIMENT SUSPENDED	11	399.5	822.8	37	2850					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	116.2	163.7	<1	440					
STREPTOCOCCI, FECAL (COL/100 ML)	12	80.6	93.3	6	280					
SILICA, DISSOLVED	12	6.10	1.60	3.5	8.2	12	-0.0019	9.3326	-0.431*	1.51
CALCIUM, DISSOLVED	12	116.58	31.08	78.0	180.0	12	0.0803	-18.9869	0.929	12.10
MAGNESIUM, DISSOLVED	12	72.08	16.47	40.0	96.0	12	0.0445	-3.0696	0.971	4.10
SODIUM, DISSOLVED	12	176.00	39.02	92.0	230.0	12	0.1034	1.5025	0.952	12.55
POTASSIUM, DISSOLVED	12	4.73	0.46	3.9	5.5	12	0.0001	4.6197	0.052*	0.49
BICARBONATE, ION	12	307.2	52.0	249	418	12	0.123	99.142	0.852	28.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	682.50	186.75	320.0	1000.0	12	0.5069	-173.2917	0.975	43.11
CHLORIDE, DISSOLVED	12	17.75	5.40	10.0	31.0	12	0.0115	-1.5904	0.763	3.66
DISSOLVED SOLIDS, SUM OF CONST	12	1228.2	294.1	683	1750	12	0.805	-131.383	0.984	54.7
DISSOLVED SOLIDS, RDE 180 DEG C	12	1311.3	320.5	711	1840	12	0.891	-192.245	0.999	17.1
HARDNESS, TOTAL	12	587.5	139.0	360	840	12	0.381	-56.409	0.986	24.4
HARDNESS, NONCARBONATE	12	335.0	104.6	140	500	12	0.284	-144.975	0.975	24.2
TURBIDITY (JTU)	12	64.3	191.9	3	680	12	-0.370	709.696	-0.694	145.0
FLUORIDE, DISSOLVED	12	0.38	0.04	0.3	0.4	12	0.0001	0.2720	0.609	0.03

*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%
	2250	2100	2010	1910	1820	1660	1530	1160	895	745

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
312	10.35	10.51	2.80	91	2.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	3	3	0	1
CADMIUM (CD), UG/L	3	<10	<10	3	1	1
CHROMIUM (CR), UG/L	3	0	0	3	0	0
COBALT (CO), UG/L	3	<50	<50	3	0	2
COPPER (CU), UG/L	3	10	10	3	1	5
IRON (FE), UG/L	3	280	1700	3	0	40
LEAD (PB), UG/L	3	<100	<100	3	4	7
MANGANESE (MN), UG/L	3	30	80	3	10	30
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.0
SELENIUM (SE), UG/L	3	1	2	3	1	2
ZINC (ZN), UG/L	3	20	40	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	24.80	95.00			
BIOMASS, ASH WT., G/SQ M	2	22.50	89.00			
CHLOROPHYLL A, MG/SQ M	2	2.300	2.400			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	3	4.800	11.000			

Table 12. Summary of measurements at each station--Continued.

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: 10/01/75 - 09/30/76

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, A	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.75	4.78	1.5	14.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	628.8	24.7	565	660					
STREAMFLOW (CUBIC FT/SEC)	12	12700.0	864.4	11600	14500	12	6.258	8765.215	0.179*	892.0
PH (STANDARD UNITS)	12	8.50	0.17	8.2	8.7	12	-0.0014	9.3913	-0.212*	0.17
PHOSPHORUS, TOTAL	11	0.015	0.010	0.00	0.03	11	0.00019	-0.10437	0.473*	0.010
NITRITE + NITRATE, TOTAL	11	0.098	0.047	0.03	0.17	11	-0.00009	0.15236	-0.048*	0.049
NITROGEN, KJELDAHL, TOTAL	11	0.312	0.155	0.00	0.59	11	-0.00110	1.00304	-0.183*	0.161
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	939.2	1213.2	130	4300	12	7.641	-3865.287	0.156*	1256.9
SEDIMENT SUSPENDED	10	27.6	25.7	8	94					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	4.7	3.7	<1	12					
STREPTOCOCCI, FECAL (COL/100 ML)	12	10.6	14.8	<1	52					
SILICA, DISSOLVED	11	7.65	0.42	6.9	8.3	11	-0.0006	8.0498	-0.039*	0.45
CALCIUM, DISSOLVED	11	55.73	2.24	53.0	61.0	11	0.0322	35.4814	0.372*	2.19
MAGNESIUM, DISSOLVED	11	20.36	0.92	19.0	22.0	11	0.0098	14.2259	0.273*	0.94
SODIUM, DISSOLVED	11	46.36	1.29	44.0	48.0	11	-0.0193	58.5111	-0.389*	1.25
POTASSIUM, DISSOLVED	11	3.89	0.17	3.6	4.2	11	-0.0043	6.5772	-0.651	0.14
BICARBONATE, ION	11	180.8	5.6	173	188	11	0.059	144.035	0.272*	5.6
CARBONATE, ION	11	3.3	3.5	0	8	11	-0.075	50.243	-0.553*	3.1
SULFATE, DISSOLVED	11	157.27	7.86	140.0	170.0	11	0.2102	25.1418	0.692	5.98
CHLORIDE, DISSOLVED	11	7.55	0.63	6.9	9.0	11	0.0006	7.1960	0.024*	0.66
DISSOLVED SOLIDS, SUM OF CONST	11	391.8	6.2	377	399	11	0.191	271.656	0.801	3.9
DISSOLVED SOLIDS, ROE 180 DEG C	11	401.2	6.4	391	410	11	-0.008	406.092	-0.031*	6.8
HARDNESS, TOTAL	11	222.7	7.9	210	240	11	0.103	157.941	0.339*	7.8
HARDNESS, NONCARBONATE	11	69.2	9.1	58	85	11	0.194	-52.975	0.552*	8.0
TURBIDITY (JTU)	11	3.6	3.3	1	10	11	0.050	-27.734	0.342*	3.2
FLUORIDE, DISSOLVED	11	0.67	0.05	0.6	0.7	11	0.0008	0.1959	0.420*	0.04

*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%
	812	740	692	652	642	629	621	615	612	609

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	8.17	6.06	2.33	94	1.04

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	3	5	4	3	6
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	1	50	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	4
IRON (FE), UG/L	4	100	1000	4	0	20
LEAD (PB), UG/L	4	3	<100	4	0	6
MANGANESE (MN), UG/L	4	10	20	4	0	6
MERCURY (HG), UG/L	3	0.0	<0.5	4	0.0	< 0.5
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	10	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	3.08				
BIOMASS, ASH WT., G/SQ M	1	2.92				
CHLOROPHYLL A, MG/SQ M	1	0.100				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	3.100	3.300			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	9.96	9.58	0.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	870.8	295.2	365	1430					
STREAMFLOW (CUBIC FT/SEC)	12	1217.8	1981.0	203	7370	12	-4.059	4752.391	-0.605	1654.4
PH (STANDARD UNITS)	12	8.19	0.35	7.5	8.9	12	0.0003	7.9510	0.233*	0.36
PHOSPHORUS, TOTAL	12	0.258	0.240	0.04	0.88	12	-0.00060	0.77718	-0.734	0.171
NITRITE + NITRATE, TOTAL	12	0.136	0.126	0.01	0.39	12	-0.00003	0.15768	-0.059*	0.132
NITROGEN, KJELDAHL, TOTAL	12	1.232	1.073	0.05	4.30	12	-0.00169	2.70062	-0.464*	0.997
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8676.7	8432.4	220	27000	12	0.893	7898.644	0.031*	8859.6
SEDIMENT SUSPENDED	12	440.3	724.9	33	2650					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	111.9	94.2	15	340					
STREPTOCOCCI, FECAL (COL/100 ML)	12	170.9	179.1	4	540					
SILICA, DISSOLVED	12	5.89	1.38	4.0	8.9	12	0.0029	3.3658	0.622	1.13
CALCIUM, DISSOLVED	12	50.92	18.87	21.0	93.0	12	0.0594	-0.8023	0.929	7.33
MAGNESIUM, DISSOLVED	12	23.53	8.55	8.4	43.0	12	0.0268	0.1806	0.926	3.39
SODIUM, DISSOLVED	12	102.58	37.77	40.0	170.0	12	0.1250	-6.2835	0.977	6.40
POTASSIUM, DISSOLVED	12	6.50	0.99	5.0	7.8	12	0.0013	5.3479	0.395*	0.95
BICARBONATE, ION	12	225.1	82.1	102	401	12	0.216	36.961	0.776	54.3
CARBONATE, ION	12	0.9	2.2	0	6	12	-0.000	1.252	-0.053*	2.3
SULFATE, DISSOLVED	12	238.75	103.75	85.0	450.0	12	0.3359	-53.7734	0.956	31.96
CHLORIDE, DISSOLVED	12	12.98	5.71	4.0	25.0	12	0.0159	-0.8802	0.823	3.40
DISSOLVED SOLIDS, SUM OF CONST	12	553.4	199.5	218	946	12	0.674	-33.640	0.996	14.6
DISSOLVED SOLIDS, RDE 180 DEG C	12	570.5	202.0	249	958	12	0.682	-23.141	0.996	18.4
HARDNESS, TOTAL	12	223.9	82.5	87	410	12	0.259	-1.389	0.926	32.7
HARDNESS, NONCARBONATE	12	39.0	30.5	0	110	12	0.084	-33.998	0.813	18.6
TURBIDITY (JTU)	12	168.5	250.0	5	900	12	-0.552	649.176	-0.652	198.8
FLUORIDE, DISSOLVED	12	0.29	0.07	0.2	0.4	12	0.0002	0.1290	0.825	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%
	1460	1370	1330	1170	1040	880	775	570	521	355

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	9.74	12.30	2.85	95	2.01

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	42	4	0	2
CADMIUM (CD), UG/L	4	7	10	4	0	1
CHROMIUM (CR), UG/L	4	0	60	4	0	<10
COBALT (CO), UG/L	4	5	50	4	0	1
COPPER (CU), UG/L	4	<10	80	4	2	10
IRON (FE), UG/L	4	570	59000	4	0	180
LEAD (PB), UG/L	4	48	100	4	2	4
MANGANESE (MN), UG/L	4	70	1200	4	2	40
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	< 0.5
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	20	390	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	6.300	34.000			

Table 12. 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: 10/01/75 – 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	8.62	7.94	0.0	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	635.8	47.3	495	680					
STREAMFLOW (CUBIC FT/SEC)	12	18115.4	3867.8	14000	25700	12	-62.859	57709.461	-0.786	2456.9
PH (STANDARD UNITS)	12	8.35	0.30	7.9	9.0	12	0.0022	6.9620	0.339*	0.30
PHOSPHORUS, TOTAL	12	0.142	0.130	0.03	0.49	12	-0.00253	1.74835	-0.918	0.054
NITRITE + NITRATE, TOTAL	12	0.116	0.054	0.01	0.22	12	-0.00066	0.53795	-0.582	0.046
NITROGEN, KJELDAHL, TOTAL	12	0.723	0.778	0.16	3.10	12	-0.01507	10.30255	-0.916	0.327
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	870.9	787.8	80	2400	11	-0.579	1238.788	-0.036*	829.8
SEDIMENT SUSPENDED	12	452.1	396.4	73	1480					
SEDIMENT, CLAY-SILT (PERCENT)	11	48.6	17.8	23	81					
COLIFORM, FECAL (COL/100 ML)	12	51.7	69.8	4	190					
STREPTOCOCCI, FECAL (COL/100 ML)	12	98.3	138.7	2	460					
SILICA, DISSOLVED	12	7.27	0.71	5.6	8.0	12	0.0085	1.8755	0.562*	0.62
CALCIUM, DISSOLVED	12	53.17	6.12	36.0	61.0	12	0.1166	-20.9755	0.902	2.77
MAGNESIUM, DISSOLVED	12	20.42	1.98	15.0	23.0	12	0.0347	-1.6669	0.632	1.15
SODIUM, DISSOLVED	12	50.08	4.56	41.0	58.0	12	0.0738	3.1425	0.766	3.08
POTASSIUM, DISSOLVED	12	4.16	0.28	3.8	4.7	12	-0.0033	6.2504	-0.561*	0.24
BICARBONATE, ION	12	182.6	14.2	142	201	12	0.290	-1.615	0.966	3.8
CARBONATE, ION	12	1.1	2.0	0	5	12	0.012	-6.765	0.296*	2.0
SULFATE, DISSOLVED	12	165.00	19.31	110.0	180.0	12	0.3693	-69.8120	0.905	8.60
CHLORIDE, DISSOLVED	12	7.71	1.15	4.5	9.0	12	0.0197	-4.8429	0.816	0.69
DISSOLVED SOLIDS, SUM OF CONST	12	399.3	37.5	287	432	12	0.776	-94.202	0.960	7.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	407.0	34.3	316	445	12	0.670	-19.033	0.925	13.7
HARDNESS, TOTAL	12	215.8	21.9	150	230	12	0.432	-56.750	0.932	8.3
HARDNESS, NONCARBONATE	12	65.3	11.1	35	79	12	0.178	-47.600	0.760	7.5
TURBIDITY (JTU)	12	76.3	96.7	15	350	12	-1.906	1288.047	-0.933	36.5
FLUORIDE, DISSOLVED	12	0.61	0.08	0.4	0.7	12	0.0015	-0.3441	0.894	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%
	731	682	675	660	650	634	627	612	592	481

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN – M (DEG C)	AMPLITUDE – A (DEG C)	PHASE ANGLE – C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.42	9.97	2.74	96	1.46

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	4	20	4	0	2
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	30	4	0	20
COBALT (CO), UG/L	4	6	<50	4	0	0
COPPER (CU), UG/L	4	10	50	4	0	4
IRON (FE), UG/L	4	1800	30000	4	0	20
LEAD (PB), UG/L	4	9	<100	4	0	8
MANGANESE (MN), UG/L	4	40	610	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	30	140	4	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	5.000	6.700			

Table 12. Summary of measurements at each station–Continued.

STATION NUMBER: 06214500   NAME: YELLOWSTONE RIVER AT BILLINGS MT

LAT 45D47M48S LONG 108D28M12S
DRAINAGE AREA: 11795 SC MI (30549 SC KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.13	6.95	1.0	18.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	346.5	103.7	165	510					
STREAMFLOW (CUBIC FT/SEC)	12	9380.8	7387.2	3840	21700	12	-64.864	32504.977	-0.911	3197.7
PH (STANDARD UNITS)	12	8.04	0.23	7.6	8.6	12	-0.0005	8.2261	-0.232*	0.24
PHOSPHORUS, TOTAL	12	0.092	0.151	0.00	0.51	12	-0.00061	0.30975	-0.419*	0.144
NITRITE + NITRATE, TOTAL	12	0.205	0.136	0.01	0.40	12	0.00058	-0.00317	0.445*	0.128
NITROGEN, KJELDAHL, TOTAL	12	0.545	0.559	0.02	1.80	12	0.00042	0.39655	0.077*	0.584
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4274.2	3492.0	590	12000	12	0.988	3921.776	0.029*	3660.8
SEDIMENT SUSPENDED	11	118.9	204.0	12	721					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	216.8	173.1	22	540					
STREPTOCOCCI, FECAL (COL/100 ML)	11	230.7	336.3	27	1200					
SILICA, DISSOLVED	12	13.00	1.13	11.0	15.0	12	0.0063	10.7623	0.577	0.97
CALCIUM, DISSOLVED	12	33.00	8.54	17.0	43.0	12	0.0781	5.1684	0.948	2.84
MAGNESIUM, DISSOLVED	12	11.44	3.39	5.7	15.0	12	0.0316	0.1673	0.967	0.91
SODIUM, DISSOLVED	12	22.83	7.67	11.0	33.0	12	0.0715	-2.6461	0.966	2.07
POTASSIUM, DISSOLVED	12	3.17	1.33	1.7	6.9	12	0.0012	2.7313	0.097*	1.39
BICARBONATE, ION	12	137.6	31.7	76	169	12	0.281	37.466	0.919	13.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	63.75	27.34	21.0	100.0	12	0.2462	-24.7280	0.942	9.66
CHLORIDE, DISSOLVED	12	5.92	1.62	3.1	8.2	12	0.0121	1.6116	0.775	1.07
DISSOLVED SOLIDS, SUM OF CONST	12	221.5	64.0	111	295	12	0.588	11.827	0.953	20.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	227.7	64.3	126	308	12	0.601	13.371	0.969	16.6
HARDNESS, TOTAL	12	131.6	36.3	66	170	12	0.334	12.581	0.955	11.3
HARDNESS, NONCARBONATE	12	16.9	10.2	0	34	12	0.090	-15.332	0.917	4.3
TURBIDITY (JTU)	12	21.7	38.0	1	140	12	-0.147	73.954	-0.400*	36.6
FLUORIDE, DISSOLVED	12	0.42	0.08	0.3	0.5	12	0.0006	0.2053	0.848	0.04

*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%
	572	499	482	469	449	408	342	173	150	134

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	8.75	8.95	2.77	89	2.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	5	18	4	5	13
CADMIUM (CD), UG/L	4	0	<10	4	0	2
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	0	20	4	1	4
IRON (FE), UG/L	4	310	2700	4	0	60
LEAD (PB), UG/L	4	<100	200	4	2	14
MANGANESE (MN), UG/L	4	10	110	4	0	10
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	40	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.20				
BIOMASS, ASH WT., G/SQ M	1	0.40				
CHLOROPHYLL A, MG/SQ M	1	0.200				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	3.600	9.200			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.71	6.96	1.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	811.7	91.2	640	905					
STREAMFLOW (CUBIC FT/SEC)	12	4226.3	1218.7	2550	6320	12	10.136	-3998.523	0.756	833.4
PH (STANDARD UNITS)	12	8.32	0.16	8.0	8.5	12	0.0001	8.2630	0.036*	0.17
PHOSPHORUS, TOTAL	12	0.047	0.038	0.00	0.15	12	0.00003	0.02033	0.077*	0.040
NITRITE + NITRATE, TOTAL	12	0.260	0.095	0.09	0.37	12	0.00049	-0.13956	0.474*	0.087
NITROGEN, KJELDAHL, TOTAL	12	0.459	0.225	0.15	0.88	12	-0.00066	0.99794	-0.269*	0.227
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2045.0	2025.5	180	6000	12	-10.809	10816.234	-0.466*	1656.0
SEDIMENT SUSPENDED	12	66.4	64.3	14	228					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	53.8	113.6	<1	410					
STREPTOCOCCI, FECAL (COL/100 ML)	12	114.3	143.5	13	470					
SILICA, DISSOLVED	12	8.36	0.94	5.8	9.3	12	0.0032	5.7682	0.311*	0.93
CALCIUM, DISSOLVED	12	71.00	8.03	55.0	80.0	12	0.0783	7.4721	0.888	3.87
MAGNESIUM, DISSOLVED	12	24.92	3.03	20.0	29.0	12	0.0276	2.5272	0.830	1.77
SODIUM, DISSOLVED	12	66.67	10.10	52.0	84.0	12	0.0778	5.5235	0.702	7.55
POTASSIUM, DISSOLVED	12	3.47	0.42	2.8	4.3	12	0.0033	0.7715	0.723	0.30
BICARBONATE, ION	12	195.3	20.1	159	224	12	0.192	39.113	0.871	10.4
CARBONATE, ION	12	1.3	2.1	0	5	12	-0.002	3.035	-0.091*	2.2
SULFATE, DISSOLVED	12	250.00	31.62	190.0	290.0	12	0.2915	13.3853	0.840	17.98
CHLORIDE, DISSOLVED	12	10.30	2.70	7.4	17.0	12	0.0120	0.5525	0.405*	2.59
DISSOLVED SOLIDS, SUM OF CONST	12	534.8	61.4	417	618	12	0.567	58.620	0.871	31.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	556.3	68.6	435	641	12	0.632	43.540	0.840	39.0
HARDNESS, TOTAL	12	280.0	33.8	220	320	12	0.325	16.299	0.875	17.2
HARDNESS, NONCARBONATE	12	117.9	15.9	89	140	12	0.145	0.435	0.829	9.3
TURBIDITY (JTU)	12	13.1	15.8	3	60	12	-0.010	21.272	-0.058*	16.5
FLUORIDE, DISSOLVED	12	0.37	0.05	0.3	0.4	12	0.0005	-0.0122	0.864	0.03

*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%
	982	944	911	883	851	819	790	669	650	623

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	9.48	9.00	2.58	93	1.76

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	2	4	0	2
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	50	4	0	0
COBALT (CO), UG/L	4	< 50	80	4	0	1
COPPER (CU), UG/L	4	10	40	4	1	2
IRON (FE), UG/L	4	260	960	4	0	180
LEAD (PB), UG/L	4	<100	100	4	2	3
MANGANESE (MN), UG/L	4	20	50	4	10	20
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	2	2	4	2	2
ZINC (ZN), UG/L	4	30	50	4	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.50	46.70			
BIOMASS, ASH WT., G/SQ M	3	0.40	32.20			
CHLOROPHYLL A, MG/SQ M	3	1.100	7.600			
CHLOROPHYLL B, MG/SQ M	3	0.200	2.000			
ORGANIC CARBON, MG/L	4	4.000	5.300			

Table 12. 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: 10/01/75 - 09/30/76

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	9.12	9.95	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	905.2	267.3	440	1320					
STREAMFLOW (CUBIC FT/SEC)	13	423.7	370.4	90	1530	13	-0.855	1197.321	-0.617	304.5
PH (STANDARD UNITS)	13	8.22	0.21	7.7	8.5	13	0.0004	7.8558	0.512*	0.19
PHOSPHORUS, TOTAL	13	0.143	0.227	0.00	0.67	13	-0.00041	0.51617	-0.486*	0.207
NITRITE + NITRATE, TOTAL	13	0.075	0.076	0.02	0.26	13	-0.00007	0.13714	-0.243*	0.077
NITROGEN, KJELDAHL, TOTAL	13	0.711	0.619	0.20	2.50	13	-0.00042	1.09243	-0.182*	0.635
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4018.3	5102.6	270	16000	12	-4.581	8014.387	-0.225*	5214.8
SEDIMENT SUSPENDED	13	378.2	660.8	11	1960					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	848.5	2665.8	1	9300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	559.8	1363.2	4	4800					
SILICA, DISSOLVED	13	5.08	2.31	0.5	8.9	13	0.0009	4.3115	0.099*	2.40
CALCIUM, DISSOLVED	13	64.54	14.12	40.0	83.0	13	0.0482	20.8699	0.913	6.01
MAGNESIUM, DISSOLVED	13	46.00	14.47	17.0	61.0	13	0.0505	0.2959	0.933	5.44
SODIUM, DISSOLVED	13	77.54	30.53	37.0	130.0	13	0.0934	-7.0109	0.818	18.35
POTASSIUM, DISSOLVED	13	4.90	1.02	2.9	6.7	13	0.0037	1.5662	0.963	0.29
BICARBONATE, ION	13	291.6	64.1	174	373	13	0.226	86.976	0.943	22.2
CARBONATE, ION	13	0.4	1.4	0	5	13	0.001	-0.221	0.129*	1.4
SULFATE, DISSOLVED	13	270.69	101.84	89.0	440.0	13	0.3645	-59.2263	0.957	30.94
CHLORIDE, DISSOLVED	13	4.86	1.86	2.0	8.7	13	0.0055	-0.0835	0.785	1.20
DISSOLVED SOLIDS, SUM OF CONST	13	618.2	185.0	281	912	13	0.679	3.751	0.981	37.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	600.0	176.9	294	895	12	0.697	-8.191	0.986	30.7
HARDNESS, TOTAL	13	350.8	93.8	170	450	13	0.329	53.132	0.938	34.1
HARDNESS, NONCARBONATE	13	111.3	44.8	27	160	13	0.143	-17.814	0.851	24.6
TURBIDITY (JTU)	13	133.2	252.6	2	750	13	-0.456	545.590	-0.482*	231.1
FLUORIDE, DISSOLVED	13	0.32	0.06	0.2	0.4	13	0.0001	0.2050	0.588	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 273

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	1520	1510	1080	1040	893	620	489	416	389

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
294	10.85	12.67	2.79	93	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	15	5	0	1
CADMIUM (CD), UG/L	5	0	10	5	0	1
CHROMIUM (CR), UG/L	5	0	60	5	0	0
COBALT (CO), UG/L	4	<50	50	5	0	<10
COPPER (CU), UG/L	5	<10	60	5	1	4
IRON (FE), UG/L	5	220	31000	5	0	50
LEAD (PB), UG/L	5	0	<100	5	1	7
MANGANESE (MN), UG/L	5	10	570	5	0	20
MERCURY (HG), UG/L	5	0.0	0.1	5	0.0	0.0
SELENIUM (SE), UG/L	5	0	2	5	0	1
ZINC (ZN), UG/L	5	10	240	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.40	71.00			
BIOMASS, ASH WT., G/SQ M	3	0.10	67.70			
CHLOROPHYLL A, MG/SQ M	3	0.300	3.600			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	3	3.500	22.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 06326500   NAME: POWDER RIVER NEAR LOCATE, MT.

LAT 46027M00S LONG 105019M00S
DRAINAGE AREA: 13194 SQ MI (34172 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.38	8.30	0.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1884.2	603.6	760	2900					
STREAMFLOW (CUBIC FT/SEC)	12	601.4	665.8	24	2420	12	-0.869	2238.835	-0.788	429.8
PH (STANDARD UNITS)	12	8.17	0.24	7.7	8.5	12	0.0001	8.0205	0.208*	0.24
PHOSPHORUS, TOTAL	12	0.921	0.978	0.08	3.10	12	-0.00103	2.86967	-0.638	0.790
NITRITE + NITRATE, TOTAL	12	0.391	0.194	0.01	0.61	12	-0.00014	0.64749	-0.423*	0.185
NITROGEN, KJELDAHL, TOTAL	12	2.517	2.196	0.61	7.30	12	-0.00210	6.46766	-0.576	1.882
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8649.2	15197.4	0	43000	12	13.207	-16234.379	0.525*	13568.3
SEDIMENT SUSPENDED	12	3027.8	3306.0	139	9350					
SEDIMENT, CLAY-SILT (PERCENT)	6	53.8	22.0	29	92					
COLIFORM, FECAL (COL/100 ML)	12	1887.4	5403.4	4	19000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1191.4	2399.9	97	8600					
SILICA, DISSOLVED	12	7.90	1.40	5.8	10.0	12	0.0007	6.5646	0.305*	1.40
CALCIUM, DISSOLVED	12	115.25	35.47	48.0	160.0	12	0.0515	18.1836	0.877	17.87
MAGNESIUM, DISSOLVED	12	50.17	19.23	14.0	87.0	12	0.0306	-7.4507	0.960	5.61
SODIUM, DISSOLVED	12	243.33	87.11	110.0	420.0	12	0.1379	-16.4616	0.956	26.86
POTASSIUM, DISSOLVED	12	7.07	2.18	4.5	12.0	12	0.0030	1.4993	0.820	1.31
BICARBONATE, ION	12	273.3	61.1	186	390	12	0.040	197.844	0.395*	58.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	646.67	256.28	220.0	1200.0	12	0.3911	-90.2363	0.922	104.38
CHLORIDE, DISSOLVED	12	103.00	47.50	23.0	190.0	12	0.0573	-4.9567	0.728	34.14
DISSOLVED SOLIDS, SUM OF CONST	12	1308.9	424.9	519	2130	12	0.692	5.935	0.983	82.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	1354.6	446.5	513	2200	12	0.733	-27.029	0.992	60.6
HARDNESS, TOTAL	12	494.2	162.2	180	730	12	0.254	14.964	0.947	54.8
HARDNESS, NONCARBONATE	12	272.1	150.1	0	510	12	0.221	-143.750	0.888	72.3
TURBIDITY (JTU)	12	1282.5	1701.2	40	5800	12	-0.475	2178.213	-0.169*	1758.6
FLUORIDE, DISSOLVED	12	0.42	0.10	0.3	0.7	12	0.0001	0.3180	0.355*	0.09

*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%
	2900	2720	2670	2570	2350	2110	1760	1200	1010	900

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	8.81	11.00	2.94	91	2.52

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

06326500 -- POWDER RIVER NEAR LOCATE, MT.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	40	4	0	2
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	80	4	0	10
COBALT (CO), UG/L	4	<50	100	4	0	0
COPPER (CU), UG/L	4	10	100	4	2	7
IRON (FE), UG/L	4	2200	73000	4	10	20
LEAD (PB), UG/L	4	<100	200	4	2	4
MANGANESE (MN), UG/L	4	60	1200	4	0	10
MERCURY (HG), UG/L	4	0.1	0.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	2	2	4	2	2
ZINC (ZN), UG/L	4	50	310	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.00	25.10			
BIOMASS, ASH WT., G/SQ M	3	0.00	9.92			
CHLOROPHYLL A, MG/SQ M	3	0.000	0.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.000			
ORGANIC CARBON, MG/L	4	7.800	30.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	10.12	8.78	0.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	668.6	182.1	330	940					
STREAMFLOW (CUBIC FT/SEC)	24	15020.8	10205.7	6440	44400	24	-39.260	41270.902	-0.700	7447.4
PH (STANDARD UNITS)	24	8.35	0.24	8.0	9.0	24	0.0006	7.9663	0.427	0.22
PHOSPHORUS, TOTAL	24	0.175	0.204	0.01	0.73	24	-0.00039	0.43714	-0.350*	0.195
NITRITE + NITRATE, TOTAL	24	0.250	0.193	0.00	0.59	24	0.00052	-0.09549	0.486	0.173
NITROGEN, KJELDAHL, TOTAL	24	0.722	0.411	0.23	1.80	24	-0.00025	0.88705	-0.109*	0.418
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	7073.0	14557.7	250	48000	10	-44.438	37402.027	-0.523*	13158.2
SEDIMENT SUSPENDED	17	597.4	718.1	27	2450					
SEDIMENT, CLAY-SILT (PERCENT)	12	54.8	17.4	25	78					
COLIFORM, FECAL (COL/100 ML)	24	74.9	128.2	<1	510					
STREPTOCOCCI, FECAL (COL/100 ML)	25	81.8	116.5	<1	460					
SILICA, DISSOLVED	12	9.55	1.11	8.0	12.0	12	-0.0029	11.4661	-0.459*	1.04
CALCIUM, DISSOLVED	12	53.08	11.94	34.0	69.0	12	0.0659	10.1104	0.958	3.58
MAGNESIUM, DISSOLVED	12	20.08	5.40	11.0	27.0	12	0.0306	0.1148	0.984	1.02
SODIUM, DISSOLVED	12	56.58	19.00	25.0	80.0	12	0.1085	-14.1436	0.991	2.69
POTASSIUM, DISSOLVED	12	3.33	0.63	2.1	3.9	12	0.0033	1.1763	0.905	0.28
BICARBONATE, ION	12	177.7	36.8	114	220	12	0.196	49.546	0.926	14.5
CARBONATE, ION	12	1.0	1.7	0	5	12	0.005	-2.199	0.516*	1.5
SULFATE, DISSOLVED	12	172.50	52.68	83.0	240.0	12	0.2888	-15.8027	0.951	17.04
CHLORIDE, DISSOLVED	12	10.57	4.26	5.6	18.0	12	0.0221	-3.8071	0.899	1.95
DISSOLVED SOLIDS, SUM OF CONST	12	414.8	108.8	234	550	12	0.618	11.829	0.986	19.0
DISSOLVED SOLIDS, ROE 180 DEG C	23	441.7	125.0	208	650	23	0.707	-39.577	0.990	17.7
HARDNESS, TOTAL	12	215.8	51.1	130	260	12	0.286	29.091	0.973	12.4
HARDNESS, NONCARBONATE	12	67.8	22.4	31	100	12	0.121	-11.327	0.942	7.8
TURBIDITY (JTU)	23	70.7	99.7	4	400	23	-0.269	253.757	-0.473	89.9
FLUORIDE, DISSOLVED	12	0.36	0.10	0.1	0.4	12	0.0004	0.1023	0.684	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%
	939	891	868	810	769	709	571	384	363	328

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	9.92	11.54	2.84	94	2.01

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

06329500 -- YELLOWSTONE RIVER NEAR SIDNEY, MT.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	4	18	2	2	6
CADMIUM (CD), UG/L	4	0	<10	2	0	1
CHROMIUM (CR), UG/L	4	0	40	2	0	0
COBALT (CO), UG/L	0			0		
COPPER (CU), UG/L	4	<10	50	2	1	2
IRON (FE), UG/L	4	630	24000	12	0	50
LEAD (PB), UG/L	4	31	<100	2	2	3
MANGANESE (MN), UG/L	4	20	600	2	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	2	0.0	0.0
SELENIUM (SE), UG/L	4	0	2	2	1	2
ZINC (ZN), UG/L	4	30	90	2	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	14.00				
BIOMASS, ASH WT., G/SQ M	1	12.00				
CHLOROPHYLL A, MG/SQ M	1	21.000				
CHLOROPHYLL B, MG/SQ M	1	0.400				
ORGANIC CARBON, MG/L	21	2.000	24.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.46	9.41	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1783.3	544.8	840	2700					
STREAMFLOW (CUBIC FT/SEC)	12	148.3	184.4	4	627	12	-0.185	475.565	-0.542*	162.6
PH (STANDARD UNITS)	12	8.37	0.37	7.8	8.9	12	-0.0000	8.4083	-0.026*	0.39
PHOSPHORUS, TOTAL	12	0.807	1.599	0.00	5.10	12	-0.00117	2.69510	-0.399*	1.536
NITRITE + NITRATE, TOTAL	12	0.327	0.536	0.00	1.90	12	-0.00039	1.01859	-0.394*	0.517
NITROGEN, KJELDAHL, TOTAL	12	2.137	2.142	0.46	6.60	12	-0.00222	6.09142	-0.564*	1.855
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	26875.5	67601.3	26	240000	12	17.657	-4612.754	0.142*	70176.6
SEDIMENT SUSPENDED	4	3609.5	6332.2	186	13100					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	49.3	43.0	13	160					
STREPTOCOCCI, FECAL (COL/100 ML)	10	72.4	50.7	26	195					
SILICA, DISSOLVED	12	8.37	2.15	5.3	12.0	12	0.0011	6.3810	0.282*	2.17
CALCIUM, DISSOLVED	12	73.08	29.49	28.0	130.0	12	0.0465	-9.7657	0.858	15.88
MAGNESIUM, DISSOLVED	12	36.50	14.49	12.0	60.0	12	0.0235	-5.4198	0.883	7.12
SODIUM, DISSOLVED	12	298.33	103.12	140.0	450.0	12	0.1609	-24.3225	0.956	31.78
POTASSIUM, DISSOLVED	12	10.81	1.59	9.1	14.0	12	0.0011	8.9175	0.384*	1.54
BICARBONATE, ION	12	390.0	143.9	198	648	12	0.181	66.976	0.686	109.9
CARBONATE, ION	12	5.2	6.9	0	18	12	0.006	-4.843	0.441*	6.5
SULFATE, DISSOLVED	12	649.17	220.76	250.0	970.0	12	0.3850	-37.3330	0.950	72.32
CHLORIDE, DISSOLVED	12	11.27	7.61	4.5	33.0	12	0.0094	-5.5324	0.674	5.90
DISSOLVED SOLIDS, SUM OF CONST	12	1284.1	428.7	549	1940	12	0.740	-36.210	0.941	152.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	1306.4	429.0	587	1930	12	0.757	-43.931	0.962	123.5
HARDNESS, TOTAL	12	332.5	131.5	120	570	12	0.212	-46.001	0.879	65.7
HARDNESS, NONCARBONATE	12	31.4	24.5	0	61	12	0.011	12.110	0.240*	25.0
TURBIDITY (JTU)	12	337.5	814.3	4	2900	12	-0.527	1278.013	-0.353*	799.1
FLUORIDE, DISSOLVED	12	0.32	0.09	0.1	0.4	12	0.0001	0.2250	0.353*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 257

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%
	2500	2260	2150	2000	1830	1540	1260	775	680	620

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
257	9.94	9.88	2.91	83	2.53

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	13	4	1	3
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	3	0	4
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	10	60	4	8	36
IRON (FE), UG/L	4	3600	9200	4	20	360
LEAD (PB), UG/L	4	<100	100	4	2	13
MANGANESE (MN), UG/L	4	90	220	4	10	90
MERCURY (HG), UG/L	4	0.1	0.9	4	0.0	0.6
SELENIUM (SE), UG/L	4	0	1	4	0	2
ZINC (ZN), UG/L	4	40	100	4	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.00				
BIOMASS, ASH WT., G/SQ M	1	0.00				
CHLOROPHYLL A, MG/SQ M	1	0.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	9.200	46.000			

STATION NUMBER: 06338490   NAME: MISSOURI RIVER AT GARRISON DAM, ND

LAT 47D30M08S LONG 101D25M50S
DRAINAGE AREA: 181400 SQ MI (469826 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	7.38	6.10	0.5	16.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	631.7	19.3	600	650					
STREAMFLOW (CUBIC FT/SEC)	12	34908.3	3492.7	28000	38000	12	-119.339	110290.813	-0.661	2748.8
PH (STANDARD UNITS)	12	8.27	0.15	8.0	8.5	12	-0.0026	9.9284	-0.340*	0.15
PHOSPHORUS, TOTAL	12	0.012	0.011	0.00	0.03	12	0.00027	-0.15631	0.454*	0.011
NITRITE + NITRATE, TOTAL	12	0.178	0.061	0.07	0.28	12	0.00114	-0.54044	0.361*	0.060
NITROGEN, KJELDAHL, TOTAL	12	0.332	0.168	0.20	0.76	12	-0.00215	1.68718	-0.248*	0.170
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	204.3	395.0	0	1100	12	-3.495	2412.198	-0.171*	408.1
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1.0	0.0	<1	1					
STREPTOCOCCI, FECAL (COL/100 ML)	11	2.1	2.7	<1	10					
SILICA, DISSOLVED	12	8.23	3.09	6.8	18.0	12	0.0478	-21.9739	0.300*	3.09
CALCIUM, DISSOLVED	12	51.75	4.05	47.0	60.0	12	0.1385	-35.7257	0.662	3.18
MAGNESIUM, DISSOLVED	12	19.58	1.24	18.0	21.0	12	0.0409	-6.2501	0.638	1.00
SODIUM, DISSOLVED	12	55.67	2.15	53.0	60.0	12	-0.0045	58.4802	-0.040*	2.25
POTASSIUM, DISSOLVED	12	3.96	0.17	3.6	4.2	12	0.0053	0.6077	0.612	0.14
BICARBONATE, ION	11	184.4	5.2	172	191	11	0.197	60.021	0.765	3.5
CARBONATE, ION	12	1.2	2.9	0	10	12	-0.035	23.163	-0.233*	2.9
SULFATE, DISSOLVED	12	165.83	13.79	150.0	190.0	12	0.3482	-54.1347	0.489*	12.62
CHLORIDE, DISSOLVED	12	8.32	0.72	7.3	9.8	12	0.0202	-4.4482	0.540*	0.64
DISSOLVED SOLIDS, SUM OF CONST	11	407.8	20.7	376	437	11	0.698	-32.773	0.679	16.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	406.8	13.6	381	423	12	0.393	158.749	0.560*	11.8
HARDNESS, TOTAL	12	209.2	14.4	190	240	12	0.539	-131.119	0.722	10.5
HARDNESS, NONCARBONATE	12	69.5	46.5	31	210	12	0.724	-387.829	0.301*	46.6
TURBIDITY (JTU)	12	1.7	1.2	1	5	12	0.017	-9.332	0.292*	1.2
FLUORIDE, DISSOLVED	12	0.47	0.07	0.3	0.5	12	0.0004	0.2109	0.120*	0.07

*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%
	657	652	646	638	634	622	618	611	610	600

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	6.59	7.33	2.14	96	1.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

06338490 -- MISSDURI RIVER AT GARRISON DAM, ND

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	2	12	0	4
CADMIUM (CD), UG/L	3	0	<10	11	0	1
CHROMIUM (CR), UG/L	2	0	10	3	0	10
COBALT (CO), UG/L	0			4	0	1
COPPER (CU), UG/L	3	0	10	3	0	2
IRON (FE), UG/L	3	40	70	3	0	10
LEAD (PB), UG/L	3	3	100	3	0	2
MANGANESE (MN), UG/L	3	1	10	3	0	2
MERCURY (HG), UG/L	3	0.0	<0.5	3	0.0	<0.5
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	10	40	3	5	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	18.00	37.00			
BIOMASS, ASH WT., G/SQ M	2	13.00	30.00			
CHLOROPHYLL A, MG/SQ M	2	20.000	92.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.100			
ORGANIC CARBON, MG/L	0					

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 06340500   NAME: KNIFE RIVER AT HAZEN, ND

LAT 47D17M06S LONG 101D37M26S
DRAINAGE AREA: 2350 SQ MI (6087 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	9.15	8.73	0.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	1528.2	388.6	725	2100					
STREAMFLOW (CUBIC FT/SEC)	17	74.1	75.4	16	260	17	-0.139	285.835	-0.714	54.5
PH (STANDARD UNITS)	17	8.33	0.39	7.7	9.2	17	0.0002	8.0526	0.163*	0.39
PHOSPHORUS, TOTAL	14	0.129	0.158	0.02	0.61	14	-0.00029	0.56434	-0.720	0.114
NITRITE + NITRATE, TOTAL	14	0.164	0.209	C.00	0.59	14	-0.00017	0.41227	-0.311*	0.207
NITROGEN, KJELDAHL, TOTAL	14	1.279	0.693	0.11	2.80	14	-0.00038	1.84688	-0.216*	0.704
PHYTOPLANKTON, TOTAL (CELLS/ML)	15	28714.0	23539.3	410	65000	14	1.634	24461.094	0.028*	24267.3
SEDIMENT SUSPENDED	13	136.0	258.7	26	990					
SEDIMENT, CLAY-SILT (PERCENT)	11	78.2	17.9	39	97					
COLIFORM, FECAL (COL/100 ML)	14	403.1	705.1	<1	2800					
STREPTOCOCCI, FECAL (COL/100 ML)	14	444.7	480.6	61	1900					
SILICA, DISSOLVED	14	9.78	2.66	6.3	14.0	14	0.0050	2.3562	0.731	1.89
CALCIUM, DISSOLVED	3	50.67	4.51	46.0	55.0					
MAGNESIUM, DISSOLVED	3	44.33	7.02	37.0	51.0					
SODIUM, DISSOLVED	3	291.33	53.00	232.0	334.0					
POTASSIUM, DISSOLVED	3	8.43	0.51	8.0	9.0					
BICARBONATE, ION	0									
CARBONATE, ION	0									
SULFATE, DISSOLVED	3	465.00	124.19	337.0	585.0					
CHLORIDE, DISSOLVED	3	6.13	1.03	5.0	7.0					
DISSOLVED SOLIDS, SUM OF CONST	0									
DISSOLVED SOLIDS, ROE 180 DEG C	3	1183.3	180.4	1010	1370					
HARDNESS, TOTAL	3	309.0	35.1	280	348					
HARDNESS, NONCARBONATE	0									
TURBIDITY (JTU)	14	76.1	195.4	4	750	14	-0.229	419.234	-0.460*	180.5
FLUORIDE, DISSOLVED	14	0.36	0.11	0.2	0.6	14	0.0002	0.0820	0.662	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%
	2060	1970	1950	1890	1700	1550	1440	815	688	548

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	9.31	11.98	2.82	93	2.42

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

06340500 -- KNIFE RIVER AT HAZEN, ND

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	13	5	0	4
CADMIUM (CD), UG/L	5	1	10	5	0	1
CHROMIUM (CR), UG/L	5	10	50	5	0	10
COBALT (CO), UG/L	0			0		
COPPER (CU), UG/L	5	0	50	5	0	6
IRON (FE), UG/L	5	160	38000	5	20	130
LEAD (PB), UG/L	5	7	<100	5	0	16
MANGANESE (MN), UG/L	5	170	940	5	9	140
MERCURY (HG), UG/L	5	0.0	2.5	5	0.0	0.7
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	5	30	140	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	0.00	21.30			
BIOMASS, ASH WT., G/SQ M	5	0.00	20.70			
CHLOROPHYLL A, MG/SQ M	5	0.000	3.400			
CHLOROPHYLL B, MG/SQ M	5	0.000	0.000			
ORGANIC CARBON, MG/L	0					

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B'	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	8.55	9.02	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	1922.7	622.9	1180	3000					
STREAMFLOW (CUBIC FT/SEC)	11	139.5	172.5	1	467	11	-0.204	532.330	-0.737	122.8
PH (STANDARD UNITS)	11	8.35	0.26	8.0	8.7	11	-0.0001	8.5448	-0.235*	0.27
PHOSPHORUS, TOTAL	11	0.097	0.115	0.00	0.40	11	-0.00012	0.32124	-0.629	0.095
NITRITE + NITRATE, TOTAL	11	0.219	0.268	0.00	0.78	11	-0.00022	0.63335	-0.501*	0.244
NITROGEN, KJELDAHL, TOTAL	11	1.391	0.572	0.76	2.30	11	-0.00078	2.89502	-0.852	0.315
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	29122.0	64157.4	250	210000	10	1.251	26739.578	0.013*	68043.7
SEDIMENT SUSPENDED	10	251.6	424.6	25	1360					
SEDIMENT, CLAY-SILT (PERCENT)	7	78.6	15.4	60	98					
COLIFORM, FECAL (COL/100 ML)	11	684.5	1908.4	<1	6400					
STREPTOCOCCI, FECAL (COL/100 ML)	11	955.0	2555.6	17	8600					
SILICA, DISSOLVED	11	4.97	1.33	2.4	6.8	11	0.0000	4.8955	0.019*	1.40
CALCIUM, DISSOLVED	11	82.27	33.19	38.0	150.0	11	0.0434	-1.1925	0.815	20.28
MAGNESIUM, DISSOLVED	11	68.18	24.33	42.0	120.0	11	0.0340	2.7854	0.871	12.60
SODIUM, DISSOLVED	11	288.18	122.54	140.0	490.0	11	0.1901	-77.2993	0.966	33.31
POTASSIUM, DISSOLVED	11	11.07	2.03	8.9	15.0	11	0.0020	7.2657	0.607	1.70
BICARBONATE, ION	11	421.4	196.1	213	735	11	0.287	-131.357	0.913	84.4
CARBONATE, ION	11	3.1	6.5	0	21	11	0.001	1.036	0.103*	6.8
SULFATE, DISSOLVED	11	729.09	291.19	420.0	1300.0	11	0.4287	-95.1956	0.917	122.41
CHLORIDE, DISSOLVED	11	14.40	8.93	6.3	37.0	11	0.0086	-2.1023	0.599*	7.54
DISSOLVED SOLIDS, SUM OF CONST	11	1408.1	537.5	789	2460	11	0.849	-225.181	0.984	99.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	1451.7	523.4	853	2520	11	0.824	-131.937	0.980	109.5
HARDNESS, TOTAL	11	487.3	180.3	290	870	11	0.248	9.922	0.858	97.7
HARDNESS, NONCARBONATE	11	163.6	73.8	0	270	11	0.025	115.717	0.210*	76.0
TURBIDITY (JTU)	11	66.8	109.0	3	350	11	-0.094	247.268	-0.536*	97.0
FLUORIDE, DISSOLVED	11	0.44	0.22	0.2	1.0	11	0.0002	0.0548	0.561*	0.19

*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%
	3260	2940	2740	2460	2310	1910	1640	1260	1150	941

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
328	8.42	11.14	2.87	91	2.48

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	11	4	0	2
CADMIUM (CD), UG/L	4	1	10	4	0	1
CHROMIUM (CR), UG/L	4	0	30	4	0	10
COBALT (CO), UG/L	4	17	50	4	0	0
COPPER (CU), UG/L	4	10	30	4	2	10
IRON (FE), UG/L	4	110	19000	4	10	60
LEAD (PB), UG/L	4	28	<100	4	0	8
MANGANESE (MN), UG/L	4	40	550	4	4	40
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	120	4	0	8
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.50	25.30			
BIOMASS, ASH WT., G/SQ M	3	0.40	22.30			
CHLOROPHYLL A, MG/SQ M	3	0.200	7.900			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	3	7.800	27.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	15	14.20	11.60	0.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	1809.6	627.9	590	3000					
STREAMFLOW (CUBIC FT/SEC)	15	71.9	74.8	9	297	13	-0.097	239.536	-0.792	49.1
PH (STANDARD UNITS)	13	8.22	0.45	7.0	8.6	13	0.0000	8.1769	0.036*	0.47
PHOSPHORUS, TOTAL	12	0.272	0.545	0.00	1.90	12	-0.00041	1.01402	-0.488*	0.499
NITRITE + NITRATE, TOTAL	12	0.197	0.339	0.00	1.20	12	-0.00025	0.65753	-0.486*	0.311
NITROGEN, KJELDAHL, TOTAL	12	1.772	2.182	0.37	8.30	12	-0.00155	4.59188	-0.464*	2.028
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6295.6	9949.1	0	28000	12	-4.362	14138.914	-0.287*	9995.8
SEDIMENT SUSPENDED	3	7390.0	4174.7	2700	10700					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	861.0	2310.7	0	7800					
STREPTOCOCCI, FECAL (COL/100 ML)	11	3053.6	8951.9	20	30000					
SILICA, DISSOLVED	12	4.28	2.12	0.9	8.5	12	-0.0014	6.9245	-0.447*	1.99
CALCIUM, DISSOLVED	12	48.00	23.82	16.0	94.0	12	0.0314	-9.3304	0.863	12.60
MAGNESIUM, DISSOLVED	12	29.14	14.95	6.7	57.0	12	0.0220	-10.9881	0.963	4.21
SODIUM, DISSOLVED	12	337.75	128.04	93.0	570.0	12	0.1898	-8.1504	0.969	33.13
POTASSIUM, DISSOLVED	12	9.82	2.15	5.7	13.0	12	0.0028	4.7538	0.845	1.21
BICARBONATE, ION	12	408.7	141.9	167	700	12	0.198	47.865	0.912	60.9
CARBONATE, ION	12	8.4	9.5	0	25	12	0.005	-0.204	0.326*	9.4
SULFATE, DISSOLVED	12	602.50	265.92	130.0	1100.0	12	0.3989	-124.7144	0.981	54.04
CHLORIDE, DISSOLVED	12	22.16	22.49	5.8	90.0	12	0.0073	8.7616	0.214*	23.04
DISSOLVED SOLIDS, SUM OF CONST	12	1264.1	500.7	344	2210	12	0.754	-110.726	0.985	90.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	1277.9	458.6	391	2090	12	0.685	28.876	0.977	102.3
HARDNESS, TOTAL	12	239.8	118.3	68	470	12	0.170	-69.360	0.938	43.1
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	436.8	954.5	3	3000	12	-0.673	1662.979	-0.461*	888.4
FLUORIDE, DISSOLVED	12	0.38	0.08	0.2	0.5	12	0.0001	0.2703	0.486*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 312

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%
	3100	2800	2650	2250	2100	1850	1470	940	800	620

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
302	12.75	14.41	2.83	90	3.40

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	45	4	0	1
CADMIUM (CD), UG/L	4	0	10	4	0	0
CHROMIUM (CR), UG/L	4	0	60	4	0	10
COBALT (CO), UG/L	4	49	100	4	0	1
COPPER (CU), UG/L	4	0	140	4	1	10
IRON (FE), UG/L	4	140	67000	4	20	30
LEAD (PB), UG/L	4	65	<100	4	0	2
MANGANESE (MN), UG/L	4	50	1000	4	0	80
MERCURY (HG), UG/L	4	0.0	0.5	4	0.0	0.5
SELENIUM (SE), UG/L	4	0	2	4	0	1
ZINC (ZN), UG/L	4	10	350	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	5.77				
BIOMASS, ASH WT., G/SQ M	1	5.08				
CHLOROPHYLL A, MG/SQ M	1	1.400				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	9.700	171.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.96	9.18	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1971.7	578.9	1020	2900					
STREAMFLOW (CUBIC FT/SEC)	12	479.6	853.3	47	3050	12	-0.947	2346.007	-0.642	686.0
PH (STANDARD UNITS)	11	8.09	0.46	7.5	8.9	11	-0.0001	8.2993	-0.136*	0.48
PHOSPHORUS, TOTAL	11	0.537	0.916	0.00	3.10	11	-0.00089	2.30777	-0.585*	0.783
NITRITE + NITRATE, TOTAL	11	2.238	1.891	0.49	6.90	11	0.00172	-1.17957	0.547*	1.668
NITROGEN, KJELDAHL, TOTAL	11	1.523	0.908	0.48	3.50	11	-0.00029	2.09823	-0.192*	0.939
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5507.5	10414.6	110	37000	12	-8.147	21570.230	-0.453*	9738.6
SEDIMENT SUSPENDED	10	1583.1	2558.3	144	7960					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1139.3	3126.9	2	11000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1102.1	2773.1	15	9800					
SILICA, DISSOLVED	11	5.57	1.44	3.6	8.0	11	-0.0005	6.5314	-0.202*	1.48
CALCIUM, DISSOLVED	11	209.09	70.21	100.0	340.0	11	0.0605	88.6341	0.519*	63.25
MAGNESIUM, DISSOLVED	11	95.73	38.34	32.0	160.0	11	0.0485	-0.8696	0.762	26.15
SODIUM, DISSOLVED	11	155.00	81.08	42.0	270.0	11	0.0978	-39.7710	0.727	58.69
POTASSIUM, DISSOLVED	11	14.49	4.47	8.5	20.0	11	0.0055	3.4364	0.749	3.12
BICARBONATE, ION	11	217.5	80.2	161	376	11	0.076	67.155	0.568*	69.6
CARBONATE, ION	11	0.1	0.3	0	1	11	-0.000	0.580	-0.491*	0.3
SULFATE, DISSOLVED	11	1009.09	361.34	400.0	1600.0	11	0.4610	90.9067	0.769	243.50
CHLORIDE, DISSOLVED	11	22.43	11.54	5.8	41.0	11	0.0149	-7.2763	0.779	7.63
DISSOLVED SOLIDS, SUM OF CONST.	11	1617.9	578.0	677	2580	11	0.725	173.027	0.756	398.5
DISSOLVED SOLIDS, ROE 180 DEG C	11	1809.1	667.6	700	2880	11	0.853	110.115	0.770	448.8
HARDNESS, TOTAL	11	920.0	330.5	380	1500	11	0.364	195.015	0.664	260.5
HARDNESS, NONCARBONATE	11	741.8	272.4	250	1200	11	0.296	151.561	0.656	216.8
TURBIDITY (JTU)	11	425.7	891.5	2	2900	11	-0.361	1144.980	-0.244*	911.3
FLUORIDE, DISSOLVED	11	0.45	0.10	0.2	0.6	11	0.0001	0.3417	0.330*	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%
	4300	3600	3300	2800	2500	2050	1800	1480	1420	1020

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
346	10.17	12.60	2.83	92	2.67

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	75	22000	4	35	140
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	10	330	4	0	10
COBALT (CO), UG/L	4	<50	100	4	1	4
COPPER (CU), UG/L	4	20	410	4	1	16
IRON (FE), UG/L	3	1100	740000	4	0	40
LEAD (PB), UG/L	4	100	500	4	0	1
MANGANESE (MN), UG/L	4	150	29000	4	20	320
MERCURY (HG), UG/L	4	0.0	9.3	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	22	4	2	22
ZINC (ZN), UG/L	4	50	1100	4	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	47.10				
BIOMASS, ASH WT., G/SQ M	1	43.00				
CHLOROPHYLL A, MG/SQ M	1	15.200				
CHLOROPHYLL B, MG/SQ M	1	0.400				
ORGANIC CARBON, MG/L	3	5.800	112.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	15	11.70	9.84	0.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	2246.2	510.8	1270	3400					
STREAMFLOW (CUBIC FT/SEC)	15	384.5	415.5	37	1750	13	-0.674	1897.624	-0.772	295.7
PH (STANDARD UNITS)	13	8.15	0.19	7.7	8.4	13	-0.0002	8.5451	-0.478*	0.17
PHOSPHORUS, TOTAL	13	0.248	0.191	0.01	0.60	13	-0.00022	0.74532	-0.592	0.161
NITRITE + NITRATE, TOTAL	13	1.037	0.832	0.27	2.60	13	0.00099	-1.18287	0.607	0.690
NITROGEN, KJELDAHL, TOTAL	13	0.917	0.321	0.57	1.80	13	-0.00008	1.10356	-0.132*	0.332
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	14113.2	19539.9	48	55000	12	-18.257	55647.602	-0.488*	17886.8
SEDIMENT SUSPENDED	2	19900.0	8343.9	14000	25800					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	188.9	268.5	0	760					
STREPTOCOCCI, FECAL (COL/100 ML)	13	126.5	196.5	0	600					
SILICA, DISSOLVED	13	6.70	2.67	1.5	10.0	13	0.0000	6.6314	0.006*	2.79
CALCIUM, DISSOLVED	13	203.06	45.53	120.0	320.0	13	0.0721	41.0657	0.609	27.94
MAGNESIUM, DISSOLVED	13	80.62	21.06	46.0	120.0	13	0.0311	10.6826	0.755	14.42
SODIUM, DISSOLVED	13	178.00	66.19	79.0	330.0	13	0.1212	-94.1753	0.935	24.49
POTASSIUM, DISSOLVED	13	13.50	2.65	8.5	18.0	13	0.0034	5.7564	0.666	2.06
BICARBONATE, ION	13	199.3	62.0	131	358	13	0.084	10.403	0.693	46.6
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	968.46	261.69	490.0	1600.0	13	0.4558	-55.3811	0.890	124.74
CHLORIDE, DISSOLVED	13	48.77	21.42	14.0	83.0	13	0.0365	-33.2341	0.871	11.00
DISSOLVED SOLIDS, SUM OF CONST	13	1598.9	419.7	866	2660	13	0.763	-114.714	0.928	162.8
DISSOLVED SOLIDS, ROE 180 DEG C	13	1733.1	445.1	930	2850	13	0.794	-50.794	0.911	191.2
HARDNESS, TOTAL	13	841.5	196.8	490	1300	13	0.314	135.429	0.816	118.7
HARDNESS, NONCARBONATE	13	676.2	173.4	330	1000	13	0.239	138.223	0.705	128.4
TURBIDITY (JTU)	13	104.8	103.4	1	350	13	-0.142	423.847	-0.702	76.9
FLUORIDE, DISSOLVED	13	0.50	0.07	0.4	0.7	13	0.0001	0.3795	0.388*	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%
	3050	2900	2750	2450	2330	2050	1800	1460	1030	930

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
346	11.27	13.33	2.83	89	3.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	17	200	4	17	26
CADMIUM (CD), UG/L	4	1	20	4	0	5
CHROMIUM (CR), UG/L	4	0	20	4	0	20
COBALT (CO), UG/L	4	10	<50	4	0	1
COPPER (CU), UG/L	4	10	20	4	0	3
IRON (FE), UG/L	4	60	21000	4	10	30
LEAD (PB), UG/L	4	28	100	4	0	1
MANGANESE (MN), UG/L	4	50	750	4	20	460
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	6	4	0	6
ZINC (ZN), UG/L	4	10	60	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.23	2.23			
BIOMASS, ASH WT., G/SQ M	4	0.15	1.54			
CHLOROPHYLL A, MG/SQ M	4	0.000	0.600			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.000			
ORGANIC CARBON, MG/L	4	3.000	17.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B'	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	24	10.02	7.14	0.5	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	720.0	41.4	650	820					
STREAMFLOW (CUBIC FT/SEC)	24	45970.8	10635.8	18000	57800	24	-92.560	112613.938	-0.360*	10144.8
PH (STANDARD UNITS)	24	8.27	0.17	8.0	8.5	24	-0.0003	8.4609	-0.065*	0.17
PHOSPHORUS, TOTAL	24	0.022	0.037	0.00	0.17	24	-0.00029	0.23455	-0.330*	0.036
NITRITE + NITRATE, TOTAL	12	0.141	0.017	0.11	0.16	12	0.00027	-0.05220	0.517*	0.016
NITROGEN, KJELDAHL, TOTAL	12	0.268	0.126	0.00	0.53	12	0.00076	-0.27808	0.201*	0.129
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	111.5	121.3	0	390	12	-1.447	1154.456	-0.399*	116.7
SEDIMENT SUSPENDED	10	46.5	45.5	13	162					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	2.3	2.0	0	5					
STREPTOCOCCI, FECAL (COL/100 ML)	11	8.2	7.2	<1	20					
SILICA, DISSOLVED	24	5.83	0.47	4.8	6.6	24	-0.0022	7.4319	-0.196*	0.47
CALCIUM, DISSOLVED	24	54.96	2.46	49.0	59.0	24	0.0221	39.0566	0.372*	2.33
MAGNESIUM, DISSOLVED	24	20.63	0.77	18.0	22.0	24	0.0043	17.5178	0.232*	0.77
SODIUM, DISSOLVED	24	63.63	3.87	56.0	75.0	24	0.0335	39.4983	0.359*	3.69
POTASSIUM, DISSOLVED	24	4.47	0.25	3.8	5.0	24	0.0022	2.8978	0.361*	0.24
BICARBONATE, ION	24	187.0	12.1	154	199	24	0.096	117.727	0.330*	11.7
CARBONATE, ION	24	2.2	3.5	0	11	24	-0.014	12.402	-0.167*	3.6
SULFATE, DISSOLVED	24	191.67	12.04	170.0	210.0	24	0.0711	140.4888	0.244*	11.94
CHLORIDE, DISSOLVED	24	10.00	1.44	8.8	14.0	24	0.0108	2.2094	0.311*	1.40
DISSOLVED SOLIDS, SUM OF CONST	24	446.5	18.8	389	476	24	0.174	321.072	0.384	17.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	460.1	13.1	435	475	12	0.092	393.856	0.235*	13.3
HARDNESS, TOTAL	24	222.1	7.8	200	230	24	0.081	163.594	0.432	7.2
HARDNESS, NONCARBONATE	24	65.1	5.9	55	79	24	0.020	50.827	0.138*	6.0
TURBIDITY (JTU)	12	2.0	1.2	1	4	12	0.008	-3.864	0.225*	1.2
FLUORIDE, DISSOLVED	24	0.51	0.05	0.4	0.6	24	-0.0000	0.5268	-0.021*	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%
	755	750	740	730	720	720	700	680	670	670

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	9.32	11.07	2.52	97	1.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	3	4	2	3
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	1
COPPER (CU), UG/L	4	10	10	4	1	14
IRON (FE), UG/L	4	20	290	4	0	300
LEAD (PB), UG/L	4	< 100	< 100	4	0	4
MANGANESE (MN), UG/L	4	10	40	4	0	30
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	1	4	1	1
ZINC (ZN), UG/L	4	0	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.15	1.08			
BIOMASS, ASH WT., G/SQ M	2	0.08	0.31			
CHLOROPHYLL A, MG/SQ M	2	0.000	0.200			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	4	3.800	11.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 06452000 NAME: WHITE RIVER NEAR OACOMA S OAK

LAT 43D44M54S LONG 099D33M22S
DRAINAGE AREA: 10200 SQ MI (26418 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	24	13.10	8.96	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	708.9	418.0	450	2050					
STREAMFLOW (CUBIC FT/SEC)	24	383.8	766.8	1	3200	14	-0.164	264.036	-0.350*	191.0
PH (STANDARD UNITS)	14	8.19	0.37	7.5	8.8	14	0.0001	8.0886	0.153*	0.38
PHOSPHORUS, TOTAL	12	5.129	8.170	0.09	23.00	12	-0.00492	8.69888	-0.271*	8.248
NITRITE + NITRATE, TOTAL	12	0.706	0.517	0.00	1.50	12	-0.00053	1.09068	-0.462*	0.481
NITROGEN, KJELDAHL, TOTAL	11	1.987	1.787	0.09	5.60	11	-0.00126	2.92371	-0.330*	1.779
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	18461.5	25446.7	330	75000	13	0.206	18315.070	0.004*	26577.7
SEDIMENT SUSPENOED	10	30108.8	23805.9	513	73100					
SEDIMENT, CLAY-SILT (PERCENT)	0									
CDLIFORM, FECAL (COL/100 ML)	13	1394.5	1984.5	0	5600					
STREPTOCOCCI, FECAL (COL/100 ML)	13	1155.0	2172.0	0	7500					
SILICA, DISSOLVED	13	40.31	14.18	22.0	64.0	13	0.0179	27.3232	0.542*	12.45
CALCIUM, DISSOLVED	13	37.07	25.40	5.6	92.0	13	0.0290	16.0300	0.490*	23.13
MAGNESIUM, DISSOLVED	13	5.33	4.74	0.4	16.0	13	0.0083	-0.7236	0.755	3.25
SODIUM, DISSOLVED	13	117.31	80.79	45.0	360.0	13	0.1720	-7.6304	0.915	34.14
POTASSIUM, OISSOLVED	13	6.95	3.34	3.3	16.0	13	0.0070	1.8974	0.895	1.55
BICARBONATE, ION	13	255.2	52.1	174	340	13	0.066	207.409	0.542*	45.7
CARBONATE, ION	13	0.8	2.0	0	7	13	0.004	-2.105	0.830	1.2
SULFATE, DISSOLVED	13	134.77	125.06	61.0	520.0	13	0.2837	-71.3203	0.975	29.30
CHLORIDE, DISSOLVED	13	21.54	41.99	4.5	160.0	13	0.0939	-46.7011	0.961	12.12
DISSOLVEO SDLIDS, SUM OF CONST	13	491.1	281.3	277	1360	13	0.652	17.637	0.995	28.0
OISSOLVED SOLIOS, ROE 180 DEG C	13	494.0	289.0	278	1380	13	0.669	7.594	0.995	29.1
HARDNESS, TOTAL	13	114.9	81.3	20	280	13	0.108	36.456	0.570	69.8
HARDNESS, NONCARBONATE	13	0.3	1.1	0	4	13	0.000	-0.051	0.191*	1.1
TURBIDITY (JTU)	13	2237.6	4394.5	0	13000	13	-2.333	3932.723	-0.228*	4468.9
FLUORIDE, DISSOLVED	13	0.72	0.31	0.4	1.6	13	0.0006	0.2760	0.844	0.17

*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 EXCEEOEO FOR THE INDICATED PERCENTAGE OF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	1480	1100	870	730	590	530	500	460	440	390

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
333	11.87	11.74	2.91	87	3.22

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

06452000 -- WHITE RIVER NEAR OACOMA S OAK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	6	22	4	6	50
CAOMIUM (CD), UG/L	4	0	10	4	0	2
CHROMIUM (CR), UG/L	4	0	80	4	0	10
COBALT (CO), UG/L	4	3	100	4	0	1
COPPER (CU), UG/L	4	10	110	4	0	8
IRON (FE), UG/L	4	190	99000	4	10	180
LEAD (PB), UG/L	4	11	200	4	0	4
MANGANESE (MN), UG/L	4	30	2300	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	1	3	4	2	3
ZINC (ZN), UG/L	4	10	320	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.00	0.54			
BIOMASS, ASH WT., G/SQ M	2	0.00	0.23			
CHLOROPHYLL A, MG/SQ M	2	0.000	0.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	3	3.800	22.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	10.58	7.31	2.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	680.8	65.2	520	770					
STREAMFLOW (CUBIC FT/SEC)	12	36708.3	9851.9	23300	60500	12	-42.837	65872.875	-0.283*	9909.4
PH (STANDARD UNITS)	12	7.98	0.47	6.8	8.6	12	-0.0013	8.8849	-0.183*	0.49
PHOSPHORUS, TOTAL	11	0.015	0.020	0.00	0.07	11	-0.00004	0.03839	-0.121*	0.021
NITRITE + NITRATE, TOTAL	11	0.111	0.037	0.07	0.17	11	0.00025	-0.05533	0.451*	0.035
NITROGEN, KJELDAHL, TOTAL	11	1.654	4.110	0.02	14.00	11	0.02804	-17.36064	0.461*	3.843
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	302.4	169.1	49	650	12	0.616	-116.885	0.237*	172.3
SEDIMENT SUSPENDED	11	68.9	18.8	40	102					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	0.4	0.5	0	1					
STREPTOCOCCI, FECAL (COL/100 ML)	12	0.3	0.7	0	2					
SILICA, DISSOLVED	11	5.52	0.72	4.0	6.3	11	-0.0001	5.6017	-0.012*	0.76
CALCIUM, DISSOLVED	11	57.09	1.76	55.0	60.0	11	0.0107	49.8024	0.414*	1.69
MAGNESIUM, DISSOLVED	11	20.82	1.72	16.0	22.0	11	-0.0038	23.3914	-0.149*	1.79
SODIUM, DISSOLVED	11	67.73	1.74	65.0	70.0	11	0.0230	52.0995	0.897	0.81
POTASSIUM, DISSOLVED	11	4.62	0.65	2.7	5.1	11	0.0005	4.3016	0.048*	0.69
BICARBONATE, ION	11	187.6	13.2	158	199	11	0.089	127.281	0.457*	12.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	202.73	13.48	180.0	220.0	11	-0.0075	207.8467	-0.038*	14.20
CHLORIDE, DISSOLVED	11	9.86	0.45	9.3	11.0	11	0.0030	7.8455	0.452*	0.42
DISSOLVED SOLIDS, SUM OF CONST	11	461.5	14.0	436	492	11	0.070	413.752	0.339*	13.9
DISSOLVED SOLIDS, ROE 180 DEG C	11	465.5	27.8	424	524	11	0.260	288.897	0.634	22.6
HARDNESS, TOTAL	11	229.1	8.3	210	240	11	-0.005	232.324	-0.039*	8.8
HARDNESS, NONCARBONATE	11	74.4	7.9	60	90	11	-0.060	115.158	-0.514*	7.2
TURBIDITY (JTU)	11	6.1	3.0	2	10	11	-0.013	14.956	-0.293*	3.0
FLUORIDE, DISSOLVED	11	0.47	0.05	0.4	0.5	11	0.0002	0.3623	0.236*	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%
	700	690	680	670	665	660	655	645	635	630

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	10.86	12.03	2.49	98	1.34

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	2
CADMIUM (CD), UG/L	4	0	<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	10	4	1	3
IRON (FE), UG/L	4	70	230	4	0	30
LEAD (PB), UG/L	4	0	<100	4	0	3
MANGANESE (MN), UG/L	4	10	30	4	0	20
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	2	4	1	2
ZINC (ZN), UG/L	4	10	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	9.46				
BIOMASS, ASH WT., G/SQ M	1	7.08				
CHLOROPHYLL A, MG/SQ M	1	1.800				
CHLOROPHYLL B, MG/SQ M	1	0.100				
ORGANIC CARBON, MG/L	4	3.400	21.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 06465500 NAME: NIOBRARA RIVER NR. VERDEL. NEBR.

LAT 42D44M25S LONG 098D12M45S
DRAINAGE AREA: 12600 SQ MI (32634 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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	13.35	7.47	0.5	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	245.7	18.4	216	271					
STREAMFLOW (CUBIC FT/SEC)	14	1236.5	357.2	775	1860	11	9.322	-1120.494	0.492*	319.4
PH (STANDARD UNITS)	11	7.62	0.22	7.4	8.1	11	0.0015	7.2440	0.126*	0.23
PHOSPHORUS, TOTAL	11	0.177	0.042	0.13	0.24	11	0.00064	0.02102	0.277*	0.043
NITRITE + NITRATE, TOTAL	11	0.391	0.351	0.01	0.95	11	0.01337	-2.89559	0.702	0.263
NITROGEN, KJELDAHL, TOTAL	11	0.779	0.515	0.16	1.70	11	0.00628	-0.76368	0.224*	0.529
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	78690.9	103612.6	1000	260000	11	-2518.229	697488.500	-0.447*	97691.6
SEDIMENT SUSPENDED	10	613.9	393.1	206	1440					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	148.9	274.3	5	900					
STREPTOCOCCI, FECAL (COL/100 ML)	11	430.1	742.3	60	2600					
SILICA, DISSOLVED	11	47.64	3.53	45.0	55.0	11	0.0038	46.6990	0.020*	3.72
CALCIUM, DISSOLVED	11	33.82	2.27	31.0	37.0	11	0.1021	8.7346	0.826	1.35
MAGNESIUM, DISSOLVED	11	4.77	0.76	3.8	6.4	11	0.0322	-3.1509	0.784	0.49
SODIUM, DISSOLVED	11	9.47	0.56	8.2	10.0	11	0.0247	3.4015	0.819	0.34
POTASSIUM, DISSOLVED	11	6.32	0.82	4.9	7.6	11	-0.0029	7.0261	-0.064*	0.86
BICARBONATE, ION	11	137.9	9.6	116	149	11	0.438	30.393	0.837	5.5
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	15.52	4.63	9.7	26.0	11	0.1201	-13.9947	0.477*	4.29
CHLORIDE, DISSOLVED	11	1.63	0.80	0.7	3.6	11	0.0183	-2.8657	0.420*	0.77
DISSOLVED SOLIDS, SUM OF CONST	11	188.1	11.8	171	210	11	0.553	52.289	0.863	6.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	189.5	13.3	166	207	11	0.577	47.691	0.796	8.5
HARDNESS, TOTAL	11	104.0	8.4	93	120	11	0.360	15.488	0.789	5.4
HARDNESS, NONCARBONATE	11	0.1	0.3	0	1	11	0.007	-1.744	0.456*	0.3
TURBIDITY (JTU)	11	38.6	14.7	15	65	11	0.288	-32.225	0.361*	14.4
FLUORIDE, DISSOLVED	11	0.35	0.05	0.3	0.4	11	0.0022	-0.1874	0.777	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%
	362	322	301	279	273	262	253	239	230	203

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.22	13.52	2.76	93	2.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	4	13	4	2	10
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	1	<50	4	0	1
COPPER (CU), UG/L	4	0	10	4	0	2
IRON (FE), UG/L	4	950	4700	11	0	150
LEAD (PB), UG/L	4	3	<100	4	0	6
MANGANESE (MN), UG/L	4	80	330	11	0	150
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.10	28.70			
BIOMASS, ASH WT., G/SQ M	4	0.00	25.70			
CHLOROPHYLL A, MG/SQ M	4	0.100	23.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.400			
ORGANIC CARBON, MG/L	4	3.900	6.800			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	12.82	10.71	0.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	1017.3	219.1	680	1350					
STREAMFLOW (CUBIC FT/SEC)	11	147.7	123.6	3	346	11	-0.371	525.531	-0.659	98.0
PH (STANDARD UNITS)	11	7.66	0.57	6.5	8.4	11	0.0009	6.7596	0.341*	0.57
PHOSPHORUS, TOTAL	10	0.315	0.074	0.21	0.48	10	0.00026	0.05226	0.789	0.048
NITRITE + NITRATE, TOTAL	10	0.169	0.205	0.01	0.56	10	0.00035	-0.19418	0.393*	0.200
NITROGEN, KJELDAHL, TOTAL	10	1.960	0.506	1.00	2.50	10	-0.00074	2.71808	-0.332*	0.506
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	63318.2	60929.6	5500	180000	11	-99.675	164715.000	-0.358*	59955.8
SEDIMENT SUSPENDED	10	134.6	29.6	95	173					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	121.4	153.4	10	540					
STREPTOCOCCI, FECAL (COL/100 ML)	11	372.3	578.3	15	1900					
SILICA, DISSOLVED	10	9.83	5.53	0.3	18.0	10	0.0032	6.5330	0.132*	5.61
CALCIUM, DISSOLVED	10	95.20	22.00	67.0	130.0	10	0.0749	18.1726	0.776	14.71
MAGNESIUM, DISSOLVED	10	43.00	9.29	31.0	60.0	10	0.0304	11.7572	0.746	6.56
SODIUM, DISSOLVED	10	81.50	18.42	57.0	120.0	10	0.0510	29.0842	0.631*	15.15
POTASSIUM, DISSOLVED	10	13.74	5.28	0.4	20.0	10	0.0101	3.3738	0.435*	5.05
BICARBONATE, ION	10	305.9	58.6	227	402	10	-0.001	306.477	-0.002*	62.2
CARBONATE, ION	10	0.5	1.6	0	5	10	0.003	-3.040	0.496*	1.5
SULFATE, DISSOLVED	10	293.00	110.66	120.0	470.0	10	0.4116	-130.1499	0.848	62.24
CHLORIDE, DISSOLVED	10	44.70	19.26	24.0	78.0	10	0.0542	-10.9786	0.641	15.68
DISSOLVED SOLIDS, SUM OF CONST	10	733.1	167.4	502	997	10	0.638	77.284	0.869	87.9
DISSOLVED SOLIDS, ROE 180 DEG C	10	787.4	189.7	510	1060	10	0.726	41.119	0.872	98.4
HARDNESS, TOTAL	10	416.0	90.2	300	550	10	0.308	99.353	0.778	60.1
HARDNESS, NONCARBONATE	10	164.3	95.3	12	340	10	0.310	-154.472	0.741	67.9
TURBIDITY (JTU)	10	13.3	7.4	4	28	10	-0.008	21.378	-0.243*	7.6
FLUORIDE, DISSOLVED	10	0.32	0.04	0.3	0.4	10	0.0000	0.2905	0.155*	0.04

*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%
	1720	1600	1400	1270	1180	1060	935	800	650	395

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
333	11.47	12.19	2.83	95	1.90

SUMMARV OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	7	4	1	5
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	0	<50	4	0	0
COPPER (CU), UG/L	4	<10	20	4	1	3
IRON (FE), UG/L	4	350	2600	4	20	30
LEAD (PB), UG/L	4	0	<100	4	0	4
MANGANESE (MN), UG/L	4	410	2000	4	30	2300
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	40	60	4	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.31	52.50			
BIOMASS, ASH WT., G/SQ M	2	2.15	23.80			
CHLOROPHYLL A, MG/SQ M	2	8.500	18.900			
CHLOROPHYLL B, MG/SQ M	2	0.500	3.900			
ORGANIC CARBON, MG/L	4	1.800	45.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 06485500 NAME: BIG SIOUX RIVER AT AKRON, IOWA

LAT 42D49M42S LONG 096D33M45S
DRAINAGE AREA: 9030 SC MI (23388 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.63	9.38	0.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	989.6	260.7	520	1380					
STREAMFLOW (CUBIC FT/SEC)	12	386.3	627.7	39	2210	12	-1.862	2228.765	-0.773	417.3
PH (STANDARD UNITS)	12	7.93	0.41	7.3	8.5	12	0.0001	7.8275	0.069*	0.42
PHOSPHORUS, TOTAL	12	0.877	0.598	0.43	2.30	12	0.00137	-0.47637	0.597	0.503
NITRITE + NITRATE, TOTAL	12	1.107	1.263	0.00	3.70	12	0.00038	0.73366	0.078*	1.321
NITROGEN, KJELDAHL, TOTAL	12	2.642	1.230	1.40	4.80	12	0.00132	1.33331	0.280*	1.238
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	115507.5	142724.5	310	430000	12	50.673	65362.270	0.093*	149046.3
SEDIMENT SUSPENDED	12	152.9	91.1	88	428					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	261.8	338.0	40	1180					
STREPTOCOCCI, FECAL (COL/100 ML)	12	380.8	392.5	60	1380					
SILICA, DISSOLVED	12	8.82	5.60	0.8	19.0	12	0.0052	3.7246	0.240*	5.70
CALCIUM, DISSOLVED	12	95.92	26.75	60.0	150.0	12	0.0821	14.6609	0.800	16.83
MAGNESIUM, DISSOLVED	12	37.58	8.67	21.0	51.0	12	0.0295	8.3547	0.688	4.18
SODIUM, DISSOLVED	12	65.75	36.50	15.0	140.0	12	0.1151	-48.1634	0.822	21.78
POTASSIUM, DISSOLVED	12	7.75	1.85	5.0	11.0	12	0.0020	5.7536	0.284*	1.87
BICARBONATE, ION	12	256.5	75.2	163	425	12	0.163	75.379	0.635	60.9
CARBONATE, ION	12	0.8	2.9	0	10	12	0.002	-1.025	0.170*	3.0
SULFATE, DISSOLVED	12	214.50	60.99	94.0	280.0	12	0.2055	11.1868	0.878	30.57
CHLORIDE, DISSOLVED	12	85.25	50.58	16.0	190.0	12	0.1512	-64.3822	0.779	33.24
DISSOLVED SOLIDS, SUM OF CONST	12	643.3	184.3	318	869	12	0.684	-33.639	0.968	48.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	686.5	182.4	363	952	12	0.673	20.831	0.962	52.4
HARDNESS, TOTAL	12	394.2	99.3	240	580	12	0.325	72.977	0.852	54.5
HARDNESS, NONCARBONATE	12	182.3	62.0	83	260	12	0.173	10.586	0.730	44.5
TURBIDITY (JTU)	12	19.0	16.6	4	65	12	-0.049	67.035	-0.762	11.3
FLUORIDE, DISSOLVED	12	0.40	0.10	0.3	0.6	12	0.0003	0.0917	0.852	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%
	1570	1480	1420	1340	1190	1020	910	675	540	425

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
338	11.49	12.37	2.88	93	2.45

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	15	4	2	8
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	10	4	0	4
IRON (FE), UG/L	4	260	1600	4	0	50
LEAD (PB), UG/L	4	<100	<100	4	1	3
MANGANESE (MN), UG/L	4	210	920	4	0	950
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	4	4	1	3
ZINC (ZN), UG/L	4	30	130	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	55.10				
BIOMASS, ASH WT., G/SQ M	1	49.80				
CHLOROPHYLL A, MG/SQ M	1	8.100				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	12.000	31.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	40	13.46	8.16	0.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	708.3	26.6	650	750					
STREAMFLOW (CUBIC FT/SEC)	40	40417.5	11860.3	19700	64500	12	194.761	-99046.938	0.397*	12542.1
PH (STANDARD UNITS)	13	7.98	0.27	7.6	8.7	12	0.0054	4.1764	0.509*	0.25
PHOSPHORUS, TOTAL	12	0.051	0.027	0.02	0.10	12	0.00013	-0.04179	0.130*	0.028
NITRITE + NITRATE, TOTAL	11	0.090	0.068	0.01	0.20	11	0.00007	0.03749	0.022*	0.072
NITROGEN, KJELDAHL, TOTAL	11	0.354	0.086	0.23	0.50	11	0.00058	-0.06096	0.136*	0.090
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2750.8	1954.7	360	6400	12	20.214	-11567.102	0.275*	1971.2
SEDIMENT SUSPENDED	24	586.8	249.8	273	1240					
SEDIMENT, CLAY-SILT (PERCENT)	12	29.9	13.2	11	56					
COLIFORM, FECAL (COL/100 ML)	12	77.3	91.0	5	250					
STREPTOCOCCI, FECAL (COL/100 ML)	12	272.7	530.0	28	1800					
SILICA, DISSOLVED	12	7.67	1.14	6.3	9.9	12	-0.0234	24.2331	-0.546*	1.00
CALCIUM, DISSOLVED	12	58.58	4.46	53.0	69.0	12	-0.0204	73.0236	-0.121*	4.64
MAGNESIUM, DISSOLVED	12	21.33	0.65	21.0	23.0	12	-0.0043	24.3734	-0.175*	0.67
SODIUM, DISSOLVED	12	63.50	1.98	60.0	67.0	12	0.0412	34.3155	0.554*	1.73
POTASSIUM, DISSOLVED	12	4.79	0.38	4.5	5.8	12	0.0044	1.7046	0.307*	0.38
BICARBONATE, ION	12	190.8	6.5	184	208	12	-0.042	220.421	-0.171*	6.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	196.67	6.51	190.0	210.0	12	0.1073	120.6653	0.438*	6.14
CHLORIDE, DISSOLVED	12	9.92	0.58	8.9	11.0	12	-0.0036	12.4416	-0.162*	0.60
DISSOLVED SOLIDS, SUM OF CONST	12	457.2	11.9	443	488	12	0.060	400.257	0.179*	12.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	474.8	17.3	450	504	12	-0.262	660.315	-0.403*	16.6
HARDNESS, TOTAL	12	234.2	14.4	220	270	12	-0.144	335.948	-0.265*	14.6
HARDNESS, NONCARBONATE	12	77.6	10.8	58	96	12	-0.033	101.144	-0.082*	11.3
TURBIDITY (JTU)	12	16.5	4.5	10	25	12	0.039	-10.861	0.226*	4.6
FLUORIDE, DISSOLVED	12	0.61	0.08	0.5	0.8	12	0.0003	0.4111	0.093*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
90	12.15	11.61	2.72	95	1.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	3	4	1	2
CADMIUM (CD), UG/L	4	0	1	4	0	8
CHROMIUM (CR), UG/L	4	<0	<10	4	0	10
COBALT (CO), UG/L	4	0	2	4	0	0
COPPER (CU), UG/L	4	4	9	4	0	10
IRON (FE), UG/L	4	800	1900	4	10	70
LEAD (PB), UG/L	4	4	42	4	0	41
MANGANESE (MN), UG/L	4	40	90	4	0	10
MERCURY (HG), UG/L	4	0.1	0.7	4	0.1	0.4
SELENIUM (SE), UG/L	4	1	3	4	0	2
ZINC (ZN), UG/L	4	20	60	4	20	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	11.40	134.00			
BIOMASS, ASH WT., G/SQ M	2	8.38	125.00			
CHLOROPHYLL A, MG/SQ M	2	21.000	29.600			
CHLOROPHYLL B, MG/SQ M	2	2.000	2.700			
ORGANIC CARBON, MG/L	5	2.200	30.000			

Table 12. Summary of measurements at each station--Continued.

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: 10/01/75 - 09/30/76

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)	31	12.74	8.79	0.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	32	908.4	55.5	705	1060					
STREAMFLOW (CUBIC FT/SEC)	31	1182.0	412.3	302	2010	31	1.668	-334.232	0.228*	408.3
PH (STANDARD UNITS)	32	7.35	0.11	7.2	7.6	32	0.0001	7.2841	0.036*	0.11
PHOSPHORUS, TOTAL	12	0.301	0.448	0.04	1.70	12	0.00033	0.01327	0.049*	0.469
NITRITE + NITRATE, TOTAL	12	2.125	0.586	1.20	2.90	12	-0.00212	3.99436	-0.244*	0.596
NITROGEN, KJELDAHL, TOTAL	12	0.820	0.404	0.13	1.40	12	-0.00132	1.98549	-0.221*	0.413
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	34208.3	74743.8	3300	270000	12	117.014	-69066.375	0.106*	77950.4
SEDIMENT SUSPENDED	13	444.8	423.7	118	1570					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	150.9	210.8	1	600					
STREPTOCOCCI, FECAL (COL/100 ML)	11	264.0	226.6	66	660					
SILICA, DISSOLVED	12	37.08	3.06	30.0	40.0	12	-0.0208	55.4578	-0.460*	2.85
CALCIUM, DISSOLVED	12	78.75	6.25	64.0	86.0	12	-0.0054	83.4726	-0.058*	6.55
MAGNESIUM, DISSOLVED	12	19.50	0.90	19.0	22.0	12	0.0043	15.6675	0.325*	0.90
SODIUM, DISSOLVED	12	85.92	2.47	80.0	89.0	12	-0.0069	92.0278	-0.190*	2.54
POTASSIUM, DISSOLVED	12	10.54	0.82	9.2	12.0	12	0.0011	9.5740	0.091*	0.85
BICARBONATE, ION	12	294.9	23.8	255	338	12	0.012	284.720	0.033*	24.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	189.17	7.93	180.0	210.0	12	0.0625	133.9980	0.533*	7.04
CHLORIDE, DISSOLVED	12	20.00	0.74	19.0	21.0	12	0.0052	15.3870	0.479*	0.68
DISSOLVED SOLIDS. SUM OF CONST	12	595.8	22.2	558	633	12	0.032	567.569	0.097*	23.2
DISSOLVED SOLIDS, ROE 180 DEG C	4	587.3	34.8	542	617					
HARDNESS, TOTAL	12	277.5	17.6	240	310	12	-0.005	282.271	-0.021*	16.5
HARDNESS, NONCARBONATE	12	35.0	7.6	24	51	12	-0.004	38.596	-0.036*	6.0
TURBIDITY (JTU)	31	47.4	31.2	25	190	31	-0.017	62.837	-0.031*	31.7
FLUORIDE, DISSOLVED	4	0.47	0.05	0.4	0.5					

*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%
	988	936	932	912	898	881	862	841	822	747

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	10.07	10.76	2.69	89	2.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	8	4	4	8
CADMIUM (CD), UG/L	4	0	50	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	4	2	100	4	0	1
COPPER (CU), UG/L	4	10	20	4	4	10
IRON (FE), UG/L	4	1300	3400	4	0	40
LEAD (PB), UG/L	4	7	<100	4	1	3
MANGANESE (MN), UG/L	4	70	160	4	10	150
MERCURY (HG), UG/L	3	0.0	1.7	4	0.0	2.3
SELENIUM (SE), UG/L	4	2	5	4	1	4
ZINC (ZN), UG/L	4	30	60	4	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	22.00	154.00			
BIOMASS, ASH WT., G/SQ M	4	11.70	135.00			
CHLOROPHYLL A, MG/SQ M	4	0.700	62.000			
CHLOROPHYLL B, MG/SQ M	4	0.100	1.000			
ORGANIC CARBON, MG/L	4	4.200	18.000			

Table 12. 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: 10/01/75 - 09/30/76

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, M	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.67	10.35	0.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1976.7	218.9	1350	2170					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	8.07	0.35	7.5	8.6	12	0.0010	6.0701	0.632	0.28
PHOSPHORUS, TOTAL	12	0.227	0.221	0.01	0.74	12	-0.00080	1.80349	-0.791	0.142
NITRITE + NITRATE, TOTAL	12	1.622	1.270	0.00	3.60	12	-0.00039	2.39399	-0.067*	1.329
NITROGEN, KJELDAHL, TOTAL	12	1.422	1.185	0.50	5.00	12	-0.00462	10.55390	-0.854	0.647
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	14787.3	22369.9	760	78000	11	41.274	-69149.188	0.183*	23180.4
SEDIMENT SUSPENDED	12	335.7	527.0	14	1940					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	139.7	152.4	10	420					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1225.1	3575.2	35	12000					
SILICA, DISSOLVED	12	20.67	2.50	16.0	25.0	12	0.0087	3.5394	0.759	1.71
CALCIUM, DISSOLVED	12	192.50	29.27	110.0	230.0	12	0.1258	-56.1584	0.941	10.41
MAGNESIUM, DISSOLVED	12	61.00	9.72	32.0	70.0	12	0.0387	-15.5453	0.872	5.00
SODIUM, DISSOLVED	12	190.83	28.11	110.0	220.0	12	0.1192	-44.8233	0.928	10.96
POTASSIUM, DISSOLVED	11	17.73	2.61	12.0	21.0	11	0.0044	9.1099	0.383*	2.54
BICARBONATE, ION	12	272.5	56.3	172	336	12	0.129	17.956	0.501*	51.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	785.83	107.15	540.0	910.0	12	0.4247	-53.6248	0.868	55.88
CHLORIDE, DISSOLVED	12	86.92	11.60	61.0	110.0	12	0.0382	11.3165	0.722	8.43
DISSOLVED SOLIDS, SUM OF CONST	11	1497.3	195.6	970	1660	11	0.819	-122.121	0.961	57.4
DISSOLVED SOLIDS, RDE 180 DEG C	12	1582.5	183.2	1070	1790	12	0.796	10.048	0.951	59.6
HARDNESS, TOTAL	12	732.5	107.5	410	830	12	0.469	-194.610	0.955	33.6
HARDNESS, NONCARBONATE	12	510.0	84.7	270	620	12	0.366	-213.472	0.945	29.0
TURBIDITY (JTU)	12	44.1	112.8	0	400	12	-0.472	976.109	-0.915	47.8
FLUORIDE, DISSOLVED	12	0.73	0.14	0.6	1.1	12	0.0001	0.4734	0.201*	0.15

*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%
	2610	2160	2080	2040	2010	1960	1890	1800	1750	1690

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	11.33	11.78	2.81	94	2.18

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	2	4	4	2	3
CADMIUM (CD), UG/L	4	2	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	19	50	4	0	0
COPPER (CU), UG/L	4	10	36	4	1	4
IRON (FE), UG/L	4	390	24000	4	10	250
LEAD (PB), UG/L	4	40	100	4	3	6
MANGANESE (MN), UG/L	4	70	1400	4	10	30
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	3	2	5	4	2	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	D					
ORGANIC CARBON, MG/L	4	6.300	26.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	15.00	9.61	0.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	273.3	17.0	250	312					
STREAMFLOW (CUBIC FT/SEC)	14	1452.4	765.2	330	2780	12	-13.316	5173.176	-0.294*	769.9
PH (STANDARD UNITS)	13	7.57	0.45	6.7	8.4	12	0.0123	4.1991	0.452*	0.43
PHOSPHORUS, TOTAL	11	0.293	0.142	0.19	0.67	11	0.00110	-0.00983	0.134*	0.148
NITRITE + NITRATE, TOTAL	11	0.310	0.292	0.01	0.65	11	-0.00322	1.19351	-0.190*	0.303
NITROGEN, KJELDAHL, TOTAL	11	1.161	0.561	0.49	2.20	11	-0.01119	4.23436	-0.344*	0.556
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	68866.6	109735.8	1400	390000	12	226.096	7066.941	0.035*	115020.3
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	1453.7	4592.8	3	15300					
STREPTOCOCCI. FECAL (COL/100 ML)	12	265.1	387.2	12	1420					
SILICA, DISSOLVED	11	43.09	8.64	21.0	52.0	11	-0.3570	141.1032	-0.712	6.40
CALCIUM, DISSOLVED	11	35.73	3.32	31.0	42.0	11	0.1578	-7.5826	0.819	2.01
MAGNESIUM, DISSOLVED	11	5.64	1.03	3.5	7.4	11	-0.0093	8.1978	-0.156*	1.07
SODIUM, DISSOLVED	11	9.21	0.95	8.0	11.0	11	0.0303	0.8868	0.552*	0.83
POTASSIUM, DISSOLVED	11	7.98	0.90	6.9	9.7	11	0.0094	5.4120	0.180*	0.93
BICARBONATE, ION	11	154.8	13.1	134	179	11	0.655	-24.941	0.859	7.1
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	10.14	2.08	6.7	13.0	11	-0.0360	20.0171	-0.298*	2.10
CHLORIDE, DISSOLVED	11	2.49	0.95	1.4	4.0	11	0.0111	-0.5546	0.201*	0.98
DISSOLVED SOLIDS, SUM OF CONST	11	190.8	9.9	179	210	11	0.129	155.414	0.224*	10.2
DISSOLVED SOLIDS, ROE 180 DEG C	11	197.9	12.7	180	224	11	0.597	34.096	0.812	7.8
HARDNESS, TOTAL	11	112.5	9.3	98	130	11	0.389	5.644	0.718	6.9
HARDNESS, NONCARBONATE	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	46.1	59.8	10	230	12	-0.081	68.309	-0.023*	62.7
FLUORIDE, DISSOLVED	11	0.33	0.06	0.3	0.5	11	0.0000	0.3239	0.003*	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%
	362	328	319	298	290	269	261	250	246	227

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	13.86	14.22	2.88	91	3.24

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	12	4	6	10
CADMIUM (CD), UG/L	4	1	10	4	0	4
CHROMIUM (CR), UG/L	4	<10	10	4	0	<10
COBALT (CO), UG/L	4	1	<50	4	0	1
COPPER (CU), UG/L	4	0	20	4	0	10
IRON (FE), UG/L	4	980	4200	4	0	20
LEAD (PB), UG/L	4	2	<100	4	2	32
MANGANESE (MN), UG/L	4	70	180	4	4	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
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	3	6.60	8.54			
BIOMASS, ASH WT., G/SQ M	3	4.10	7.23			
CHLOROPHYLL A, MG/SQ M	3	0.000	16.200			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.000			
ORGANIC CARBON, MG/L	4	5.400	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	11	12.55	9.99	0.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	437.0	77.7	300	570					
STREAMFLOW (CUBIC FT/SEC)	11	4405.8	3304.3	464	11200	11	15.462	-2350.926	0.363*	3244.9
PH (STANDARD UNITS)	11	7.79	0.41	7.0	8.4	11	-0.0008	8.1525	-0.158*	0.42
PHOSPHORUS, TOTAL	11	0.294	0.095	0.14	0.50	11	0.00032	0.15356	0.262*	0.097
NITRITE + NITRATE, TOTAL	11	0.327	0.368	0.00	0.88	11	0.00196	-0.53008	0.414*	0.353
NITROGEN, KJELDAHL, TOTAL	11	1.339	0.650	0.58	2.70	11	0.00622	-1.37707	0.743	0.459
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	84718.1	91417.3	7200	310000	11	-351.113	238154.500	-0.298*	91975.2
SEDIMENT SUSPENDED	10	1302.1	2039.8	172	6520					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	153.3	110.9	9	310					
STREPTOCOCCI, FECAL (COL/100 ML)	11	325.7	568.4	38	2020					
SILICA, DISSOLVED	11	35.36	4.78	28.0	42.0	11	-0.0347	50.5380	-0.564*	4.16
CALCIUM, DISSOLVED	11	45.73	5.35	36.0	58.0	11	0.0621	18.5959	0.901	2.44
MAGNESIUM, DISSOLVED	11	10.25	2.28	6.6	14.0	11	0.0271	-1.5712	0.922	0.93
SODIUM, DISSOLVED	11	26.82	10.10	11.0	42.0	11	0.1230	-26.9444	0.946	3.45
POTASSIUM, DISSOLVED	11	9.03	1.09	7.8	11.0	11	0.0063	6.2728	0.449*	1.03
BICARBONATE, ION	10	175.6	14.5	149	192	10	0.080	140.267	0.452*	13.7
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	64.91	31.57	12.0	110.0	11	0.3794	-100.8935	0.933	11.95
CHLORIDE, DISSOLVED	11	9.27	3.49	3.2	15.0	11	0.0428	-9.4395	0.952	1.13
DISSOLVED SOLIDS, SUM OF CONST	10	290.1	54.6	194	375	10	0.652	3.610	0.974	13.0
DISSOLVED SOLIDS, ROE 180 DEG C	3	343.3	44.2	302	390					
HARDNESS, TOTAL	11	158.2	20.4	120	200	11	0.251	48.396	0.956	6.3
HARDNESS, NONCARBONATE	11	28.6	46.0	0	160	11	0.103	-16.459	0.174*	47.7
TURBIDITY (JTU)	10	57.0	46.9	20	180	10	0.343	-93.077	0.599*	39.8
FLUORIDE, DISSOLVED	11	0.35	0.05	0.3	0.4	11	0.0003	0.2219	0.451*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
47	11.94	12.76	2.96	81	2.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	6	16	4	4	10
CADMIUM (CD), UG/L	4	2	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	2	50	4	0	0
COPPER (CU), UG/L	4	10	10	4	3	10
IRON (FE), UG/L	4	2800	4900	11	0	110
LEAD (PB), UG/L	4	7	<100	4	2	5
MANGANESE (MN), UG/L	4	110	210	11	0	50
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	1	3	4	1	2
ZINC (ZN), UG/L	4	20	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	7.69	24.90			
BIOMASS, ASH WT., G/SQ M	2	6.62	19.30			
CHLOROPHYLL A, MG/SQ M	3	0.200	3.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.200			
ORGANIC CARBON, MG/L	4	3.700	14.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	14	12.68	9.51	0.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	790.1	386.5	494	1660					
STREAMFLOW (CUBIC FT/SEC)	15	4807.6	3030.1	466	10000	13	-5.335	8599.762	-0.679	2329.3
PH (STANDARD UNITS)	13	7.61	0.51	6.8	8.5	13	0.0008	6.9606	0.626	0.41
PHOSPHORUS, TOTAL	12	0.472	0.254	0.24	1.00	12	0.00047	0.09611	0.752	0.175
NITRITE + NITRATE, TOTAL	12	0.487	0.391	0.00	1.10	12	-0.00068	1.03106	-0.706	0.290
NITROGEN, KJELDAHL, TOTAL	12	1.533	0.761	0.49	2.90	12	-0.00002	1.54980	-0.011*	0.798
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	114600.0	136912.0	2600	450000	10	276.503	-106242.875	0.673	71977.2
SEDIMENT SUSPENDED	12	304.9	163.1	100	589					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	13	134.2	200.4	15	710					
STREPTOCOCCI, FECAL (COL/100 ML)	13	270.1	391.4	24	1440					
SILICA, DISSOLVED	12	32.67	2.42	28.0	36.0	12	-0.0040	35.8281	-0.662	1.91
CALCIUM, DISSOLVED	12	54.58	5.70	47.0	66.0	12	0.0091	47.3249	0.647	4.56
MAGNESIUM, DISSOLVED	12	12.67	1.30	11.0	15.0	12	0.0017	11.3183	0.525*	1.16
SODIUM, DISSOLVED	12	91.92	86.89	28.0	290.0	12	0.2145	-78.5355	0.995	8.76
POTASSIUM, DISSOLVED	12	9.61	1.58	7.3	12.0	12	0.0035	6.8198	0.896	0.74
BICARBONATE, ION	12	208.1	19.4	185	239	12	0.031	176.322	0.780	12.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	85.17	23.54	51.0	140.0	12	0.0398	53.5736	0.681	18.07
CHLORIDE, DISSOLVED	12	99.75	121.39	12.0	370.0	12	0.2990	-137.8673	0.993	14.75
DISSOLVED SOLIDS, SUM OF CONST	12	489.7	236.7	297	1040	12	0.584	25.703	0.995	25.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	491.2	222.8	308	978	12	0.551	53.249	0.997	17.1
HARDNESS, TOTAL	12	188.3	19.0	160	220	12	0.027	166.655	0.579	16.2
HARDNESS, NONCARBONATE	12	17.8	10.4	3	30	12	-0.001	16.569	-0.036*	10.9
TURBIDITY (JTU)	13	50.5	28.7	8	95	13	-0.026	70.626	-0.544*	28.2
FLUORIDE, DISSOLVED	12	0.42	0.14	0.3	0.8	12	0.0003	0.2019	0.835	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%
	3290	1810	1480	836	664	565	512	444	423	364

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	14.51	14.79	2.86	92	3.16

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	6	11	4	3	8
CADMIUM (CD), UG/L	4	1	10	4	1	3
CHROMIUM (CR), UG/L	4	10	20	4	0	10
COBALT (CO), UG/L	4	1	< 50	4	0	2
COPPER (CU), UG/L	4	10	40	4	4	10
IRON (FE), UG/L	4	2300	10000	4	20	100
LEAD (PB), UG/L	4	8	100	4	2	5
MANGANESE (MN), UG/L	4	190	870	4	0	10
MERCURY (HG), UG/L	4	0.0	< 0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	1	3	4	0	1
ZINC (ZN), UG/L	4	30	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	24.00	46.00			
BIOMASS, ASH WT., G/SQ M	3	21.00	41.00			
CHLOROPHYLL A, MG/SQ M	3	3.100	32.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	4	3.700	48.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, K	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	36	13.08	8.59	0.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	730.6	47.6	650	850					
STREAMFLOW (CUBIC FT/SEC)	36	46125.0	12969.1	23600	71200	12	-63.544	89048.436	-0.235*	13091.4
PH (STANDARD UNITS)	12	7.94	0.41	7.4	8.7	12	-0.0027	9.9215	-0.316*	0.41
PHOSPHORUS, TOTAL	12	0.167	0.078	0.10	0.38	12	-0.00049	0.52791	-0.301*	0.078
NITRITE + NITRATE, TOTAL	11	0.321	0.221	0.06	0.71	11	-0.00109	1.11694	-0.246*	0.226
NITROGEN, KJELDAHL, TOTAL	12	0.886	0.645	0.46	3.50	12	-0.00357	3.49812	-0.201*	0.869
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7130.8	7745.1	510	25000	12	-40.307	36588.699	-0.248*	7870.2
SEDIMENT SUSPENDED	24	791.0	558.3	396	2760					
SEDIMENT, CLAY-SILT (PERCENT)	12	32.9	8.7	24	48					
COLIFORM, FECAL (COL/100 ML)	12	15291.7	11404.7	5000	42000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2951.7	2541.2	670	10000					
SILICA, DISSOLVED	12	10.37	2.80	6.9	15.0	12	0.0010	9.6302	0.017*	2.93
CALCIUM, DISSOLVED	12	59.42	4.06	54.0	70.0	12	0.0597	15.7924	0.700	3.04
MAGNESIUM, DISSOLVED	12	21.50	1.45	20.0	25.0	12	0.0227	4.9115	0.747	1.01
SODIUM, DISSOLVED	12	61.92	5.09	51.0	70.0	12	0.0832	1.1167	0.778	3.36
POTASSIUM, DISSOLVED	12	4.92	1.66	0.1	7.0	12	0.0027	2.9651	0.077*	1.73
BICARBONATE, ION	12	199.5	13.2	189	238	12	0.229	31.990	0.823	7.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	180.83	15.05	150.0	200.0	12	0.2046	31.3314	0.647	12.04
CHLORIDE, DISSOLVED	12	14.92	1.83	13.0	18.0	12	0.0181	1.6801	0.470*	1.70
DISSOLVED SOLIDS, SUM OF CONST	12	452.8	26.1	409	520	12	0.507	82.543	0.925	10.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	473.8	22.7	444	516	12	0.388	190.053	0.812	13.9
HARDNESS, TOTAL	12	236.7	15.0	220	280	12	0.262	44.847	0.834	8.7
HARDNESS, NONCARBONATE	12	73.3	7.8	55	83	12	0.055	33.206	0.335*	7.7
TURBIDITY (JTU)	12	30.2	18.4	12	70	12	-0.185	165.566	-0.479*	16.9
FLUORIDE, DISSOLVED	12	0.52	0.08	0.4	0.6	12	-0.0001	0.5617	-0.032*	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%
	760	750	750	730	720	700	690	650	620	580

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	12.59	12.89	2.75	97	1.73

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	4	2	3
CADMIUM (CD), UG/L	4	0	1	4	0	0
CHROMIUM (CR), UG/L	4	<10	20	4	0	3
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	4	15	4	0	10
IRON (FE), UG/L	4	1700	6800	4	30	100
LEAD (PB), UG/L	4	2	19	4	0	6
MANGANESE (MN), UG/L	4	0	260	4	0	20
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	3	4	1	2
ZINC (ZN), UG/L	4	10	50	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	37.60	82.20			
BIOMASS, ASH WT., G/SQ M	2	35.80	75.50			
CHLOROPHYLL A, MG/SQ M	2	22.500	63.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	4	1.600	9.600			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	14.33	9.81	1.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	705.8	97.7	510	925					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	8.17	0.26	7.7	8.5	12	0.0010	7.4592	0.376*	0.26
PHOSPHORUS, TOTAL	12	0.358	0.500	0.10	1.60	12	-0.00371	2.97916	-0.725	0.362
NITRITE + NITRATE, TOTAL	12	0.615	0.511	0.06	1.60	12	-0.00286	2.63445	-0.547*	0.449
NITROGEN, KJELDAHL, TOTAL	12	1.397	1.893	0.42	6.70	12	-0.01370	11.06801	-0.707	1.404
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8660.0	7608.3	430	22000	12	-6.271	13085.613	-0.080*	7953.7
SEDIMENT SUSPENDED	12	1624.9	2378.3	346	8660					
SEDIMENT, CLAY-SILT (PERCENT)	12	35.5	23.5	6	92					
COLIFORM, FECAL (COL/100 ML)	12	8637.5	11188.4	450	40000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	4187.9	7066.5	25	24000					
SILICA, DISSOLVED	12	9.97	3.28	6.6	15.0	12	0.0176	-2.4209	0.522*	2.93
CALCIUM, DISSOLVED	12	57.50	7.29	44.0	74.0	12	0.0685	9.1236	0.918	3.03
MAGNESIUM, DISSOLVED	12	20.50	2.43	15.0	25.0	12	0.0229	4.3185	0.921	0.99
SODIUM, DISSOLVED	12	58.00	10.12	36.0	70.0	12	0.0788	2.3955	0.761	6.89
POTASSIUM, DISSOLVED	12	5.16	0.54	4.5	6.5	12	0.0011	4.3505	0.207*	0.55
BICARBONATE, ION	12	197.7	26.6	138	254	12	0.251	20.489	0.923	10.7
CARBONATE, ION	12	1.2	1.8	0	4	12	0.002	-0.014	0.091*	1.9
SULFATE, DISSOLVED	12	168.33	27.58	110.0	200.0	12	0.1783	42.5045	0.631	22.43
CHLORIDE, DISSOLVED	12	15.08	2.81	11.0	22.0	12	0.0222	-0.5853	0.771	1.88
DISSOLVED SOLIDS, SUM OF CONST	12	433.9	56.6	296	515	12	0.515	70.359	0.889	27.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	455.1	55.8	340	530	12	0.485	112.469	0.650	30.8
HARDNESS, TOTAL	12	227.5	28.6	170	290	12	0.273	34.555	0.932	10.9
HARDNESS, NONCARBONATE	12	63.7	9.6	45	79	12	0.059	22.337	0.594	8.1
TURBIDITY (JTU)	12	34.9	26.5	9	100	12	-0.129	126.229	-0.478*	24.4
FLUORIDE, DISSOLVED	12	0.57	0.14	0.4	0.9	12	0.0000	0.5512	0.016*	0.14

*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%
	805	740	725	710	705	700	680	640	625	580

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
358	13.11	12.67	2.76	97	1.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	3	19	4	1	2
CADMIUM (CD), UG/L	4	0	14	4	0	8
CHROMIUM (CR), UG/L	4	<10	30	4	0	2
COBALT (CO), UG/L	4	0	13	4	0	0
COPPER (CU), UG/L	4	12	40	4	3	12
IRON (FE), UG/L	4	1100	29000	4	0	50
LEAD (PB), UG/L	4	10	32	4	0	5
MANGANESE (MN), UG/L	4	50	800	4	0	100
MERCURY (HG), UG/L	1	0.0		4	0.0	0.3
SELENIUM (SE), UG/L	3	1	2	4	0	2
ZINC (ZN), UG/L	4	20	100	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.00	157.00			
BIOMASS, ASH WT., G/SQ M	4	0.60	149.00			
CHLOROPHYLL A, MG/SQ M	4	0.300	88.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.000			
ORGANIC CARBON, MG/L	4	4.200	7.600			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	15.19	8.22	1.5	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	853.8	205.8	513	1360					
STREAMFLOW (CUBIC FT/SEC)	13	273.2	313.0	64	1290	13	-0.690	862.191	-0.454*	291.4
PH (STANDARD UNITS)	12	7.92	0.31	7.5	8.5	12	-0.0000	7.9236	-0.006*	0.32
PHOSPHORUS, TOTAL	11	0.366	0.175	0.22	0.65	11	-0.00040	0.73717	-0.504*	0.159
NITRITE + NITRATE, TOTAL	11	0.602	0.643	0.00	1.60	11	0.00027	0.36596	0.092*	0.675
NITROGEN, KJELDAHL, TOTAL	11	1.642	1.015	0.76	4.00	11	-0.00273	4.01567	-0.588*	0.865
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	74232.5	74477.4	290	200000	12	-52.857	119420.813	-0.153*	77197.4
SEDIMENT SUSPENDED	1	37.0	0.0	37						
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1491.8	3361.9	22	>12000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1871.0	5711.1	32	>20000					
SILICA, DISSOLVED	11	18.77	6.12	9.5	28.0	11	0.0199	1.4207	0.712	4.53
CALCIUM, DISSOLVED	11	87.09	24.92	43.0	120.0	11	0.0964	3.2233	0.845	14.03
MAGNESIUM, DISSOLVED	11	18.24	3.60	8.6	22.0	11	0.0117	8.0182	0.713	2.66
SODIUM, DISSOLVED	11	64.27	11.65	41.0	82.0	11	0.0364	32.6184	0.683	8.97
POTASSIUM, DISSOLVED	11	12.60	2.51	9.6	17.0	11	-0.0032	15.3939	-0.280*	2.54
BICARBONATE, ION	11	267.6	61.2	141	324	11	0.185	106.467	0.661	48.4
CARBONATE, ION	11	1.2	3.9	0	13	11	0.001	0.663	0.033*	4.1
SULFATE, DISSOLVED	11	136.64	37.69	63.0	210.0	11	0.1447	10.7339	0.839	21.60
CHLORIDE, DISSOLVED	11	59.00	13.32	42.0	80.0	11	0.0454	19.4807	0.745	9.36
DISSOLVED SOLIDS, SUM OF CONST	11	530.3	111.9	294	691	11	0.444	144.029	0.867	58.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	546.5	110.1	333	721	11	0.449	155.745	0.892	52.5
HARDNESS, TOTAL	11	292.7	73.6	140	390	11	0.290	40.061	0.862	39.3
HARDNESS, NONCARBONATE	11	71.4	31.4	27	150	11	0.136	-47.225	0.949	10.4
TURBIDITY (JTU)	12	56.0	69.7	2	260	12	-0.216	241.070	-0.668	54.4
FLUORIDE, DISSOLVED	11	0.43	0.11	0.2	0.6	11	0.0001	0.3297	0.222*	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%
	1130	996	952	892	855	810	772	685	574	436

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.49	12.62	2.85	94	2.35

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

06856600 -- REPUBLICAN R AT CLAY CENTER, KS

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	5	14	4	5	10
CADMIUM (CD), UG/L	4	<10	10	4	1	3
CHROMIUM (CR), UG/L	4	0	50	4	0	5
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	0	40	4	2	7
IRON (FE), UG/L	4	90	27000	4	0	100
LEAD (PB), UG/L	4	<100	100	4	2	6
MANGANESE (MN), UG/L	4	110	740	4	0	110
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	30	140	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	8.31	67.80			
BIOMASS, ASH WT., G/SQ M	3	6.08	47.40			
CHLOROPHYLL A, MG/SQ M	3	0.600	18.900			
CHLOROPHYLL B, MG/SQ M	3	0.100	0.800			
ORGANIC CARBON, MG/L	4	2.900	27.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, K	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (OEG C)	15	14.37	8.85	2.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	2149.9	750.2	408	3190					
STREAMFLOW (CUBIC FT/SEC)	15	976.0	2218.4	183	6950	15	-2.067	5420.824	-0.699	1645.9
PH (STANDARD UNITS)	12	7.81	0.24	7.5	8.2	12	-0.0000	7.8869	-0.131*	0.24
PHOSPHORUS, TOTAL	12	0.264	0.116	0.14	0.60	12	-0.00008	0.43080	-0.562*	0.101
NITRITE + NITRATE, TOTAL	12	0.359	0.346	0.00	0.99	12	-0.00002	0.40299	-0.050*	0.363
NITROGEN, KJELOAHL, TOTAL	12	1.608	0.981	0.20	3.70	12	-0.00058	2.83416	-0.490*	0.897
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	43688.3	58293.6	660	200000	12	29.542	-18640.957	0.420*	55491.9
SEDIMENT SUSPENDEO	12	315.9	623.4	19	2270					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	2245.0	3219.9	430	12000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2134.2	5644.5	40	20000					
SILICA, DISSOLVED	12	9.49	2.49	5.8	15.0	12	0.0014	6.5468	0.465*	2.31
CALCIUM, DISSOLVED	12	131.17	34.22	36.0	180.0	12	0.0326	62.2914	0.790	22.00
MAGNESIUM, DISSOLVEO	12	28.85	6.93	9.2	34.0	12	0.0064	15.4459	0.760	4.72
SODIUM, DISSOLVED	12	282.50	136.97	25.0	505.0	12	0.1527	-39.6924	0.923	55.14
POTASSIUM, DISSOLVED	12	9.63	2.02	6.6	13.0	12	0.0011	7.3339	0.447*	1.69
BICARBONATE, ION	12	271.8	66.6	108	356	12	0.055	156.765	0.678	51.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	277.00	82.18	67.0	420.0	12	0.0752	118.3580	0.758	56.24
CHLORIDE, DISSOLVEO	12	402.50	197.03	30.0	720.0	12	0.2180	-57.4902	0.916	62.67
DISSOLVED SOLIDS, SUM OF CONST	12	1276.7	454.7	235	1860	12	0.516	188.740	0.939	163.6
OISSOLVED SOLIDS, ROE 180 DEG C	12	1291.6	446.8	242	1850	12	0.505	225.858	0.936	164.5
HARDNESS, TOTAL	12	447.0	112.1	130	590	12	0.106	222.602	0.786	72.7
HARDNESS, NONCARBONATE	12	214.8	67.3	39	300	12	0.048	114.011	0.588	57.1
TURBIDITY (JTU)	12	87.4	137.0	9	510	12	-0.105	308.261	-0.633	111.3
FLUORIOE, DISSOLVED	12	0.37	0.08	0.2	0.5	12	0.0001	0.2605	0.596	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%
	4020	3660	3230	2780	2480	2160	1940	1060	706	554

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUOE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.35	11.57	2.74	88	3.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	2	20	4	1	5
CADMIUM (CD), UG/L	4	<10	20	4	1	4
CHROMIUM (CR), UG/L	4	0	70	4	0	5
COBALT (CO), UG/L	4	<50	50	4	0	0
COPPER (CU), UG/L	4	<10	60	4	3	11
IRON (FE), UG/L	4	250	44000	4	0	110
LEAD (PB), UG/L	4	<100	100	4	2	28
MANGANESE (MN), UG/L	4	190	1700	4	0	170
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	1	3	4	0	3
ZINC (ZN), UG/L	4	30	200	4	0	10
PERIPHYTON:						
BIOMASS, ORY WT., G/SQ M	2	1.00	48.00			
BIOMASS, ASH WT., G/SQ M	2	0.23	41.00			
CHLOROPHYLL A, MG/SQ M	2	0.500	59.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.500			
ORGANIC CARBON, MG/L	4	4.400	36.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, b	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.83	9.06	1.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	473.3	52.0	400	562					
STREAMFLOW (CUBIC FT/SEC)	12	891.1	1061.7	62	3600	12	3.891	-950.519	0.191*	1093.1
PH (STANDARD UNITS)	12	7.80	0.25	7.2	8.2	12	0.0003	7.6490	0.066*	0.26
PHOSPHORUS, TOTAL	11	1.973	5.979	0.13	20.00	11	-0.02944	15.88678	-0.266*	6.071
NITRITE + NITRATE, TOTAL	11	1.178	0.190	0.85	1.40	11	0.00003	1.16579	0.006*	0.200
NITROGEN, KJELDAHL, TOTAL	11	0.909	0.335	0.51	1.60	11	0.00163	0.13866	0.265*	0.341
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	15280.6	28716.1	170	97000	12	126.694	-44687.426	0.230*	29313.4
SEDIMENT SUSPENDED	10	57.8	31.5	1	93					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	431.3	904.2	6	3100					
STREPTOCOCCI, FECAL (COL/100 ML)	11	179.9	180.0	40	530					
SILICA, DISSOLVED	11	10.95	1.74	8.3	14.0	11	0.0049	8.6192	0.154*	1.61
CALCIUM, DISSOLVED	11	55.45	5.24	45.0	62.0	11	0.0663	23.1999	0.710	3.89
MAGNESIUM, DISSOLVED	11	12.36	1.03	11.0	14.0	11	0.0107	7.3205	0.566*	0.89
SODIUM, DISSOLVED	11	19.45	2.50	16.0	24.0	11	0.0384	1.2875	0.836	1.45
POTASSIUM, DISSOLVED	11	7.68	0.96	6.4	8.7	11	0.0113	2.3300	0.640	0.78
BICARBONATE, ION	11	202.0	16.3	171	222	11	0.184	115.150	0.613	13.6
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	48.18	6.00	36.0	59.0	11	0.0639	17.9864	0.581*	5.15
CHLORIDE, DISSOLVED	11	16.36	2.25	13.0	20.0	11	0.0253	4.4279	0.612	1.87
DISSOLVED SOLIDS, SUM OF CONST	11	270.4	21.3	234	293	11	0.314	122.025	0.804	13.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	283.5	13.7	267	305	11	0.192	192.752	0.763	9.4
HARDNESS, TOTAL	11	190.0	15.5	160	210	11	0.212	89.715	0.746	10.9
HARDNESS, NONCARBONATE	11	24.0	8.8	8	39	11	0.067	-7.470	0.411*	8.5
TURBIDITY (JTU)	12	23.9	11.1	6	45	12	-0.105	73.522	-0.491*	10.1
FLUORIDE, DISSOLVED	11	0.36	0.05	0.3	0.4	11	0.0000	0.3570	0.015*	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%
	649	596	540	509	493	468	441	418	408	394

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	14.13	10.99	2.64	95	1.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	6	4	3	6
CADMIUM (CD), UG/L	4	0	10	4	1	7
CHROMIUM (CR), UG/L	4	0	80	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	0	50	4	2	5
IRON (FE), UG/L	4	270	1500	4	0	30
LEAD (PB), UG/L	4	<100	100	4	2	19
MANGANESE (MN), UG/L	4	30	120	4	5	40
MERCURY (HG), UG/L	2	0.0	0.3	4	0.0	1.1
SELENIUM (SE), UG/L	4	1	1	4	1	1
ZINC (ZN), UG/L	4	20	50	4	0	4
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	20.80	59.50			
BIOMASS, ASH WT., G/SQ M	3	14.30	48.80			
CHLOROPHYLL A, MG/SQ M	3	13.900	114.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	21.900			
ORGANIC CARBON, MG/L	3	3.400	13.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 06892350 NAME: KANSAS R AT DESOTO, KS

LAT 38D59M00S LONG 094D57M52S
DRAINAGE AREA: 59756 SQ MI (154768 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	31	16.21	8.23	0.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	922.8	368.4	438	1620					
STREAMFLOW (CUBIC FT/SEC)	14	5015.7	4497.6	920	16900	12	-3.767	8073.496	-0.296*	4702.5
PH (STANDARD UNITS)	11	8.15	0.37	7.6	8.9	11	0.0002	7.9644	0.212*	0.38
PHOSPHORUS, TOTAL	12	0.417	0.198	0.20	0.95	12	-0.00022	0.61877	-0.408*	0.189
NITRITE + NITRATE, TOTAL	12	0.614	0.518	0.00	1.60	12	0.00012	0.49886	0.089*	0.541
NITROGEN, KJELDAHL, TOTAL	12	2.598	1.087	0.88	4.60	12	0.00035	2.27318	0.119*	1.132
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	87700.0	93722.9	1200	300000	12	78.655	15121.438	0.309*	93480.4
SEDIMENT SUSPENDED	22	441.7	789.8	54	2840					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	7948.3	5209.8	180	15000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6520.6	10267.7	37	29000					
SILICA, DISSOLVED	12	6.42	2.95	2.7	11.0	12	0.0029	3.7292	0.365*	2.88
CALCIUM, DISSOLVED	12	76.25	17.56	55.0	110.0	12	0.0399	39.4764	0.836	10.11
MAGNESIUM, DISSOLVED	12	18.33	3.92	11.0	24.0	12	0.0092	9.8039	0.870	2.03
SODIUM, DISSOLVED	12	85.92	45.33	19.0	160.0	12	0.1068	-12.6275	0.868	23.61
POTASSIUM, DISSOLVED	12	7.17	1.65	4.9	10.0	12	0.0019	5.3940	0.428*	1.57
BICARBONATE, ION	12	226.5	50.6	159	305	12	0.094	139.303	0.688	38.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	125.42	40.53	55.0	190.0	12	0.0947	38.0305	0.861	21.64
CHLORIDE, DISSOLVED	12	104.08	59.21	17.0	210.0	12	0.1439	-28.6902	0.895	27.67
DISSOLVED SOLIDS, SUM OF CONST	12	535.6	179.8	253	854	12	0.445	124.555	0.913	77.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	551.4	180.7	264	842	12	0.443	142.426	0.904	81.1
HARDNESS, TOTAL	12	265.8	57.9	180	370	12	0.136	140.625	0.863	30.7
HARDNESS, NONCARBONATE	12	80.2	27.5	46	130	12	0.058	26.248	0.784	17.9
TURBIDITY (JTU)	12	116.3	199.7	4	720	12	-0.270	365.697	-0.499*	181.6
FLUORIDE, DISSOLVED	12	0.38	0.06	0.3	0.5	12	-0.0000	0.3876	-0.030*	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%
	1430	1270	1210	1100	1010	844	755	571	523	465

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	17.68	9.61	2.59	92	2.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	2	7	5	2	4
CADMIUM (CD), UG/L	5	< 10	< 10	5	0	5
CHROMIUM (CR), UG/L	5	0	20	5	0	8
COBALT (CO), UG/L	5	< 50	< 50	5	0	0
COPPER (CU), UG/L	5	10	20	5	3	14
IRON (FE), UG/L	5	450	4400	5	20	90
LEAD (PB), UG/L	5	< 100	100	5	2	4
MANGANESE (MN), UG/L	5	90	420	5	0	70
MERCURY (HG), UG/L	5	0.0	0.6	5	0.0	0.6
SELENIUM (SE), UG/L	5	1	1	5	0	1
ZINC (ZN), UG/L	5	20	120	5	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	4.23	105.00			
BIOMASS, ASH WT., G/SQ M	3	3.38	59.30			
CHLOROPHYLL A, MG/SQ M	3	0.000	7.600			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.700			
ORGANIC CARBON, MG/L	4	4.800	14.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 06902000 NAME: GRAND RIVER NEAR SUMNER MO

LAT 39D38M25S LONG 093D16M25S
DRAINAGE AREA: 6860 SQ MI (17819 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.17	9.21	1.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	434.1	134.7	187	670					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.90	0.31	7.3	8.2	12	0.0004	7.7316	0.168*	0.32
PHOSPHORUS, TOTAL	12	0.347	0.456	0.10	1.70	12	-0.00268	1.51182	-0.793	0.291
NITRITE + NITRATE, TOTAL	12	0.953	1.217	0.00	4.00	12	-0.00615	3.62474	-0.681	0.934
NITROGEN, KJELDAHL, TOTAL	12	1.572	1.995	0.47	7.70	12	-0.01048	6.12024	-0.707	1.479
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	25089.2	32632.8	570	89000	12	51.175	2674.816	0.211*	33452.9
SEDIMENT SUSPENDED	12	562.6	1241.0	4	4430					
SEDIMENT, CLAY-SILT (PERCENT)	12	83.4	16.8	55	100					
COLIFORM, FECAL (COL/100 ML)	12	2123.3	5052.1	35	18000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2335.0	5053.8	60	18000					
SILICA, DISSOLVED	12	9.93	2.34	6.5	16.0	12	0.0140	3.8711	0.805	1.45
CALCIUM, DISSOLVED	12	59.92	17.81	26.0	86.0	12	0.1298	3.5719	0.982	3.56
MAGNESIUM, DISSOLVED	12	12.34	3.36	5.3	17.0	12	0.0244	1.7483	0.977	0.75
SODIUM, DISSOLVED	12	12.86	3.21	5.5	17.0	12	0.0190	4.6276	0.796	2.04
POTASSIUM, DISSOLVED	12	4.30	0.53	3.8	5.5	12	0.0003	4.1636	0.081*	0.55
BICARBONATE, ION	11	220.9	56.5	108	300	11	0.452	14.725	0.921	23.2
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	40.00	13.89	15.0	56.0	12	0.0857	2.8103	0.831	8.11
CHLORIDE, DISSOLVED	12	7.97	2.31	2.9	11.0	12	0.0143	1.7536	0.835	1.34
DISSOLVED SOLIDS, SUM OF CONST	11	262.8	60.3	121	356	11	0.516	27.418	0.986	10.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	261.8	78.2	106	366	12	0.562	17.920	0.968	20.5
HARDNESS, TOTAL	12	200.6	58.6	87	280	12	0.426	15.474	0.980	12.1
HARDNESS, NONCARBONATE	11	28.7	14.4	0	45	11	0.067	-1.846	0.538*	12.8
TURBIDITY (JTU)	12	55.4	84.9	3	300	12	-0.396	227.238	-0.628	69.3
FLUORIDE, DISSOLVED	12	0.33	0.14	0.1	0.6	12	-0.0000	0.3545	-0.048*	0.14

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 248

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%
	595	490	470	460	445	388	295	210	190	150

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
238	14.47	10.80	2.86	89	2.63

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	1	2	4	0	2
CADMIUM (CD), UG/L	3	0	1	4	0	0
CHROMIUM (CR), UG/L	3	< 10	10	4	0	0
COBALT (CO), UG/L	3	0	3	4	0	0
COPPER (CU), UG/L	3	8	120	4	0	9
IRON (FE), UG/L	3	830	1500	4	0	100
LEAD (PB), UG/L	3	11	20	4	0	6
MANGANESE (MN), UG/L	3	180	250	4	0	250
MERCURY (HG), UG/L	1	0.0		4	0.0	0.1
SELENIUM (SE), UG/L	3	0	3	4	0	1
ZINC (ZN), UG/L	3	60	120	4	5	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	3.50	47.30			
BIOMASS, ASH WT., G/SQ M	4	2.20	43.50			
CHLOROPHYLL A, MG/SQ M	4	0.000	3.500			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.100			
ORGANIC CARBON, MG/L	4	4.200	22.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.58	7.15	3.0	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	314.3	25.5	278	348					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	8.02	0.20	7.8	8.4	12	-0.0015	8.4827	-0.189*	0.20
PHOSPHORUS, TOTAL	12	0.038	0.017	0.01	0.07	12	-0.00033	0.14228	-0.462*	0.016
NITRITE + NITRATE, TOTAL	12	0.302	0.136	0.04	0.50	12	-0.00213	0.97094	-0.400*	0.120
NITROGEN, KJELDAHL, TOTAL	12	0.274	0.098	0.13	0.41	12	-0.00032	0.37605	-0.085*	0.102
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	717.5	637.4	180	2300	12	6.646	-2063.567	0.354*	625.3
SEDIMENT SUSPENDED	12	77.6	110.3	6	374					
SEDIMENT, CLAY-SILT (PERCENT)	12	67.4	15.8	45	90					
COLIFORM, FECAL (COL/100 ML)	12	203.2	629.1	4	2200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	270.8	859.7	4	3000					
SILICA, DISSOLVED	12	5.26	1.03	3.1	6.8	12	-0.0308	14.9275	-0.758	0.71
CALCIUM, DISSOLVED	12	38.50	3.03	31.0	41.0	12	0.0847	11.8902	0.712	2.23
MAGNESIUM, DISSOLVED	12	13.33	1.72	11.0	16.0	12	0.0263	5.0792	0.388*	1.67
SODIUM, DISSOLVED	12	5.45	0.71	3.8	6.1	12	0.0220	-1.4510	0.792	0.45
POTASSIUM, DISSOLVED	12	2.47	0.22	2.0	2.8	12	0.0004	2.3553	0.040*	0.23
BICARBONATE, ION	12	154.0	9.5	136	168	12	0.249	75.796	0.670	7.4
CARBONATE, ION	12	0.3	1.2	0	4	12	0.008	-2.071	0.169*	1.2
SULFATE, DISSOLVED	12	26.50	4.80	19.0	33.0	12	0.1534	-21.7056	0.815	2.91
CHLORIDE, DISSOLVED	12	4.80	0.64	3.8	5.7	12	0.0214	-1.9120	0.857	0.34
DISSOLVED SOLIDS, SUM OF CONST	12	172.8	11.3	153	183	12	0.410	43.801	0.929	4.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	184.2	19.7	154	212	12	0.655	-21.645	0.848	10.9
HARDNESS, TOTAL	12	150.0	10.4	130	160	12	0.364	35.644	0.888	5.0
HARDNESS, NONCARBONATE	12	24.3	4.5	19	35	12	0.112	-10.839	0.631	3.7
TURBIDITY (JTU)	12	5.8	3.5	3	15	12	-0.088	33.645	-0.642	2.8
FLUORIDE, DISSOLVED	12	0.22	0.09	0.1	0.5	12	-0.0011	0.5671	-0.303*	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%
	345	335	330	320	317	312	292	280	276	270

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
363	15.77	9.14	2.58	93	1.82

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	5	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	14
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	5	33	4	2	10
IRON (FE), UG/L	4	240	760	4	0	150
LEAD (PB), UG/L	4	15	57	4	0	12
MANGANESE (MN), UG/L	4	20	140	4	0	120
MERCURY (HG), UG/L	2	0.1	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	4	0	0
ZINC (ZN), UG/L	4	20	120	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.50	17.00			
BIOMASS, ASH WT., G/SQ M	4	1.20	14.00			
CHLOROPHYLL A, MG/SQ M	4	0.300	24.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.800			
ORGANIC CARBON, MG/L	4	2.200	23.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.88	9.13	1.0	26.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	649.6	87.5	515	775					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	8.13	0.17	7.9	8.5	12	0.0008	7.5924	0.437*	0.16
PHOSPHORUS, TOTAL	12	0.202	0.115	0.02	0.50	12	-0.00041	0.46791	-0.313*	0.114
NITRITE + NITRATE, TOTAL	12	0.644	0.354	0.04	1.20	12	-0.00275	2.43080	-0.679	0.273
NITROGEN, KJELDAHL, TOTAL	12	0.769	0.376	0.38	1.60	12	-0.00304	2.74251	-0.708	0.278
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7616.7	12885.3	310	47000	12	13.080	-880.031	0.089*	13460.7
SEDIMENT SUSPENDED	12	550.2	450.0	210	1760					
SEDIMENT, CLAY-SILT (PERCENT)	12	46.3	18.3	9	75					
COLIFORM, FECAL (COL/100 ML)	12	2022.5	1880.7	450	6000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2275.0	4688.9	300	17000					
SILICA, DISSOLVED	4	8.35	2.37	5.3	11.0					
CALCIUM, DISSOLVED	4	57.50	1.00	56.0	58.0					
MAGNESIUM, DISSOLVED	4	20.25	2.75	17.0	23.0					
SODIUM, DISSOLVED	4	52.25	11.09	38.0	62.0					
POTASSIUM, DISSOLVED	4	4.85	0.37	4.5	5.3					
BICARBONATE, ION	12	198.7	15.3	188	244	12	0.073	151.391	0.417*	14.5
CARBONATE, ION	12	0.5	1.7	0	6	12	0.007	-3.913	0.343*	1.7
SULFATE, DISSOLVED	12	140.83	32.32	100.0	190.0	12	0.3151	-63.8475	0.853	17.68
CHLORIDE, DISSOLVED	12	17.17	2.98	15.0	25.0	12	0.0068	12.7281	0.201*	3.06
DISSOLVED SOLIDS, SUM OF CONST	4	404.0	46.5	344	449					
DISSOLVED SOLIDS, ROE 180 DEG C	12	415.3	48.5	334	485	12	0.480	103.485	0.866	25.4
HARDNESS, TOTAL	4	227.5	15.0	210	240					
HARDNESS, NONCARBONATE	4	67.3	13.7	56	85					
TURBIDITY (JTU)	12	52.8	53.6	3	200	12	-0.412	320.499	-0.673	41.6
FLUORIDE, DISSOLVED	4	0.45	0.06	0.4	0.5					

*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%
	740	715	700	675	650	600	525	455	425	395

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
341	14.98	12.61	2.73	96	1.91

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	4	4	2	2
CADMIUM (CD), UG/L	4	0	3	4	0	2
CHROMIUM (CR), UG/L	4	< 10	10	4	0	1
COBALT (CO), UG/L	4	0	5	4	0	0
COPPER (CU), UG/L	4	34	50	4	4	9
IRON (FE), UG/L	4	2100	6100	4	10	950
LEAD (PB), UG/L	4	4	32	4	0	9
MANGANESE (MN), UG/L	4	150	180	4	0	40
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	2	1	2	4	0	2
ZINC (ZN), UG/L	4	30	350	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.10	61.40			
BIOMASS, ASH WT., G/SQ M	4	0.90	49.20			
CHLOROPHYLL A, MG/SQ M	4	0.000	61.500			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.900			
ORGANIC CARBON, MG/L	4	2.500	18.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.08	9.07	1.5	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	566.1	71.3	438	700					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	8.06	0.16	7.9	8.3	12	0.0001	8.0235	0.028*	0.16
PHOSPHORUS, TOTAL	12	0.252	0.083	0.15	0.44	12	-0.00076	0.68026	-0.646	0.067
NITRITE + NITRATE, TOTAL	12	1.410	0.838	0.35	2.90	12	-0.00735	5.56792	-0.625	0.686
NITROGEN, KJELDAHL, TOTAL	12	1.024	0.301	0.65	1.60	12	-0.00237	2.36386	-0.561*	0.261
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	19525.0	17287.7	4700	55000	12	177.371	-80881.875	0.731	12362.7
SEDIMENT SUSPENDED	12	354.8	293.6	98	917					
SEDIMENT, CLAY-SILT (PERCENT)	12	64.3	19.4	20	88					
COLIFORM, FECAL (COL/100 ML)	12	4512.5	2417.4	1450	8900					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1082.9	1352.1	120	4200					
SILICA, DISSOLVED	12	6.16	2.41	2.9	9.9	12	-0.0156	14.9922	-0.462*	2.24
CALCIUM, DISSOLVED	12	51.92	5.71	37.0	61.0	12	0.0596	18.1926	0.744	4.01
MAGNESIUM, DISSOLVED	12	19.75	2.18	16.0	23.0	12	0.0272	4.3488	0.890	1.04
SODIUM, DISSOLVED	12	32.75	10.55	20.0	50.0	12	0.1305	-41.1480	0.882	5.21
POTASSIUM, DISSOLVED	12	3.90	0.44	3.3	4.6	12	0.0030	2.1870	0.487*	0.41
BICARBONATE, ION	12	190.7	18.8	152	224	12	0.240	55.031	0.910	8.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	93.33	29.12	57.0	140.0	12	0.3554	-107.8586	0.870	15.06
CHLORIDE, DISSOLVED	12	19.17	2.37	16.0	24.0	12	0.0152	10.5730	0.457*	2.21
DISSOLVED SOLIDS, SUM OF CONST	12	321.4	51.3	232	400	12	0.692	-70.560	0.962	14.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	335.8	51.5	270	427	12	0.580	7.420	0.803	32.2
HARDNESS, TOTAL	12	211.7	21.2	160	240	12	0.255	67.109	0.857	11.5
HARDNESS, NONCARBONATE	12	54.7	10.9	34	77	12	0.064	18.561	0.419*	10.3
TURBIDITY (JTU)	12	44.8	43.2	8	170	12	-0.326	229.322	-0.538*	38.2
FLUORIDE, DISSOLVED	12	0.39	0.10	0.3	0.6	12	0.0009	-0.1379	0.670	0.08

*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%
	655	645	630	605	585	555	510	445	415	360

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
348	15.46	12.42	2.72	96	1.89

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07022000 -- MISSISSIPPI RIVER AT THEBES ILL

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	2	4	4	1	2
CADMIUM (CD), UG/L	4	1	2	4	0	1
CHROMIUM (CR), UG/L	4	<10	30	4	0	3
COBALT (CO), UG/L	4	0	5	4	0	2
COPPER (CU), UG/L	4	14	24	4	3	9
IRON (FE), UG/L	4	1600	10000	4	10	80
LEAD (PB), UG/L	4	6	20	4	0	5
MANGANESE (MN), UG/L	4	60	310	4	0	40
MERCURY (HG), UG/L	3	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	2	0	1	4	0	1
ZINC (ZN), UG/L	4	40	70	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.20	370.00			
BIOMASS, ASH WT., G/SQ M	3	0.10	350.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	160.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.000			
ORGANIC CARBON, MG/L	4	3.800	12.000			

Table 12. 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 SC KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	14.67	6.72	3.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	83.2	9.1	70	100					
STREAMFLOW (CUBIC FT/SEC)	16	2297.1	2854.9	626	10100	13	57.137	-2245.997	0.164*	3244.3
PH (STANDARD UNITS)	11	6.82	0.41	6.1	7.3	11	-0.0195	8.4160	-0.441*	0.39
PHOSPHORUS, TOTAL	12	0.174	0.140	0.09	0.59	12	-0.00229	0.36332	-0.150*	0.146
NITRITE + NITRATE, TOTAL	12	0.436	0.133	0.20	0.71	12	-0.00400	0.76656	-0.277*	0.134
NITROGEN, KJELDAHL, TOTAL	11	0.535	0.442	0.22	1.80	11	-0.00715	1.12568	-0.156*	0.460
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4105.0	5014.1	170	14000	12	-123.556	14318.949	-0.227*	5121.0
SEDIMENT SUSPENDED	12	149.8	131.8	44	525					
SEDIMENT, CLAY-SILT (PERCENT)	9	90.4	8.4	73	99					
COLIFORM, FECAL (COL/100 ML)	11	3323.4	9304.5	130	31350					
STREPTOCOCCI, FECAL (COL/100 ML)	10	3326.9	8616.7	140	27800					
SILICA, DISSOLVED	12	10.79	2.40	6.3	13.0	12	-0.0222	12.6308	-0.086*	2.51
CALCIUM, DISSOLVED	12	6.35	1.07	5.0	8.0	12	0.0353	3.4293	0.305*	1.07
MAGNESIUM, DISSOLVED	12	2.26	0.47	1.7	3.3	12	-0.0105	3.1290	-0.206*	0.48
SODIUM, DISSOLVED	12	5.28	1.01	2.9	6.2	12	-0.0060	5.7753	-0.054*	1.06
POTASSIUM, DISSOLVED	12	1.75	0.31	1.3	2.2	12	-0.0154	3.0208	-0.464*	0.28
BICARBONATE, ION	12	30.6	7.5	18	41	12	0.065	25.170	0.080*	7.9
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.63	2.61	3.0	11.0	12	-0.0420	9.1084	-0.149*	2.71
CHLORIDE, DISSOLVED	12	3.99	0.73	2.4	5.2	12	-0.0024	4.1883	-0.030*	0.77
DISSOLVED SOLIDS, SUM OF CONST	12	51.6	6.8	36	62	12	-0.047	55.437	-0.063*	7.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	57.3	7.1	49	72	12	0.320	30.915	0.417*	6.7
HARDNESS, TOTAL	12	25.3	3.5	19	30	12	0.031	22.691	0.081*	3.7
HARDNESS, NONCARBONATE	12	1.8	2.9	0	8	12	-0.041	5.246	-0.131*	3.0
TURBIDITY (JTU)	12	53.7	72.8	8	260	12	-0.673	125.801	-0.111*	75.9
FLUORIDE, DISSOLVED	12	0.22	0.26	0.0	1.0	12	-0.0038	0.5427	-0.136*	0.27

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 312

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%
	119	97	94	91	88	83	76	66	61	53

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
348	15.98	8.27	2.87	83	2.73

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	15	4	0	1
CADMIUM (CD), UG/L	4	0	4	4	0	1
CHROMIUM (CR), UG/L	4	10	20	4	0	0
COBALT (CO), UG/L	4	0	7	4	0	0
COPPER (CU), UG/L	4	8	14	4	0	7
IRON (FE), UG/L	4	1900	13000	4	10	280
LEAD (PB), UG/L	4	3	66	4	0	3
MANGANESE (MN), UG/L	4	160	700	4	90	190
MERCURY (HG), UG/L	4	0.0	0.9	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	70	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	1.60	66.90			
BIOMASS, ASH WT., G/SQ M	4	9.00	61.50			
CHLOROPHYLL A, MG/SQ M	4	1.100	26.600			
CHLOROPHYLL B, MG/SQ M	4	0.600	6.500			
ORGANIC CARBON, MG/L	4	5.800	23.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	16.46	8.76	4.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	400.5	66.0	302	515					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.68	0.34	7.1	8.2	12	-0.0030	6.6816	-0.576*	0.29
PHOSPHORUS, TOTAL	12	0.264	0.137	0.14	0.64	12	-0.00097	0.65147	-0.468*	0.127
NITRITE + NITRATE, TOTAL	12	1.201	0.617	0.27	2.10	12	-0.00444	2.98077	-0.476*	0.569
NITROGEN, KJELDAHL, TOTAL	12	1.203	0.650	0.47	3.00	12	-0.00524	3.30251	-0.533*	0.577
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7428.3	7115.6	940	22000	12	67.970	-19793.512	0.631	5790.1
SEDIMENT SUSPENDED	12	200.8	184.9	68	740					
SEDIMENT, CLAY-SILT (PERCENT)	12	96.4	3.2	88	99					
COLIFORM, FECAL (COL/100 ML)	7	1653.6	3243.5	180	9000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	210.8	273.1	27	900					
SILICA, DISSOLVED	12	4.73	1.80	1.2	7.1	12	-0.0159	11.0866	-0.583	1.53
CALCIUM, DISSOLVED	12	39.33	3.65	34.0	45.0	12	0.0492	19.6361	0.690	1.75
MAGNESIUM, DISSOLVED	12	11.68	1.65	8.8	14.0	12	0.0209	3.3095	0.639	0.94
SODIUM, DISSOLVED	12	18.67	6.05	11.0	29.0	12	0.0805	-13.5667	0.879	3.03
POTASSIUM, DISSOLVED	12	3.19	0.36	2.6	3.8	12	0.0023	2.2715	0.418*	0.35
BICARBONATE, ION	12	124.0	12.1	96	137	12	0.151	63.431	0.623	7.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	62.33	17.30	42.0	93.0	12	0.2313	-30.2856	0.863	6.51
CHLORIDE, DISSOLVED	12	15.83	3.13	11.0	21.0	12	0.0273	4.9080	0.576*	2.68
DISSOLVED SOLIDS, SUM OF CONST	12	217.2	33.3	169	270	12	0.470	28.732	0.932	12.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	237.7	25.4	200	281	12	0.283	124.240	0.737	16.0
HARDNESS, TOTAL	12	145.8	15.6	120	170	12	0.216	59.407	0.911	6.8
HARDNESS, NONCARBONATE	12	44.7	7.5	34	58	12	0.087	9.629	0.773	5.0
TURBIDITY (JTU)	12	70.0	66.0	7	250	12	-0.343	207.422	-0.343*	65.0
FLUORIDE, DISSOLVED	12	0.22	0.07	0.1	0.3	12	0.0007	-0.0437	0.598	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%
	478	464	442	428	421	399	369	327	325	312

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
336	16.93	11.14	2.69	94	2.06

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	6	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	2
COPPER (CU), UG/L	4	30	80	4	4	10
IRON (FE), UG/L	4	2500	6600	4	0	30
LEAD (PB), UG/L	4	<100	<100	4	0	1
MANGANESE (MN), UG/L	4	170	390	4	0	10
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	110	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.90				
BIOMASS, ASH WT., G/SQ M	1	0.30				
CHLOROPHYLL A, MG/SQ M	1	0.200				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	2	6.100	8.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	17.41	6.50	3.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	292.8	114.4	168	469					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	11	7.65	0.39	6.5	8.3	11	-0.0009	7.9283	-0.277*	0.39
PHOSPHORUS, TOTAL	11	0.532	0.273	0.18	1.10	11	-0.00149	0.96823	-0.624	0.225
NITRITE + NITRATE, TOTAL	11	1.015	1.185	0.08	4.30	11	-0.00324	1.96444	-0.313*	1.186
NITROGEN, KJELDAHL, TOTAL	10	1.563	0.876	0.48	3.40	10	-0.00384	2.72439	-0.507*	0.801
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	10797.3	16301.0	610	56000	11	-6.359	12659.383	-0.045*	17165.4
SEDIMENT SUSPENDED	11	404.9	348.2	62	1110					
SEDIMENT, CLAY-SILT (PERCENT)	11	98.5	1.0	97	100					
COLIFORM, FECAL (COL/100 ML)	6	148.2	84.6	50	260					
STREPTOCOCCI, FECAL (COL/100 ML)	11	2050.9	3104.0	60	11000					
SILICA, DISSOLVED	11	12.76	3.55	7.3	19.0	11	0.0296	4.0968	0.955	1.11
CALCIUM, DISSOLVED	11	38.18	16.97	19.0	66.0	11	0.1458	-4.5041	0.983	3.30
MAGNESIUM, DISSOLVED	11	9.91	4.31	5.4	17.0	11	0.0371	-0.9620	0.985	0.79
SODIUM, DISSOLVED	11	7.31	2.56	4.4	11.0	11	0.0211	1.1268	0.943	0.90
POTASSIUM, DISSOLVED	11	3.23	0.66	2.5	5.0	11	-0.0029	4.0687	-0.498*	0.60
BICARBONATE, ION	11	152.7	75.3	76	285	11	0.645	-36.234	0.980	15.9
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	17.23	4.68	8.5	25.0	11	0.0359	6.7138	0.878	2.36
CHLORIDE, DISSOLVED	11	5.44	1.91	2.5	8.6	11	0.0133	1.5323	0.798	1.21
DISSOLVED SOLIDS, SUM OF CONST	11	169.7	69.1	93	286	11	0.597	-5.030	0.987	11.5
DISSOLVED SOLIDS, ROE 180 DEG C	11	184.1	68.6	106	298	11	0.595	9.956	0.992	9.2
HARDNESS, TOTAL	11	134.7	58.4	70	230	11	0.502	-12.350	0.984	11.0
HARDNESS, NONCARBONATE	11	10.8	6.3	1	24	11	-0.012	14.456	-0.225*	6.5
TURBIDITY (JTU)	11	205.0	172.1	25	580	11	-0.824	446.365	-0.548*	151.8
FLUORIDE, DISSOLVED	11	0.15	0.05	0.1	0.2	11	0.0000	0.1456	0.067*	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%
	529	519	506	450	436	379	273	159	125	91

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	18.40	9.95	2.87	88	2.64

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07047800 -- ST. FRANCIS RIVER AT PARKIN, ARK.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	7	8	3	0	3
CADMIUM (CD), UG/L	3	2	<10	3	2	3
CHROMIUM (CR), UG/L	3	10	20	3	0	0
COBALT (CO), UG/L	3	4	<50	3	0	0
COPPER (CU), UG/L	3	20	27	3	9	20
IRON (FE), UG/L	3	9800	12000	3	40	90
LEAD (PB), UG/L	3	15	<100	3	0	3
MANGANESE (MN), UG/L	3	160	430	3	10	20
MERCURY (HG), UG/L	3	0.0	0.4	3	0.0	0.4
SELENIUM (SE), UG/L	3	1	1	3	0	1
ZINC (ZN), UG/L	3	60	150	3	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.30	17.10			
BIOMASS, ASH WT., G/SQ M	2	0.20	11.60			
CHLOROPHYLL A, MG/SQ M	2	0.300	1.500			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.200			
ORGANIC CARBON, MG/L	2	9.500	14.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.67	7.71	2.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	238.8	72.2	160	372					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	11	7.76	0.31	7.2	8.3	11	0.0020	7.2629	0.461*	0.29
PHOSPHORUS, TOTAL	12	0.304	0.185	0.14	0.68	12	-0.00132	0.61942	-0.514*	0.167
NITRITE + NITRATE, TOTAL	12	0.332	0.295	0.01	1.00	12	-0.00174	0.74788	-0.426*	0.280
NITROGEN, KJELDAHL, TOTAL	11	1.191	0.742	0.09	3.00	11	-0.00572	2.55426	-0.583*	0.635
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10338.3	17188.5	410	62000	12	148.334	-25088.887	0.623	14105.3
SEDIMENT SUSPENDED	12	200.0	182.1	64	580					
SEDIMENT, CLAY-SILT (PERCENT)	12	97.8	1.0	97	100					
COLIFORM, FECAL (COL/100 ML)	9	612.7	1506.3	<11	4600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1694.8	2724.5	10	8200					
SILICA, DISSOLVED	12	10.05	2.72	6.2	15.0	12	0.0318	2.4550	0.843	1.53
CALCIUM, DISSOLVED	12	27.83	10.95	17.0	48.0	12	0.1454	-6.8838	0.958	3.31
MAGNESIUM, DISSOLVED	12	8.29	2.73	5.2	13.0	12	0.0361	-0.3228	0.952	0.87
SODIUM, DISSOLVED	12	5.73	1.89	3.5	9.3	12	0.0242	-0.0356	0.925	0.75
POTASSIUM, DISSOLVED	12	2.67	0.60	1.9	4.0	12	-0.0017	3.0823	-0.210*	0.61
BICARBONATE, ION	12	118.7	47.5	69	198	12	0.633	-32.406	0.961	13.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	11.42	2.66	6.3	16.0	12	0.0272	4.9339	0.737	1.89
CHLORIDE, DISSOLVED	12	5.79	2.54	3.3	13.0	12	0.0271	-0.6778	0.770	1.70
DISSOLVED SOLIDS, SUM OF CONST	12	130.3	44.6	82	210	12	0.601	-13.306	0.974	10.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	138.8	45.5	95	215	12	0.605	-5.640	0.959	13.6
HARDNESS, TOTAL	12	103.8	39.0	64	170	12	0.517	-19.569	0.957	11.9
HARDNESS, NONCARBONATE	12	6.3	3.8	0	13	12	-0.006	7.707	-0.110*	3.9
TURBIDITY (JTU)	12	120.4	109.9	20	330	12	-0.877	329.950	-0.576	94.2
FLUORIDE, DISSOLVED	12	0.13	0.05	0.1	0.2	12	0.0000	0.1222	0.068*	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%
	469	448	404	375	344	271	217	150	130	104

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	17.46	9.90	2.83	87	2.68

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07047900 -- ST. FRANCIS BAY AT RIVERFRONT, ARK.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	2	2	3	0	2
CADMIUM (CD), UG/L	3	1	10	3	1	3
CHROMIUM (CR), UG/L	3	0	20	3	0	0
COBALT (CO), UG/L	3	2	<50	3	0	0
COPPER (CU), UG/L	3	10	20	3	4	8
IRON (FE), UG/L	3	3200	6700	3	30	180
LEAD (PB), UG/L	3	10	<100	3	0	2
MANGANESE (MN), UG/L	3	100	340	3	10	30
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.2
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	40	90	3	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, MC/L	2	5.600	8.100			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	17.65	7.00	4.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	257.3	42.3	182	318					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	10	7.69	0.33	7.2	8.1	10	-0.0025	8.3213	-0.310*	0.34
PHOSPHORUS, TOTAL	10	0.090	0.040	0.05	0.17	10	-0.00069	0.26706	-0.733	0.029
NITRITE + NITRATE, TOTAL	10	0.194	0.073	0.02	0.27	10	-0.00122	0.50780	-0.710	0.054
NITROGEN, KJELDAHL, TOTAL	10	0.473	0.228	0.21	0.95	10	-0.00363	1.40662	-0.674	0.179
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	5106.0	5973.6	330	18000	10	88.214	-17591.469	0.625*	4945.1
SEDIMENT SUSPENDED	10	73.9	33.9	40	144					
SEDIMENT, CLAY-SILT (PERCENT)	10	96.5	2.3	93	100					
COLIFORM, FECAL (COL/100 ML)	10	63.3	99.9	10	340					
STREPTOCOCCI, FECAL (COL/100 ML)	10	78.8	97.0	13	280					
SILICA, DISSOLVED	10	5.77	0.66	4.7	6.8	10	0.0038	4.8050	0.242*	0.68
CALCIUM, DISSOLVED	10	30.60	5.46	20.0	39.0	10	0.1161	0.7355	0.900	2.53
MAGNESIUM, DISSOLVED	10	11.87	2.26	8.0	15.0	10	0.0477	-0.4013	0.892	1.09
SODIUM, DISSOLVED	10	4.01	2.27	2.3	10.0	10	0.0167	-0.2949	0.312*	2.28
POTASSIUM, DISSOLVED	10	1.52	0.28	1.3	2.1	10	-0.0015	1.9006	-0.225*	0.29
BICARBONATE, ION	10	149.3	28.0	101	190	10	0.640	-15.481	0.970	7.3
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	6.89	1.76	4.7	10.0	10	-0.0119	9.9507	-0.286*	1.79
CHLORIDE, DISSOLVED	10	5.40	3.19	3.4	14.0	10	0.0300	-2.3317	0.399*	3.11
DISSOLVED SOLIDS, SUM OF CONST	10	139.9	22.3	100	174	10	0.519	6.413	0.984	4.2
DISSOLVED SOLIDS, ROE 180 DEG C	10	139.6	21.3	100	177	10	0.464	20.263	0.920	8.9
HARDNESS, TOTAL	10	125.3	22.1	83	160	10	0.493	-1.500	0.945	7.7
HARDNESS, NONCARBONATE	10	3.5	3.4	0	9	10	-0.019	8.341	-0.232*	3.5
TURBIDITY (JTU)	10	33.6	22.5	15	75	10	-0.353	124.552	-0.664	17.9
FLUORIDE, DISSOLVED	10	0.11	0.03	0.1	0.2	10	-0.0001	0.1424	-0.168*	0.03

*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%
	324	308	299	284	268	235	207	172	158	138

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
359	16.13	8.66	2.77	91	1.88

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	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	10	20	4	3	5
IRON (FE), UG/L	4	640	2000	4	10	30
LEAD (PB), UG/L	4	<100	<100	4	0	0
MANGANESE (MN), UG/L	4	80	180	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	3	2	140	4	0	2
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	6.50	28.00			
BIOMASS, ASH WT., G/SQ M	2	6.10	23.00			
CHLOROPHYLL A, MG/SQ M	2	6.500	48.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	6.100			
ORGANIC CARBON, MG/L	3	2.500	3.900			

Table 12. 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: 10/01/75 - 09/30/76

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)	33	18.59	7.84	0.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	33	3439.4	1493.9	475	5500					
STREAMFLOW (CUBIC FT/SEC)	10	47.7	80.0	4	270	9	-0.053	267.002	-0.835	49.7
PH (STANDARD UNITS)	8	8.24	0.31	7.9	8.8	8	0.0002	7.5849	0.744	0.22
PHOSPHORUS, TOTAL	8	0.447	0.998	0.00	2.90	8	-0.00061	2.87939	-0.852	0.563
NITRITE + NITRATE, TOTAL	8	2.200	1.062	1.00	4.60	8	-0.00003	2.30598	-0.035*	1.147
NITROGEN, KJELDAHL, TOTAL	8	2.739	4.584	0.56	14.00	8	-0.00277	13.84198	-0.847	2.631
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	5244.4	6209.9	1300	21000	9	-1.997	13362.941	-0.425*	6008.5
SEDIMENT SUSPENDED	6	2364.7	3940.5	66	10300					
SEDIMENT, CLAY-SILT (PERCENT)	2	79.5	14.8	69	90					
COLIFORM, FECAL (COL/100 ML)	9	1829.6	4268.9	<1	13000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	1496.1	2513.1	12	7300					
SILICA, DISSOLVED	8	13.04	1.92	9.3	15.0	8	0.0010	9.0697	0.715	1.45
CALCIUM, DISSOLVED	8	343.75	110.45	140.0	440.0	8	0.0795	29.9939	0.981	23.33
MAGNESIUM, DISSOLVED	8	148.63	51.14	39.0	190.0	8	0.0360	6.4644	0.960	15.53
SODIUM, DISSOLVED	8	498.75	193.05	110.0	650.0	8	0.1391	-50.5920	0.982	39.04
POTASSIUM, DISSOLVED	8	11.86	2.26	7.9	16.0	8	0.0012	7.1939	0.714	1.71
BICARBONATE, ION	8	253.3	55.4	161	329	8	0.033	123.416	0.809	35.2
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	8	2056.25	727.73	550.0	2600.0	8	0.5199	3.3049	0.974	178.58
CHLORIDE, DISSOLVED	8	157.75	61.46	32.0	220.0	8	0.0416	-6.5685	0.923	25.56
DISSOLVED SOLIDS, SUM OF CONST	8	3354.8	1163.5	968	4230	8	0.835	58.458	0.978	261.9
DISSOLVED SOLIDS, ROE 180 DEG C	8	3611.3	1270.8	1020	4610	8	0.916	-5.607	0.982	255.7
HARDNESS, TOTAL	8	1463.8	481.0	510	1800	8	0.343	109.912	0.972	122.9
HARDNESS, NONCARBONATE	8	1261.3	451.4	380	1600	8	0.323	-15.494	0.976	105.4
TURBIDITY (JTU)	8	705.8	1739.4	3	5000	8	-1.066	4916.043	-0.836	1032.1
FLUORIDE, DISSOLVED	8	0.70	0.11	0.6	0.9	8	-0.0000	0.8427	-0.461*	0.10

*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%
	5430	5100	5020	4900	4790	4500	3940	2010	1360	900

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
206	14.30	9.38	2.82	87	2.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	150	4	0	1
CADMIUM (CD), UG/L	3	1	20	4	0	0
CHROMIUM (CR), UG/L	3	20	250	4	0	20
COBALT (CO), UG/L	3	14	260	4	0	1
COPPER (CU), UG/L	3	10	340	4	0	1
IRON (FE), UG/L	3	320	240000	4	0	30
LEAD (PB), UG/L	3	40	400	4	0	2
MANGANESE (MN), UG/L	3	90	6800	4	0	60
MERCURY (HG), UG/L	3	0.0	2.3	4	0.0	2.3
SELENIUM (SE), UG/L	3	19	28	4	10	22
ZINC (ZN), UG/L	3	110	1400	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.80	6.69			
BIOMASS, ASH WT., G/SQ M	2	4.10	6.38			
CHLOROPHYLL A, MG/SQ M	2	2.700	3.300			
CHLOROPHYLL B, MG/SQ M	2	0.100	0.200			
ORGANIC CARBON, MG/L	3	5.100	55.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	16.03	8.04	1.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	1100.3	340.4	260	1670					
STREAMFLOW (CUBIC FT/SEC)	15	11.4	11.1	0	31	15	-0.008	20.427	-0.252*	11.2
PH (STANDARD UNITS)	6	8.00	0.53	7.4	8.9	6	0.0001	7.8957	0.053*	0.59
PHOSPHORUS, TOTAL	6	0.093	0.146	0.01	0.39	6	-0.00046	0.63384	-0.992	0.021
NITRITE + NITRATE, TOTAL	6	3.333	1.904	1.70	6.90	6	0.00084	2.34518	0.139*	2.108
NITROGEN, KJELDAHL, TOTAL	6	0.728	0.333	0.53	1.40	6	-0.00103	1.94304	-0.980	0.074
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	1845.0	1634.0	230	4300	6	1.721	-189.791	0.334*	1721.7
SEDIMENT SUSPENDED	13	115.4	175.7	14	673					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	5	308.0	462.3	18	1100					
STREPTOCOCCI, FECAL (COL/100 ML)	6	70.5	74.1	25	220					
SILICA, DISSOLVED	6	13.38	4.61	8.3	21.0	6	0.0002	13.1437	0.014*	5.15
CALCIUM, DISSOLVED	6	111.00	27.96	56.0	130.0	6	0.0857	9.6854	0.973	7.20
MAGNESIUM, DISSOLVED	6	36.17	11.41	13.0	42.0	6	0.0356	-5.9217	0.991	1.72
SODIUM, DISSOLVED	6	94.17	33.02	29.0	120.0	6	0.0994	-23.3421	0.956	10.86
POTASSIUM, DISSOLVED	6	7.23	1.88	5.8	11.0	6	-0.0058	14.0497	-0.973	0.49
BICARBONATE, ION	6	254.2	66.3	126	320	6	0.198	19.729	0.950	23.1
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	6	361.67	116.86	130.0	440.0	6	0.3579	-61.5618	0.973	30.30
CHLORIDE, DISSOLVED	6	35.00	11.17	13.0	43.0	6	0.0342	-5.3945	0.971	2.98
DISSOLVED SOLIDS, SUM OF CONST	6	784.3	225.7	328	914	6	0.704	-48.215	0.991	34.1
DISSOLVED SOLIDS, ROE 180 DEG C	6	825.2	226.8	367	958	6	0.706	-9.463	0.988	38.7
HARDNESS, TOTAL	6	421.7	115.1	190	500	6	0.358	-1.094	0.986	21.3
HARDNESS, NONCARBONATE	6	220.0	65.1	90	270	6	0.202	-18.780	0.985	12.6
TURBIDITY (JTU)	5	15.2	13.9	7	40					
FLUORIDE, DISSOLVED	6	0.80	0.15	0.5	0.9	6	0.0005	0.2620	0.933	0.06

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 217

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	1440	1380	1350	1330	1300	1270	1210	1110	741

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
249	14.64	10.45	2.87	85	3.21

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07139500 — ARKANSAS R AT DODGE CITY, KS

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	4	3	0	1
CADMIUM (CD), UG/L	3	<10	<10	3	0	6
CHROMIUM (CR), UG/L	3	0	0	3	0	0
COBALT (CO), UG/L	3	<50	50	3	0	2
COPPER (CU), UG/L	3	10	20	3	2	10
IRON (FE), UG/L	3	230	3000	3	0	60
LEAD (PB), UG/L	3	<100	<100	3	1	9
MANGANESE (MN), UG/L	3	20	70	3	0	50
MERCURY (HG), UG/L	3	0.0	0.0	3	0.0	0.1
SELENIUM (SE), UG/L	3	11	18	3	6	12
ZINC (ZN), UG/L	3	20	30	3	2	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	35.00				
BIOMASS, ASH WT., G/SQ M	1	28.30				
CHLOROPHYLL A, MG/SQ M	1	30.600				
CHLOROPHYLL B, MG/SQ M	1	6.900				
ORGANIC CARBON, MG/L	3	3.900	9.700			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	13.50	8.58	0.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	1861.3	572.3	730	2630					
STREAMFLOW (CUBIC FT/SEC)	14	1162.6	1192.3	396	4870	14	-1.718	4452.520	-0.853	648.4
PH (STANDARD UNITS)	13	8.12	0.52	7.5	9.0	13	0.0004	7.4658	0.408*	0.50
PHOSPHORUS, TOTAL	13	1.050	0.522	0.53	2.60	13	0.00001	1.02928	0.013*	0.545
NITRITE + NITRATE, TOTAL	11	1.204	1.271	0.00	4.10	11	-0.00009	1.36426	-0.043*	1.339
NITROGEN, KJELDAHL, TOTAL	11	2.500	1.119	1.60	4.50	11	-0.00017	2.81341	-0.094*	1.174
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	119477.1	143446.2	49	389999	11	59.953	7201.000	0.264*	145845.8
SEDIMENT SUSPENDED	6	186.2	183.6	39	458					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	2525.5	3302.6	17	11000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1518.6	2261.3	5	7400					
SILICA, DISSOLVED	11	7.75	4.19	0.7	16.0	11	-0.0022	11.7734	-0.324*	4.18
CALCIUM, DISSOLVED	11	86.45	35.41	43.0	170.0	11	0.0399	11.7013	0.712	26.22
MAGNESIUM, DISSOLVED	11	19.40	6.05	9.4	28.0	11	0.0089	2.7968	0.925	2.43
SODIUM, DISSOLVED	11	260.27	97.26	93.0	360.0	11	0.1482	-17.2017	0.962	28.09
POTASSIUM, DISSOLVED	11	6.79	0.73	5.6	7.8	11	-0.0006	7.8708	-0.496*	0.67
BICARBONATE, ION	11	219.4	57.2	141	328	11	0.074	81.189	0.815	34.9
CARBONATE, ION	10	0.6	1.9	0	6	10	0.001	-1.707	0.431*	1.8
SULFATE, DISSOLVED	11	119.00	37.32	55.0	170.0	11	0.0536	18.6202	0.907	16.60
CHLORIDE, DISSOLVED	13	385.38	150.53	130.0	590.0	13	0.2409	-51.3794	0.955	46.49
DISSOLVED SOLIDS, SUM OF CONST	11	1008.2	356.2	416	1500	11	0.526	22.214	0.933	135.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	1031.7	362.8	411	1490	11	0.542	15.983	0.944	126.4
HARDNESS, TOTAL	13	291.5	102.3	150	540	13	0.129	57.512	0.753	70.3
HARDNESS, NONCARBONATE	11	114.5	65.4	30	270	11	0.073	-21.944	0.703	49.0
TURBIDITY (JTU)	13	86.8	97.0	8	350	13	-0.029	140.683	-0.176*	99.7
FLUORIDE, DISSOLVED	11	0.44	0.09	0.3	0.6	11	0.0001	0.2062	0.839	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%
	3140	2480	2400	2340	2270	2140	1840	1120	816	442

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	14.83	11.04	2.86	85	3.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	2	12	5	1	6
CADMIUM (CD), UG/L	5	<10	10	4	1	3
CHROMIUM (CR), UG/L	5	10	30	5	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	4
COPPER (CU), UG/L	5	10	20	4	0	6
IRON (FE), UG/L	6	350	41000	5	0	110
LEAD (PB), UG/L	5	30	100	4	0	15
MANGANESE (MN), UG/L	6	80	1900	5	0	30
MERCURY (HG), UG/L	3	0.0	0.2	5	0.0	0.2
SELENIUM (SE), UG/L	5	0	1	5	0	2
ZINC (ZN), UG/L	5	30	140	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	22.00				
BIOMASS, ASH WT., G/SQ M	1	20.00				
CHLOROPHYLL A, MG/SQ M	1	78.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L.	3	4.400	21.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	12.17	7.24	1.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	37	10925.7	12212.4	2530	65400					
STREAMFLOW (CUBIC FT/SEC)	39	125.6	272.0	0	1680	37	-0.004	173.492	-0.168*	278.1
PH (STANDARD UNITS)	38	8.09	0.35	7.5	8.9	37	0.0000	8.0219	0.201*	0.34
PHOSPHORUS, TOTAL	9	0.184	0.209	0.01	0.60	8	-0.00003	0.43097	-0.676*	0.174
NITRITE + NITRATE, TOTAL	9	0.306	0.417	0.00	1.10	8	-0.00004	0.65049	-0.460*	0.418
NITROGEN, KJELDAHL, TOTAL	9	1.369	1.349	0.22	3.70	8	-0.00015	2.68848	-0.549*	1.252
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	4518.6	4210.6	630	13000					
SEDIMENT SUSPENDED	3	371.7	235.9	115	579					
SEDIMENT, CLAY-SILT (PERCENT)	3	47.7	39.5	21	93					
COLIFORM, FECAL (COL/100 ML)	4	1488.0	2742.3	22	5600					
STREPTOCOCCI, FECAL (COL/100 ML)	3	8956.7	7474.0	370	14000					
SILICA, DISSOLVED	9	15.78	3.11	10.0	20.0	8	0.0002	14.2771	0.337*	3.31
CALCIUM, DISSOLVED	38	158.08	72.52	59.0	390.0	37	0.0043	109.1646	0.723	50.60
MAGNESIUM, DISSOLVED	38	53.29	19.13	15.0	110.0	37	0.0013	38.4044	0.839	10.46
SODIUM, DISSOLVED	38	2359.74	3252.47	440.0	8000.0	37	0.2673	-607.9099	0.994	363.53
POTASSIUM, DISSOLVED	38	9.32	2.79	4.8	18.0	37	0.0002	7.3150	0.771	1.78
BICARBONATE, ION	38	200.9	41.8	113	280	37	-0.002	219.657	-0.488	37.5
CARBONATE, ION	38	0.0	0.0	0	0	37	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	38	400.26	227.67	130.0	1100.0	37	0.0111	272.9956	0.595	185.51
CHLORIDE, DISSOLVED	38	3702.37	5053.98	680.0	8000.0	37	0.4156	-908.5645	0.994	554.53
DISSOLVED SOLIDS, SUM OF CONST	9	5297.8	3611.4	2000	11500	8	0.590	-101.441	0.997	263.1
DISSOLVED SOLIDS, ROE 180 DEG C	38	6686.1	7463.9	1410	39100	37	0.615	-158.426	0.998	467.4
HARDNESS, TOTAL	38	613.9	248.9	210	1300	37	0.016	434.038	0.777	157.8
HARDNESS, NONCARBONATE	38	449.5	265.4	110	1200	37	0.017	253.169	0.796	162.0
TURBIDITY (JTU)	9	116.2	167.2	1	450	8	-0.022	301.811	-0.631*	144.9
FLUORIDE, DISSOLVED	9	0.66	0.19	0.3	0.9	8	-0.0000	0.7206	-0.152*	0.20

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 283

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C. THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	52400	25300	20500	12300	9140	6740	5510	4100	3600	3070

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	31.91	35.75	2.33	53	23.85

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	2	21	5	1	4
CADMIUM (CD), UG/L	4	<10	40	5	0	2
CHROMIUM (CR), UG/L	5	10	30	5	0	0
COBALT (CO), UG/L	4	<50	330	5	0	2
COPPER (CU), UG/L	5	10	40	5	1	5
IRON (FE), UG/L	9	110	30000	5	20	160
LEAD (PB), UG/L	5	<100	200	5	0	22
MANGANESE (MN), UG/L	10	75	760	5	0	610
MERCURY (HG), UG/L	4	0.0	0.1	5	0.0	0.0
SELENIUM (SE), UG/L	5	1	3	5	0	3
ZINC (ZN), UG/L	4	20	140	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	4	4.500	21.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	15	14.57	9.56	1.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	48	8907.6	6646.0	763	48000					
STREAMFLOW (CUBIC FT/SEC)	48	521.2	689.0	35	3430	48	-0.012	629.116	-0.117*	691.6
PH (STANDARD UNITS)	47	8.13	0.48	7.3	9.2	47	0.0000	8.0583	0.118*	0.48
PHOSPHORUS, TOTAL	40	0.657	0.740	0.21	4.60	40	0.00000	0.65277	0.004*	0.749
NITRITE + NITRATE, TOTAL	10	0.376	0.528	0.01	1.20	10	0.00000	0.33835	0.078*	0.559
NITROGEN, KJELDAHL, TOTAL	10	1.573	1.224	0.48	4.60	10	0.00002	1.37349	0.179*	1.277
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	72580.0	89085.9	1800	260000	10	1.320	56863.297	0.194*	92693.9
SEDIMENT SUSPENDED	6	493.8	936.4	28	2400					
SEDIMENT, CLAY-SILT (PERCENT)	6	74.3	19.9	36	94					
COLIFORM, FECAL (COL/100 ML)	4	2300.0	2620.4	600	6200					
STREPTOCOCCI, FECAL (COL/100 ML)	7	903.3	1226.5	52	3500					
SILICA, DISSOLVED	11	6.13	3.48	0.1	11.0	11	0.0000	5.7878	0.103*	3.65
CALCIUM, DISSOLVED	47	148.49	35.01	44.0	200.0	47	0.0009	140.1151	0.160*	34.82
MAGNESIUM, DISSOLVED	47	53.83	14.73	11.0	75.0	47	0.0004	50.2834	0.181*	14.64
SODIUM, DISSOLVED	47	1545.08	691.63	89.0	3600.0	47	0.0330	1250.0940	0.321	662.29
POTASSIUM, DISSOLVED	47	6.00	1.59	4.5	12.0	47	0.0000	7.7344	0.125*	1.59
BICARBONATE, ION	47	251.4	60.6	104	339	47	-0.000	252.738	-0.017*	61.2
CARBONATE, ION	46	1.1	3.3	0	15	46	-0.000	1.220	-0.020*	3.3
SULFATE, DISSOLVED	47	356.60	114.21	18.0	560.0	47	0.0027	332.0488	0.162*	113.95
CHLORIDE, DISSOLVED	46	2434.78	1145.54	130.0	6000.0	46	0.0557	1938.9622	0.330	1093.55
DISSOLVED SOLIDS, SUM OF CONST	11	4876.4	1689.5	2410	8020	11	-0.039	5339.859	-0.290*	1704.3
DISSOLVED SOLIDS, ROE 180 DEG C	47	4782.7	1996.2	417	10600	47	0.093	3949.007	0.314	1916.0
HARDNESS, TOTAL	47	592.3	142.9	160	810	47	0.004	556.026	0.191*	141.8
HARDNESS, NONCARBONATE	47	384.3	127.9	32	650	47	0.004	347.818	0.215*	126.3
TURBIDITY (JTU)	11	155.5	354.6	5	1200	11	0.003	125.557	0.089*	372.2
FLUORIDE, DISSOLVED	11	0.49	0.07	0.4	0.6	11	0.0000	0.4890	0.029*	0.07

*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%
	14800	12200	11000	10100	9370	8520	6900	4220	3140	1950

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.21	10.13	2.83	61	5.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	3	32	4	2	9
CADMIUM (CD), UG/L	4	<10	20	4	0	3
CHROMIUM (CR), UG/L	4	0	60	4	0	10
COBALT (CO), UG/L	4	<50	100	4	0	0
COPPER (CU), UG/L	4	10	70	4	3	8
IRON (FE), UG/L	9	100	46000	4	10	60
LEAD (PB), UG/L	4	<100	200	4	2	4
MANGANESE (MN), UG/L	9	45	2300	4	10	130
MERCURY (HG), UG/L	3	0.0	1.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	1	1	4	1	1
ZINC (ZN), UG/L	4	20	200	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	4.800	31.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	46	15.83	7.46	1.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	49	2186.9	724.8	1110	3790					
STREAMFLOW (CUBIC FT/SEC)	3	8806.7	3462.0	6650	12800					
PH (STANDARD UNITS)	46	8.02	0.35	6.5	8.8	46	0.0000	7.9880	0.035*	0.36
PHOSPHORUS, TOTAL	45	0.108	0.114	0.02	0.81	45	-0.00004	0.19734	-0.256*	0.112
NITRITE + NITRATE, TOTAL	11	0.433	0.159	0.14	0.68	11	-0.00010	0.62003	-0.401*	0.153
NITROGEN, KJELDAHL, TOTAL	11	0.555	0.275	0.00	1.10	11	0.00013	0.29765	0.318*	0.275
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	2542.2	2032.8	800	6000	9	0.370	1732.966	0.147*	2149.5
SEDIMENT SUSPENDED	8	113.0	186.9	7	551					
SEDIMENT, CLAY-SILT (PERCENT)	8	46.4	35.0	3	89					
COLIFORM, FECAL (COL/100 ML)	6	81.5	108.6	4	264					
STREPTOCOCCI, FECAL (COL/100 ML)	7	63.4	34.8	26	116					
SILICA, DISSOLVED	11	3.76	1.35	1.2	5.4	11	-0.0009	5.5641	-0.485*	1.24
CALCIUM, DISSOLVED	47	78.89	14.96	49.0	100.0	47	0.0170	41.7473	0.825	8.54
MAGNESIUM, DISSOLVED	47	22.68	5.98	12.0	31.0	47	0.0075	6.3853	0.906	2.56
SODIUM, DISSOLVED	47	341.91	138.43	150.0	660.0	47	0.1844	-60.4285	0.966	36.05
POTASSIUM, DISSOLVED	47	6.39	1.62	5.5	17.0	47	0.0003	5.7446	0.133*	1.62
BICARBONATE, ION	47	199.7	34.8	134	254	47	0.028	138.430	0.585	28.6
CARBONATE, ION	43	0.8	2.7	0	12	42	0.001	-0.343	0.151*	2.7
SULFATE, DISSOLVED	47	124.00	32.36	64.0	190.0	47	0.0416	33.3176	0.932	11.89
CHLORIDE, DISSOLVED	47	537.87	223.42	220.0	1100.0	47	0.2958	-107.5608	0.960	62.92
DISSOLVED SOLIDS, SUM OF CONST	11	1215.7	489.4	678	2180	11	0.640	-57.888	0.945	168.8
DISSOLVED SOLIDS, ROE 180 DEG C	48	1249.4	427.1	612	2190	48	0.569	-2.272	0.969	106.1
HARDNESS, TOTAL	47	290.6	61.0	170	370	47	0.073	130.516	0.872	30.2
HARDNESS, NONCARBONATE	48	131.6	55.5	33	400	47	0.050	17.186	0.917	15.9
TURBIDITY (JTU)	12	7.8	3.0	3	13	12	-0.001	9.198	-0.173*	3.1
FLUORIDE, DISSOLVED	11	0.39	0.07	0.3	0.5	11	0.0001	0.2750	0.600*	0.06

*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%
	3860	3320	3170	2970	2810	2350	1590	1240	1180	1150

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.69	11.09	2.65	65	5.79

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	2	4	4	2	4
CADMIUM (CD), UG/L	7	0	20	4	0	2
CHROMIUM (CR), UG/L	7	0	30	4	0	2
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	<10	30	4	1	12
IRON (FE), UG/L	13	<100	740	4	0	110
LEAD (PB), UG/L	7	0	100	4	0	14
MANGANESE (MN), UG/L	10	2	130	4	10	90
MERCURY (HG), UG/L	6	0.0	0.2	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	7	10	40	4	0	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	7	0.600	6.500			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	16.68	7.52	3.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	46	451.0	137.2	220	690					
STREAMFLOW (CUBIC FT/SEC)	1	78.0	0.0	78						
PH (STANDARD UNITS)	44	8.00	0.41	6.6	8.9	44	0.0011	7.5103	0.355	0.39
PHOSPHORUS, TOTAL	36	0.289	0.202	0.08	0.71	36	0.00090	-0.10896	0.634	0.158
NITRITE + NITRATE, TOTAL	8	1.429	0.900	0.15	2.60	8	0.00481	-0.87537	0.813	0.565
NITROGEN, KJELDAHL, TOTAL	7	0.933	0.578	0.00	1.80	7	0.00202	-0.05168	0.567*	0.522
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	7155.0	7332.5	730	21000	6	25.005	-3196.969	0.630*	6363.8
SEDIMENT SUSPENDED	5	267.0	352.8	28	875					
SEDIMENT, CLAY-SILT (PERCENT)	5	77.0	16.1	54	95					
COLIFORM, FECAL (COL/100 ML)	6	557.5	828.1	65	2220					
STREPTOCOCCI, FECAL (COL/100 ML)	7	648.7	786.3	2	2050					
SILICA, DISSOLVED	9	3.98	2.26	0.3	6.8	9	-0.0081	7.6271	-0.598*	1.94
CALCIUM, DISSOLVED	44	46.64	9.96	25.0	61.0	44	0.0613	18.8732	0.862	5.11
MAGNESIUM, DISSOLVED	44	9.11	2.63	4.1	14.0	44	0.0180	0.9634	0.957	0.78
SODIUM, DISSOLVED	44	29.79	14.92	8.4	57.0	44	0.1009	-15.8677	0.946	4.88
POTASSIUM, DISSOLVED	43	3.87	1.42	2.5	12.0	43	0.0045	1.8550	0.439	1.29
BICARBONATE, ION	44	132.0	24.0	69	168	44	0.112	81.431	0.652	18.4
CARBONATE, ION	42	0.2	1.1	0	7	42	0.000	-0.031	0.061*	1.1
SULFATE, DISSOLVED	44	42.00	15.21	18.0	73.0	44	0.0896	1.4632	0.824	8.71
CHLORIDE, DISSOLVED	44	50.30	28.70	11.0	120.0	44	0.1575	-20.9836	0.768	18.59
DISSOLVED SOLIDS, SUM OF CONST	9	249.9	86.1	130	360	9	0.509	20.602	0.985	15.9
DISSOLVED SOLIDS, ROE 180 DEG C	44	268.0	77.6	126	400	44	0.510	37.304	0.919	30.9
HARDNESS, TOTAL	44	154.5	35.2	86	210	44	0.228	51.358	0.907	15.0
HARDNESS, NONCARBONATE	44	45.3	20.9	12	81	44	0.135	-15.719	0.905	9.0
TURBIDITY (JTU)	9	20.3	14.7	3	50	9	-0.058	46.617	-0.660*	11.8
FLUORIDE, DISSOLVED	9	0.30	0.00	0.3	0.3	9	0.0000	0.3000	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%
	688	650	620	590	562	444	403	257	243	228

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	16.34	9.46	2.68	91	2.16

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07178620 -- NEWT GRAHAM LOCK AND DAM NR INOLA, OK

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	3	1	1
CADMIUM (CD), UG/L	4	<10	<10	3	1	1
CHROMIUM (CR), UG/L	4	0	10	3	0	<10
COBALT (CO), UG/L	4	<50	<50	3	0	1
COPPER (CU), UG/L	4	10	30	3	4	7
IRON (FE), UG/L	6	400	3500	3	20	40
LEAD (PB), UG/L	4	<100	<100	3	1	3
MANGANESE (MN), UG/L	6	80	360	3	0	10
MERCURY (HG), UG/L	3	0.1	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	3	0	0
ZINC (ZN), UG/L	4	20	210	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	4	4.000	8.300			

Table 12. 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: 10/01/75 - 09/30/76

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)	17	13.82	7.34	4.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	265.4	39.6	200	406					
STREAMFLOW (CUBIC FT/SEC)	1	1240.0	0.0	1240						
PH (STANDARD UNITS)	11	8.05	0.36	7.5	8.7	11	-0.0013	8.3823	-0.193*	0.37
PHOSPHORUS, TOTAL	11	0.050	0.036	0.01	0.13	11	-0.00006	0.06423	-0.049*	0.038
NITRITE + NITRATE, TOTAL	12	0.382	0.119	0.19	0.55	12	0.00048	0.25440	0.215*	0.122
NITROGEN, KJELDAHL, TOTAL	11	0.559	0.286	0.00	0.95	11	0.00141	0.20260	0.153*	0.297
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	4500.0	2376.7	1700	8600	9	-2.548	5019.410	-0.032*	2664.0
SEDIMENT SUSPENDED	5	18.0	6.0	10	26					
SEDIMENT, CLAY-SILT (PERCENT)	5	78.2	17.9	48	93					
COLIFORM, FECAL (COL/100 ML)	4	59.8	12.5	47	71					
STREPTOCOCCI, FECAL (COL/100 ML)	6	68.5	66.3	5	180					
SILICA, DISSOLVED	12	2.65	1.76	0.1	5.4	12	-0.0121	5.8555	-0.367*	1.71
CALCIUM, DISSOLVED	12	35.00	3.44	29.0	40.0	12	0.0468	22.6024	0.725	2.48
MAGNESIUM, DISSOLVED	12	5.53	0.83	4.3	6.7	12	0.0048	4.2507	0.311*	0.83
SODIUM, DISSOLVED	12	8.70	1.21	7.1	11.0	12	0.0121	5.5010	0.533*	1.07
POTASSIUM, DISSOLVED	12	2.64	0.12	2.5	2.9	12	-0.0009	2.8915	-0.405*	0.12
BICARBONATE, ION	12	107.3	9.6	90	118	12	0.126	73.819	0.703	7.1
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	27.67	4.36	22.0	36.0	12	0.0528	13.6710	0.646	3.49
CHLORIDE, DISSOLVED	12	9.57	1.87	7.5	14.0	12	0.0082	7.4000	0.234*	1.91
DISSOLVED SOLIDS, SUM OF CONST	12	144.8	11.8	130	164	12	0.175	98.373	0.794	7.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	155.4	24.5	117	208	12	0.361	59.744	0.784	16.0
HARDNESS, TOTAL	12	109.3	9.4	96	120	12	0.131	74.621	0.740	6.7
HARDNESS, NONCARBONATE	12	22.2	6.5	6	32	12	0.033	13.334	0.274*	6.5
TURBIDITY (JTU)	11	8.5	4.1	2	15	11	-0.052	22.667	-0.655	3.3
FLUORIDE, DISSOLVED	12	0.19	0.05	0.1	0.3	12	0.0003	0.1110	0.315*	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 318

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%
	368	314	306	288	280	266	253	237	236	234

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
343	17.55	8.89	2.61	89	2.20

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	4	4	0	4
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	100	4	0	2
COPPER (CU), UG/L	4	10	20	4	1	10
IRON (FE), UG/L	9	100	1500	4	0	70
LEAD (PB), UG/L	4	<100	<100	4	2	2
MANGANESE (MN), UG/L	9	30	130	4	0	40
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	1
ZINC (ZN), UG/L	4	20	100	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	3	3.000	7.200			

Table 12. 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 SC MI (0 SC KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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 COEFFICIENT, A	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	13.05	6.49	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	6903.0	3333.5	1150	12000					
STREAMFLOW (CUBIC FT/SEC)	10	25.6	41.1	3	112	10	-0.011	102.161	-0.900	19.0
PH (STANDARD UNITS)	10	8.22	0.23	7.9	8.6	10	-0.0000	8.2506	-0.022*	0.24
PHOSPHORUS, TOTAL	10	1.157	3.461	0.00	11.00	10	-0.00064	5.60559	-0.621*	2.678
NITRITE + NITRATE, TOTAL	10	0.301	0.364	0.00	1.00	10	-0.00009	0.93136	-0.637	0.211
NITROGEN, KJELDAHL, TOTAL	10	0.947	1.761	0.21	5.90	10	-0.00036	3.34917	-0.672	1.382
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	1220.0	921.9	0	2600	9	0.061	659.499	0.306*	937.5
SEDIMENT SUSPENDED	10	3434.5	7184.7	12	17800					
SEDIMENT, CLAY-SILT (PERCENT)	10	68.6	25.4	29	98					
COLIFORM, FECAL (COL/100 ML)	10	2406.9	5143.2	0	14000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	940.8	2294.6	3	7400					
SILICA, DISSOLVED	10	7.48	1.73	4.8	9.8	10	0.0000	7.3996	0.022*	1.84
CALCIUM, DISSOLVED	10	103.50	50.43	12.0	160.0	10	0.0136	9.3071	0.902	23.10
MAGNESIUM, DISSOLVED	10	64.24	32.09	4.5	93.0	10	0.0091	1.5018	0.944	11.23
SODIUM, DISSOLVED	10	1416.00	641.65	220.0	2000.0	10	0.1795	177.1340	0.932	246.05
POTASSIUM, DISSOLVED	10	9.35	4.30	2.8	18.0	10	0.0009	2.6802	0.726	3.14
BICARBONATE, ION	10	270.2	50.6	178	350	10	0.012	184.895	0.815	31.1
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	386.60	156.66	76.0	570.0	10	0.0430	89.5452	0.916	66.79
CHLORIDE, DISSOLVED	10	2135.00	1039.74	210.0	3100.0	10	0.2955	95.5007	0.947	353.49
DISSOLVED SOLIDS, SUM OF CONST	10	4257.5	1939.2	655	6010	10	0.547	478.576	0.941	695.9
DISSOLVED SOLIDS, ROE 180 DEG C	10	4300.8	1992.5	632	6290	10	0.555	468.364	0.929	783.0
HARDNESS, TOTAL	10	523.1	255.5	50	760	10	0.072	28.878	0.934	96.7
HARDNESS, NONCARBONATE	10	323.0	175.7	0	480	10	0.050	-19.694	0.942	62.3
TURBIDITY (JTU)	10	1230.4	3784.5	4	12000	10	-0.689	5986.484	-0.607*	3190.4
FLUORIDE, DISSOLVED	10	0.56	0.07	0.5	0.7	10	0.0000	0.5469	0.091*	0.07

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	1	19	5	1	5
CADMIUM (CD), UG/L	5	0	20	5	0	2
CHROMIUM (CR), UG/L	5	0	200	5	0	0
COBALT (CO), UG/L	5	0	400	5	0	1
COPPER (CU), UG/L	5	0	190	5	0	10
IRON (FE), UG/L	5	130	130000	10	0	160
LEAD (PB), UG/L	5	10	400	5	0	10
MANGANESE (MN), UG/L	5	60	6400	5	0	140
MERCURY (HG), UG/L	5	0.0	0.7	5	0.0	0.6
SELENIUM (SE), UG/L	5	0	2	5	0	2
ZINC (ZN), UG/L	4	5	20	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	29.10			
BIOMASS, ASH WT., G/SQ M	4	0.00	26.70			
CHLOROPHYLL A, MG/SQ M	4	0.000	0.400			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.000			
ORGANIC CARBON, MG/L	1	2.300				

Table 12. 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: 10/01/75 - 09/30/76

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)	22	16.66	9.32	0.0	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	2202.0	864.6	660	3300					
STREAMFLOW (CUBIC FT/SEC)	22	58.0	94.1	0	357	22	0.030	-8.294	0.277*	92.7
PH (STANDARD UNITS)	22	8.26	0.32	7.5	8.9	22	-0.0000	8.3203	-0.075*	0.33
PHOSPHORUS, TOTAL	22	0.111	0.079	0.01	0.34	22	0.00001	0.09630	0.075*	0.081
NITRITE + NITRATE, TOTAL	12	0.058	0.119	0.00	0.42	12	0.00006	-0.06540	0.461*	0.111
NITROGEN, KJELDAHL, TOTAL	12	0.734	0.471	0.21	2.00	12	0.00014	0.44864	0.268*	0.476
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	22536.4	28555.7	1900	88000	11	-7.145	38294.551	-0.213*	29407.2
SEDIMENT SUSPENDED	12	181.7	463.1	2	1620					
SEDIMENT, CLAY-SILT (PERCENT)	12	43.1	30.3	4	88					
COLIFORM, FECAL (COL/100 ML)	12	1018.7	2648.5	21	9400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	9886.9	31534.9	63	110000					
SILICA, DISSOLVED	12	26.83	7.53	17.0	37.0	12	-0.0054	38.0194	-0.656	5.95
CALCIUM, DISSOLVED	12	95.08	25.54	58.0	130.0	12	0.0268	39.4101	0.965	6.98
MAGNESIUM, DISSOLVED	12	40.67	18.93	16.0	75.0	12	0.0189	1.3233	0.921	7.76
SODIUM, DISSOLVED	12	282.25	145.65	65.0	450.0	12	0.1573	-44.9951	0.995	14.89
POTASSIUM, DISSOLVED	12	15.49	12.96	2.2	49.0	12	0.0104	-6.1127	0.738	9.17
BICARBONATE, ION	12	299.6	48.3	226	402	12	0.009	280.005	0.180*	49.8
CARBONATE, ION	12	2.0	3.1	0	8	12	-0.001	3.040	-0.150*	3.2
SULFATE, DISSOLVED	12	149.92	101.45	12.0	270.0	12	0.1071	-72.8239	0.973	24.74
CHLORIDE, DISSOLVED	22	470.68	241.03	77.0	910.0	22	0.2688	-121.2771	0.965	65.15
DISSOLVED SOLIDS, SUM OF CONST	12	1200.0	538.5	414	1880	12	0.562	-11.359	0.998	47.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	1228.3	576.2	422	1930	12	0.623	-67.652	0.996	51.6
HARDNESS, TOTAL	22	464.4	210.9	200	1200	22	0.142	150.711	0.584	175.4
HARDNESS, NONCARBONATE	12	163.1	122.7	0	310	12	0.129	-104.372	0.965	33.6
TURBIDITY (JTU)	22	17.8	54.7	1	260	22	-0.005	28.175	-0.075*	55.9
FLUORIDE, DISSOLVED	11	1.37	0.36	0.7	1.9	11	0.0001	1.1006	0.317*	0.36

*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%
	3660	3110	2960	2850	2800	2640	1750	735	698	659

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
348	16.79	12.04	2.90	84	3.82

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	1	8	4	1	5
CADMIUM (CD), UG/L	7	0	10	4	0	0
CHROMIUM (CR), UG/L	7	6	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	7	2	10	4	0	1
IRON (FE), UG/L	14	100	3000	4	10	40
LEAD (PB), UG/L	7	2	41	4	0	2
MANGANESE (MN), UG/L	14	5	870	4	20	130
MERCURY (HG), UG/L	6	0.0	0.5	4	0.0	0.3
SELENIUM (SE), UG/L	6	0	3	4	0	0
ZINC (ZN), UG/L	7	4	100	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	0.00	120.00			
BIOMASS, ASH WT., G/SQ M	5	0.00	96.00			
CHLOROPHYLL A, MG/SQ M	5	0.000	120.000			
CHLOROPHYLL B, MG/SQ M	5	0.000	8.600			
ORGANIC CARBON, MG/L	4	3.200	14.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT, K	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	17.38	11.24	2.0	33.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	1193.0	392.2	520	1840					
STREAMFLOW (CUBIC FT/SEC)	23	1017.9	3181.6	6	15400	21	-3.297	5083.496	-0.391*	3141.0
PH (STANDARD UNITS)	15	8.28	0.40	7.6	8.8	15	-0.0005	8.8698	-0.416*	0.38
PHOSPHORUS, TOTAL	15	0.235	0.245	0.12	1.10	15	-0.00041	0.73248	-0.604	0.203
NITRITE + NITRATE, TOTAL	12	0.233	0.249	0.00	0.61	12	-0.00026	0.53297	-0.376*	0.242
NITROGEN, KJELDAHL, TOTAL	12	1.581	1.690	0.59	6.80	12	-0.00251	4.46034	-0.532*	1.501
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	110218.1	188600.0	5400	660000	11	-17.144	129029.250	-0.030*	198710.6
SEDIMENT SUSPENDED	7	182.7	218.3	36	628					
SEDIMENT, CLAY-SILT (PERCENT)	7	65.3	24.1	17	84					
COLIFORM, FECAL (COL/100 ML)	7	1721.9	4356.1	26	11600					
STREPTOCOCCI, FECAL (COL/100 ML)	9	2677.6	7086.9	21	21500					
SILICA, DISSOLVED	12	7.63	2.52	3.8	12.0	12	0.0026	4.6444	0.370*	2.45
CALCIUM, DISSOLVED	21	78.95	24.98	34.0	120.0	21	0.0518	16.3061	0.817	14.77
MAGNESIUM, DISSOLVED	21	34.95	12.22	14.0	54.0	21	0.0267	2.6736	0.861	6.38
SODIUM, DISSOLVED	21	128.43	47.57	45.0	240.0	21	0.1072	-1.2170	0.686	22.42
POTASSIUM, DISSOLVED	14	5.06	1.22	3.5	7.4	14	0.0012	3.6215	0.365*	1.18
BICARBONATE, ION	21	229.9	49.8	131	324	21	0.082	130.493	0.650	38.8
CARBONATE, ION	14	0.2	0.8	0	3	14	0.001	-0.564	0.327*	0.8
SULFATE, DISSOLVED	21	153.62	93.03	36.0	380.0	21	0.1443	-20.8577	0.611	75.55
CHLORIDE, DISSOLVED	21	209.71	94.77	68.0	460.0	21	0.1872	-16.6723	0.779	61.02
DISSOLVED SOLIDS, SUM OF CONST	12	712.0	211.1	287	908	12	0.538	95.120	0.912	90.8
DISSOLVED SOLIDS, ROE 180 DEG C	21	747.2	240.6	300	1090	21	0.580	45.590	0.950	77.0
HARDNESS, TOTAL	21	340.5	110.0	140	570	21	0.240	50.010	0.860	57.5
HARDNESS, NONCARBONATE	21	152.0	81.8	29	340	21	0.171	-54.625	0.823	47.6
TURBIDITY (JTU)	12	157.2	394.6	4	1400	12	-0.690	948.491	-0.626	322.8
FLUORIDE, DISSOLVED	12	0.41	0.12	0.3	0.7	12	0.0001	0.3024	0.284*	0.12

*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%
	2100	1740	1650	1580	1520	1390	1270	890	779	584

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
347	16.32	11.33	2.63	33	11.31

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07231500 -- CANADIAN RIVER AT CALVIN, OK

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	2	8	4	1	5
CADMIUM (CD), UG/L	5	2	<10	4	0	3
CHROMIUM (CR), UG/L	5	0	20	4	0	10
COBALT (CO), UG/L	5	0	<50	4	0	1
COPPER (CU), UG/L	5	10	20	4	2	4
IRON (FE), UG/L	11	<100	8000	4	20	270
LEAD (PB), UG/L	5	18	100	4	2	8
MANGANESE (MN), UG/L	12	60	2600	4	0	10
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	5	0	0	4	0	0
ZINC (ZN), UG/L	5	20	100	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	5	5.000	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	6	14.67	7.87	5.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	1243.3	1324.3	460	3800					
STREAMFLOW (CUBIC FT/SEC)	6	5.5	5.2	1	14	6	-0.001	6.304	-0.163*	5.8
PH (STANDARD UNITS)	6	8.42	0.34	8.1	9.0	6	0.0001	8.3330	0.264*	0.36
PHOSPHORUS, TOTAL	5	0.076	0.062	0.03	0.17					
NITRITE + NITRATE, TOTAL	5	0.358	0.285	0.01	0.67					
NITROGEN, KJELDAHL, TOTAL	5	0.694	0.291	0.31	1.10					
PHYTOPLANKTON, TOTAL (CELLS/ML)	3	3600.0	2551.5	1000	6100					
SEDIMENT SUSPENDED	3	105.7	64.0	32	147					
SEDIMENT, CLAY-SILT (PERCENT)	3	63.7	46.7	10	95					
COLIFORM, FECAL (COL/100 ML)	3	699.7	757.6	69	1540					
STREPTOCOCCI, FECAL (COL/100 ML)	1	960.0	0.0	960						
SILICA, DISSOLVED	5	21.40	4.04	17.0	27.0					
CALCIUM, DISSOLVED	5	52.60	16.33	35.0	79.0					
MAGNESIUM, DISSOLVED	5	26.00	3.74	23.0	32.0					
SODIUM, DISSOLVED	5	60.60	77.94	24.0	200.0					
POTASSIUM, DISSOLVED	5	6.22	1.45	4.7	8.4					
BICARBONATE, ION	5	250.8	10.7	238	265					
CARBONATE, ION	5	2.0	2.7	0	5					
SULFATE, DISSOLVED	5	65.00	47.52	43.0	150.0					
CHLORIDE, DISSOLVED	5	69.40	123.32	13.0	290.0					
DISSOLVED SOLIDS, SUM OF CONST	5	428.6	263.9	294	900					
DISSOLVED SOLIDS, RDE 180 DEG C	5	438.6	279.3	285	937					
HARDNESS, TOTAL	5	240.0	52.0	200	330					
HARDNESS, NONCARBONATE	5	30.8	55.7	0	130					
TURBIDITY (JTU)	5	30.4	32.7	5	80					
FLUORIDE, DISSOLVED	5	1.60	0.35	1.0	1.9					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 139

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	645	574	567	552	543	528	507	397	366	274

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
142	18.82	9.53	2.77	68	3.91

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07232500 -- BEAVER RIVER NR GUYMON, OK

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	1	4		1	4	
CADMIUM (CD), UG/L	1	<10		1	1	
CHROMIUM (CR), UG/L	1	10		1	0	
COBALT (CO), UG/L	1	<50		1	0	
COPPER (CU), UG/L	1	10		1	1	
IRON (FE), UG/L	5	<100	900	1	20	
LEAD (PB), UG/L	1	<100		1	3	
MANGANESE (MN), UG/L	5	25	320	1	20	
MERCURY (HG), UG/L	1	0.0		1	0.1	
SELENIUM (SE), UG/L	1	1		1	1	
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	2.700				

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	14.89	7.10	3.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	3616.3	1376.8	450	5690					
STREAMFLOW (CUBIC FT/SEC)	24	26.4	49.3	0	202	24	-0.022	104.151	-0.600	40.3
PH (STANDARD UNITS)	24	7.97	0.45	7.2	8.9	24	-0.0001	8.1904	-0.181*	0.46
PHOSPHORUS, TOTAL	5	0.040	0.027	0.01	0.08					
NITRITE + NITRATE, TOTAL	5	0.006	0.009	0.00	0.02					
NITROGEN, KJELDAHL, TOTAL	5	0.522	0.275	0.14	0.89					
PHYTOPLANKTON, TOTAL (CELLS/ML)	4	6547.5	6391.6	190	13000					
SEDIMENT SUSPENDED	5	74.2	73.2	7	199					
SEDIMENT, CLAY-SILT (PERCENT)	5	70.4	31.5	17	97					
COLIFORM, FECAL (COL/100 ML)	4	73.0	55.3	13	120					
STREPTOCOCCI, FECAL (COL/100 ML)	3	212.0	232.3	69	480					
SILICA, DISSOLVED	5	21.80	3.27	17.0	25.0					
CALCIUM, DISSOLVED	24	168.67	72.31	63.0	350.0	24	0.0375	32.9109	0.715	51.70
MAGNESIUM, DISSOLVED	24	85.33	39.33	22.0	160.0	24	0.0232	1.4280	0.812	23.46
SODIUM, DISSOLVED	24	477.83	214.07	88.0	860.0	24	0.1477	-56.4580	0.950	68.16
POTASSIUM, DISSOLVED	24	9.07	2.22	3.9	12.0	24	0.0005	7.2046	0.320*	2.15
BICARBONATE, ION	24	247.9	45.2	139	323	24	0.005	230.883	0.143*	45.8
CARBONATE, ION	24	0.5	1.6	0	7	24	-0.000	0.585	-0.030*	1.7
SULFATE, DISSOLVED	23	502.83	257.69	65.0	1000.0	23	0.1507	-33.6907	0.807	155.82
CHLORIDE, DISSOLVED	23	773.91	363.56	150.0	1500.0	23	0.2545	-132.0967	0.966	96.63
DISSOLVED SOLIDS, SUM OF CONST	5	1739.6	1024.6	565	2910					
DISSOLVED SOLIDS, ROE 180 DEG C	24	2309.9	923.0	582	3790	24	0.664	-91.652	0.991	128.5
HARDNESS, TOTAL	24	767.9	333.0	250	1500	24	0.187	93.338	0.771	216.7
HARDNESS, NONCARBONATE	24	567.8	332.0	61	1300	24	0.186	-103.412	0.770	216.7
TURBIDITY (JTU)	5	12.4	7.2	3	20					
FLUORIDE, DISSOLVED	5	0.92	0.19	0.7	1.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 175

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%
	5830	5090	4900	4630	4510	4180	2920	1790	1430	1130

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
224	31.75	10.21	4.09	3	36.52

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07234000 -- BEAVER RIVER AT BEAVER, DK

CONSTITUENT	TOTAL			DISSOLVED		
	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	3	6	2	3	3
CADMIUM (CD), UG/L	1	<10		2	0	2
CHROMIUM (CR), UG/L	2	0	0	2	0	0
COBALT (CO), UG/L	1	50		2	0	0
COPPER (CU), UG/L	2	10	30	2	1	3
IRON (FE), UG/L	3	200	500	2	0	20
LEAD (PB), UG/L	2	<100	<100	2	0	10
MANGANESE (MN), UG/L	4	31	490	2	0	420
MERCURY (HG), UG/L	2	0.0	0.0	2	0.0	0.0
SELENIUM (SE), UG/L	2	0	1	2	0	1
ZINC (ZN), UG/L	1	10		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	2	5.000	15.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE. WATER (DEG C)	12	16.04	8.09	1.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	2403.6	625.7	1400	3540					
STREAMFLOW (CUBIC FT/SEC)	10	40.2	77.8	2	257	10	-0.074	214.694	-0.616*	65.0
PH (STANDARD UNITS)	12	8.61	0.50	7.3	9.2	11	-0.0001	8.9578	-0.198*	0.31
PHOSPHORUS. TOTAL	9	1.137	0.675	0.19	2.30	9	0.00069	-0.47887	0.699	0.516
NITRITE + NITRATE, TOTAL	9	0.817	1.000	0.20	3.30	9	0.00023	0.28667	0.155*	1.056
NITROGEN. KJELDAHL, TOTAL	9	2.009	1.350	0.88	4.40	9	0.00040	1.05768	0.206*	1.412
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	25425.0	23428.5	3300	74000	8	-19.950	73529.813	-0.600*	20235.0
SEDIMENT SUSPENDED	7	60.7	48.7	6	131					
SEDIMENT, CLAY-SILT (PERCENT)	7	60.6	15.6	52	96					
COLIFORM. FECAL (COL/100 ML)	7	10537.1	16274.3	210	42000					
STREPTOCOCCI, FECAL (COL/100 ML)	6	3039.5	3762.9	227	9300					
SILICA, DISSOLVED	9	20.00	4.00	13.0	24.0	9	0.0044	9.7516	0.748	2.84
CALCIUM, DISSOLVED	9	180.11	73.32	81.0	260.0	9	0.1033	-62.5478	0.966	20.22
MAGNESIUM, DISSOLVED	9	46.56	13.75	25.0	66.0	9	0.0189	2.0549	0.945	4.81
SODIUM. DISSOLVED	9	277.78	99.22	140.0	430.0	9	0.1383	-47.0217	0.956	31.26
POTASSIUM, DISSOLVED	9	7.19	1.28	5.0	9.7	9	-0.0010	9.5285	-0.534*	1.15
BICARBONATE, ION	8	246.8	33.4	195	289	8	0.047	131.548	0.971	8.6
CARBONATE. ION	8	0.9	2.5	0	7	8	-0.001	3.359	-0.283*	2.6
SULFATE. DISSOLVED	9	464.44	217.61	190.0	800.0	9	0.3090	-261.3406	0.974	53.09
CHLORIDE. DISSOLVED	9	398.89	132.61	210.0	600.0	9	0.1655	-36.8335	0.959	40.12
DISSOLVED SOLIDS. SUM OF CONST	9	1518.1	550.6	763	2320	9	0.782	-318.369	0.974	134.2
DISSOLVED SOLIDS, ROE 180 DEG C	9	1646.8	662.3	761	2900	9	0.870	-397.402	0.901	307.3
HARDNESS, TOTAL	9	641.1	234.9	310	970	9	0.334	-143.421	0.975	56.0
HARDNESS, NONCARBONATE	10	422.0	204.3	150	730	9	0.297	-258.446	0.973	51.3
TURBIDITY (JTU)	9	9.9	13.0	1	35	9	-0.012	37.319	-0.614*	11.0
FLUORIDE. DISSOLVED	9	0.76	0.10	0.6	0.9	9	0.0000	0.7121	0.125*	0.11

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 287

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%
	3660	3540	3380	2880	2810	2660	2280	1540	1440	1040

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
311	16.15	10.28	3.14	68	5.08

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07237500 -- NORTH CANADIAN RIVER AT WOODWARD, OK

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	2	9	5	2	6
CADMIUM (CD), UG/L	5	<10	<10	5	0	1
CHROMIUM (CR), UG/L	5	0	15	5	0	10
COBALT (CO), UG/L	5	50	150	5	0	2
COPPER (CU), UG/L	5	10	20	5	0	7
IRON (FE), UG/L	11	80	2600	5	20	40
LEAD (PB), UG/L	5	<100	<100	5	0	4
MANGANESE (MN), UG/L	11	9	160	5	10	280
MERCURY (HG), UG/L	5	0.0	4.0	5	0.0	0.0
SELENIUM (SE), UG/L	5	0	0	5	0	1
ZINC (ZN), UG/L	5	10	40	5	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	7.400	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, K	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.00	6.49	5.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	46	471.6	73.9	65	600					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	45	8.09	0.27	7.5	8.7	44	0.0005	7.8432	0.143*	0.28
PHOSPHORUS, TOTAL	17	0.045	0.036	0.00	0.15	17	-0.00040	0.24292	-0.445*	0.033
NITRITE + NITRATE, TOTAL	11	0.150	0.093	0.03	0.31	11	0.00011	0.09323	0.041*	0.098
NITROGEN, KJELDAHL, TOTAL	11	0.515	0.295	0.25	1.30	11	-0.00414	2.61592	-0.482*	0.273
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	4600.0	5314.6	600	17000	9	-94.749	52216.824	-0.174*	5594.4
SEDIMENT SUSPENDED	5	1634.2	3508.7	9	7910					
SEDIMENT, CLAY-SILT (PERCENT)	5	39.2	30.3	4	86					
COLIFORM, FECAL (COL/100 ML)	5	43.8	65.4	2	160					
STREPTOCOCCI, FECAL (COL/100 ML)	7	66.3	49.6	7	120					
SILICA, DISSOLVED	11	4.35	1.64	0.1	6.3	11	-0.0102	9.5483	-0.214*	1.69
CALCIUM, DISSOLVED	46	36.03	6.17	8.6	51.0	46	0.0626	6.4973	0.750	4.12
MAGNESIUM, DISSOLVED	46	12.29	1.88	2.6	15.0	46	0.0234	1.2506	0.922	0.73
SODIUM, DISSOLVED	46	37.71	6.70	3.8	45.0	46	0.0817	-0.7994	0.901	2.93
POTASSIUM, DISSOLVED	46	3.51	0.37	1.7	4.0	46	0.0040	1.6441	0.783	0.24
BICARBONATE, ION	46	128.0	23.2	25	185	46	0.231	19.106	0.735	15.9
CARBONATE, ION	45	0.2	0.7	0	4	45	-0.000	0.194	-0.004*	0.7
SULFATE, DISSOLVED	46	37.89	7.13	11.0	56.0	46	0.0621	8.5844	0.645	5.51
CHLORIDE, DISSOLVED	46	59.09	11.44	2.2	74.0	46	0.1350	-4.5582	0.873	5.65
DISSOLVED SOLIDS, SUM OF CONST	11	265.3	16.6	244	305	11	0.092	218.365	0.191*	17.2
DISSOLVED SOLIDS, ROE 180 DEG C	46	261.0	37.1	59	308	46	0.474	37.361	0.944	12.3
HARDNESS, TOTAL	46	140.0	22.2	32	190	46	0.259	17.948	0.863	11.4
HARDNESS, NONCARBONATE	46	35.3	8.7	12	50	46	0.063	5.738	0.532	7.5
TURBIDITY (JTU)	11	6.8	3.5	3	14	11	-0.024	19.247	-0.243*	3.5
FLUORIDE, DISSOLVED	11	0.24	0.07	0.1	0.3	11	0.0003	0.0780	0.159*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	16.38	8.50	2.61	88	2.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	2	4	0	3
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	0
COPPER (CU), UG/L	4	10	10	4	0	3
IRON (FE), UG/L	11	<100	550	4	0	720
LEAD (PB), UG/L	4	<100	<100	4	0	35
MANGANESE (MN), UG/L	12	10	310	4	0	250
MERCURY (HG), UG/L	3	0.0	1.0	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	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	5	4.600	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	17.75	7.76	4.5	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	578.8	181.8	315	981					
STREAMFLOW (CUBIC FT/SEC)	2	71550.0	17041.3	59500	83600					
PH (STANDARD UNITS)	12	7.72	0.39	7.1	8.4	12	0.0007	7.3365	0.306*	0.39
PHOSPHORUS, TOTAL	12	0.089	0.017	0.07	0.12	12	0.00004	0.06861	0.373*	0.017
NITRITE + NITRATE, TOTAL	12	0.220	0.081	0.10	0.38	12	-0.00013	0.29799	-0.303*	0.081
NITROGEN, KJELDAHL, TOTAL	12	0.883	0.304	0.34	1.30	12	0.00028	0.71872	0.170*	0.314
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6625.0	4719.6	2000	18000	12	1.828	5566.762	0.070*	4937.6
SEDIMENT SUSPENDED	12	31.3	11.6	13	55					
SEDIMENT, CLAY-SILT (PERCENT)	12	87.8	17.3	43	98					
COLIFORM, FECAL (COL/100 ML)	12	1049.2	933.4	170	3200					
STREPTOCOCCI, FECAL (COL/100 ML)	10	97.1	118.1	<4	330					
SILICA, DISSOLVED	12	2.64	1.78	0.1	5.0	12	-0.0021	3.8296	-0.209*	1.83
CALCIUM, DISSOLVED	12	38.83	6.53	27.0	52.0	12	0.0298	21.6021	0.828	3.84
MAGNESIUM, DISSOLVED	12	9.03	2.11	6.4	14.0	12	0.0102	3.1088	0.882	1.04
SODIUM, DISSOLVED	12	61.67	28.47	22.0	130.0	12	0.1498	-25.0061	0.956	8.74
POTASSIUM, DISSOLVED	12	3.43	0.45	2.8	4.3	12	0.0011	2.8070	0.441*	0.42
BICARBONATE, ION	12	121.0	18.2	94	160	12	0.067	81.976	0.673	14.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	39.25	12.02	25.0	64.0	12	0.0620	3.3905	0.937	4.41
CHLORIDE, DISSOLVED	12	92.92	43.73	32.0	200.0	12	0.2308	-40.6580	0.960	12.91
DISSOLVED SOLIDS, SUM OF CONST	12	307.7	96.1	165	523	12	0.514	10.194	0.972	23.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	319.5	92.3	181	514	12	0.489	36.373	0.963	26.0
HARDNESS, TOTAL	12	133.7	25.8	94	190	12	0.126	60.828	0.886	12.5
HARDNESS, NONCARBONATE	12	34.8	12.8	17	60	12	0.061	-0.290	0.664	6.7
TURBIDITY (JTU)	12	17.3	10.3	2	42	12	-0.008	22.240	-0.150*	10.7
FLUORIDE, DISSOLVED	12	0.22	0.04	0.2	0.3	12	0.0001	0.1738	0.346*	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 117

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%
	981	652	615	582	572	511	471	451	439	432

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
333	17.23	10.52	2.71	93	1.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	0	6	6	0	3
CADMIUM (CD), UG/L	6	0	<10	6	0	1
CHROMIUM (CR), UG/L	6	0	20	6	0	10
COBALT (CO), UG/L	6	<50	<50	6	0	2
COPPER (CU), UG/L	6	10	30	6	2	5
IRON (FE), UG/L	6	250	1900	6	10	40
LEAD (PB), UG/L	6	0	<100	6	0	2
MANGANESE (MN), UG/L	6	60	120	6	0	10
MERCURY (HG), UG/L	5	0.0	0.0	6	0.0	0.0
SELENIUM (SE), UG/L	6	0	1	6	0	0
ZINC (ZN), UG/L	6	10	60	6	0	60
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	13.00	22.00			
BIOMASS, ASH WT., G/SQ M	3	9.60	17.00			
CHLOROPHYLL A, MG/SQ M	3	3.100	22.000			
CHLOROPHYLL B, MG/SQ M	3	0.100	0.600			
ORGANIC CARBON, MG/L	5	4.600	20.000			

Table 12. 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: 10/01/75 - 09/30/76

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	18.50	7.60	5.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	501.1	154.8	318	786					
STREAMFLOW (CUBIC FT/SEC)	13	19347.7	21020.7	2990	68500	13	-28.817	33787.063	-0.212*	21454.8
PH (STANDARD UNITS)	13	7.75	0.33	7.1	8.4	13	0.0009	7.2946	0.425*	0.31
PHOSPHORUS, TOTAL	13	0.085	0.015	0.07	0.11	13	-0.00002	0.09503	-0.198*	0.015
NITRITE + NITRATE, TOTAL	13	0.162	0.122	0.01	0.38	13	-0.00026	0.29212	-0.328*	0.120
NITROGEN, KJELDAHL, TOTAL	13	0.908	1.143	0.06	4.60	13	-0.00128	1.54892	-0.173*	1.176
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	25884.6	30957.2	2300	110000	13	6.716	22519.586	0.034*	32315.0
SEDIMENT SUSPENDED	12	33.1	20.1	13	87					
SEDIMENT, CLAY-SILT (PERCENT)	12	91.5	4.3	83	96					
COLIFORM, FECAL (COL/100 ML)	12	1178.3	1048.9	310	4100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	149.7	276.9	4	960					
SILICA, DISSOLVED	13	5.82	12.74	0.3	48.0	13	0.0285	-8.4626	0.346*	12.48
CALCIUM, DISSOLVED	12	33.58	8.28	23.0	50.0	12	0.0334	16.8314	0.651	6.60
MAGNESIUM, DISSOLVED	13	8.10	1.88	4.9	11.0	13	0.0098	3.1922	0.805	1.17
SODIUM, DISSOLVED	13	51.85	22.84	28.0	100.0	13	0.1448	-20.7330	0.982	4.51
POTASSIUM, DISSOLVED	13	3.20	0.57	2.5	4.2	13	0.0015	2.4528	0.407*	0.54
BICARBONATE, ION	13	105.8	22.6	75	149	13	0.078	66.841	0.531*	20.0
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	36.92	9.94	25.0	58.0	13	0.0545	9.6296	0.849	5.49
CHLORIDE, DISSOLVED	13	79.38	38.93	40.0	160.0	13	0.2430	-42.3913	0.967	10.43
DISSOLVED SOLIDS, SUM OF CONST	12	272.8	90.6	167	411	12	0.553	-4.928	0.987	15.4
DISSOLVED SOLIDS, ROE 180 DEG C	13	274.9	84.3	167	442	13	0.540	4.508	0.991	11.7
HARDNESS, TOTAL	12	118.1	28.0	78	170	12	0.124	55.710	0.718	20.4
HARDNESS, NONCARBONATE	12	31.2	11.6	13	48	12	0.059	1.332	0.825	6.9
TURBIDITY (JTU)	13	14.9	9.7	4	36	13	-0.011	20.241	-0.169*	10.0
FLUORIDE, DISSOLVED	13	0.24	0.07	0.2	0.4	13	0.0002	0.1396	0.470*	0.06

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 289

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%
	904	733	658	576	513	457	408	319	298	245

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
294	18.09	11.18	2.74	93	2.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	30	4	0	10
COBALT (CO), UG/L	4	0	50	4	0	2
COPPER (CU), UG/L	4	10	30	4	4	6
IRON (FE), UG/L	4	300	1100	4	10	70
LEAD (PB), UG/L	4	9	<100	4	0	1
MANGANESE (MN), UG/L	4	60	110	4	0	20
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	20	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	9.00	36.00			
BIOMASS, ASH WT., G/SQ M	3	8.00	29.00			
CHLOROPHYLL A, MG/SQ M	3	7.300	46.200			
CHLOROPHYLL B, MG/SQ M	3	0.200	9.800			
ORGANIC CARBON, MG/L	2	4.100	5.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.13	8.68	4.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	396.0	60.3	244	460					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.68	0.22	7.3	8.1	12	-0.0018	8.3777	-0.470*	0.21
PHOSPHORUS, TOTAL	12	0.245	0.095	0.13	0.48	12	0.00004	0.23076	0.023*	0.099
NITRITE + NITRATE, TOTAL	12	1.097	0.486	0.31	1.80	12	-0.00143	1.66512	-0.178*	0.501
NITROGEN, KJELDAHL, TOTAL	12	1.052	0.428	0.56	2.20	12	-0.00052	1.25805	-0.073*	0.448
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6466.7	6248.8	1100	21000	12	35.372	-7540.559	0.342*	6159.7
SEDIMENT SUSPENDED	12	173.0	130.2	74	548					
SEDIMENT, CLAY-SILT (PERCENT)	12	95.3	3.8	88	98					
COLIFORM, FECAL (COL/100 ML)	9	1040.0	907.1	56	2400					
STREPTOCOCCI, FECAL (COL/100 ML)	10	305.6	164.7	68	670					
SILICA, DISSOLVED	12	4.73	1.53	1.3	6.5	12	-0.0107	8.9634	-0.421*	1.46
CALCIUM, DISSOLVED	12	37.58	3.03	34.0	44.0	12	0.0315	25.0913	0.628	2.47
MAGNESIUM, DISSOLVED	12	11.16	1.47	8.7	13.0	12	0.0200	3.2487	0.817	0.89
SODIUM, DISSOLVED	12	18.83	5.39	12.0	26.0	12	0.0647	-6.7837	0.724	3.90
POTASSIUM, DISSOLVED	12	2.98	0.25	2.7	3.4	12	0.0024	2.0427	0.578	0.21
BICARBONATE, ION	12	122.4	11.6	99	136	12	0.157	60.214	0.814	7.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	56.25	14.33	39.0	86.0	12	0.1485	-2.5704	0.625	11.73
CHLORIDE, DISSOLVED	12	18.67	5.91	12.0	32.0	12	0.0542	-2.8161	0.553*	5.17
DISSOLVED SOLIDS, SUM OF CONST	12	210.8	28.6	168	253	12	0.386	57.799	0.815	17.4
DISSOLVED SOLIDS, RDE 180 DEG C	12	224.2	27.3	175	263	12	0.353	64.509	0.779	17.9
HARDNESS, TOTAL	12	138.3	12.7	120	160	12	0.160	75.032	0.761	8.6
HARDNESS, NONCARBONATE	12	39.5	7.1	30	52	12	0.030	27.601	0.254*	7.2
TURBIDITY (JTU)	12	65.1	49.1	15	180	12	-0.031	77.536	-0.039*	51.5
FLUORIDE, DISSOLVED	12	0.21	0.07	0.1	0.3	12	0.0007	-0.0597	0.611	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%
	509	476	457	441	428	406	367	319	309	302

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	17.49	10.70	2.69	95	1.73

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	6	4	0	2
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	10	20	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	20	60	4	3	7
IRON (FE), UG/L	4	3100	7600	4	0	30
LEAD (PB), UG/L	4	0	<100	4	0	1
MANGANESE (MN), UG/L	4	220	430	4	0	10
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	130	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	2	5.000	7.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.71	7.77	4.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	82.4	16.4	56	105					
STREAMFLOW (CUBIC FT/SEC)	12	12018.3	3595.8	8100	18000	12	-168.706	25922.492	-0.771	2401.4
PH (STANDARD UNITS)	12	7.12	0.58	6.1	8.1	12	-0.0097	7.9154	-0.275*	0.58
PHOSPHORUS, TOTAL	12	0.243	0.137	0.10	0.53	12	-0.00490	0.64742	-0.587	0.117
NITRITE + NITRATE, TOTAL	12	0.262	0.148	0.09	0.56	12	-0.00165	0.41419	-0.206*	0.152
NITROGEN, KJELDAHL, TOTAL	12	0.852	0.383	0.39	1.50	12	-0.01129	1.78301	-0.484*	0.352
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3491.7	3020.4	1300	12000	12	54.266	-975.841	0.295*	3026.8
SEDIMENT SUSPENDED	12	230.9	109.6	60	478					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	638.3	630.4	20	2500					
STREPTOCOCCI, FECAL (COL/100 ML)	10	445.3	412.0	30	1250					
SILICA, DISSOLVED	12	6.27	0.72	4.7	7.3	12	0.0073	5.6725	0.168*	0.74
CALCIUM, DISSOLVED	12	7.45	1.94	4.9	12.0	12	0.0691	1.7590	0.586	1.65
MAGNESIUM, DISSOLVED	12	2.56	0.42	2.0	3.1	12	0.0219	0.7549	0.850	0.23
SODIUM, DISSOLVED	12	4.74	0.71	3.7	6.0	12	0.0267	2.5447	0.621	0.58
POTASSIUM, DISSOLVED	12	2.22	0.39	1.7	3.0	12	-0.0069	2.9485	-0.376*	0.38
BICARBONATE, ION	12	30.8	7.6	22	46	12	0.352	1.821	0.756	5.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.15	1.50	4.3	9.2	12	0.0161	5.8228	0.176*	1.55
CHLORIDE, DISSOLVED	12	4.11	0.92	2.6	5.2	12	0.0145	2.9166	0.259*	0.93
DISSOLVED SOLIDS, SUM OF CONST	12	50.1	5.9	43	61	12	0.319	23.796	0.891	2.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	65.8	16.7	40	97	12	0.397	33.103	0.391*	16.1
HARDNESS, TOTAL	12	29.1	5.6	21	39	12	0.266	7.179	0.787	3.6
HARDNESS, NONCARBONATE	12	4.1	4.2	0	14	12	-0.012	5.066	-0.047*	4.4
TURBIDITY (JTU)	12	115.4	93.5	30	340	12	-3.373	393.440	-0.593	78.9
FLUORIDE, DISSOLVED	12	0.19	0.10	0.0	0.4	12	-0.0032	0.4540	-0.525*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
91	18.38	11.74	2.59	88	1.92

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	11	4	0	1
CADMIUM (CD), UG/L	4	1	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	30	4	0	2
COBALT (CO), UG/L	4	0	5	4	0	0
COPPER (CU), UG/L	4	14	35	4	2	6
IRON (FE), UG/L	4	2500	17000	4	70	520
LEAD (PB), UG/L	4	7	37	4	2	6
MANGANESE (MN), UG/L	4	250	470	4	30	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	30	90	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	671.00				
BIOMASS, ASH WT., G/SQ M	1	651.00				
CHLOROPHYLL A, MG/SQ M	1	28.200				
CHLOROPHYLL B, MG/SQ M	1	1.500				
ORGANIC CARBON, MG/L	4	3.600	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	17.46	6.87	3.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	376.8	53.4	280	440					
STREAMFLOW (CUBIC FT/SEC)	13	558845.0	243538.6	230000	961998	13	-3718.248	1959765.000	-0.615	147301.1
PH (STANDARD UNITS)	13	7.55	0.26	7.2	8.0	13	0.0001	7.5073	0.021*	0.27
PHOSPHORUS, TOTAL	13	0.227	0.100	0.10	0.35	13	-0.00098	0.59447	-0.519*	0.090
NITRITE + NITRATE, TOTAL	13	1.008	0.399	0.38	1.60	13	-0.00052	1.20270	-0.069*	0.416
NITROGEN, KJELDAHL, TOTAL	13	0.895	0.636	0.46	2.90	13	-0.00367	2.27773	-0.307*	0.634
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	7530.8	6976.1	1300	24000	13	72.405	-19749.359	0.554	6064.8
SEDIMENT SUSPENDED	11	271.2	147.0	88	561					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	9	3951.1	6934.5	250	20000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	192.6	133.1	40	410					
SILICA, DISSOLVED	12	5.40	1.13	2.8	6.4	12	-0.0100	9.1337	-0.470*	1.04
CALCIUM, DISSOLVED	13	38.46	5.36	31.0	50.0	13	0.0864	5.1592	0.680	2.66
MAGNESIUM, DISSOLVED	13	11.55	2.09	8.6	14.0	13	0.0362	-2.0975	0.925	0.63
SODIUM, DISSOLVED	13	18.46	4.75	11.0	25.0	13	0.0768	-10.4693	0.662	2.51
POTASSIUM, DISSOLVED	13	2.64	0.69	0.7	3.2	13	0.0086	-0.5657	0.665	0.54
BICARBONATE, ION	13	120.6	17.5	93	143	13	0.301	7.256	0.917	7.3
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	53.15	10.74	39.0	76.0	13	0.1470	-2.2270	0.731	7.65
CHLORIDE, DISSOLVED	13	19.15	8.21	12.0	43.0	13	0.0847	-12.7399	0.550*	7.16
DISSOLVED SOLIDS, SUM OF CONST	12	205.6	33.6	159	260	12	0.575	-8.400	0.904	15.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	222.6	38.6	164	274	12	0.586	4.706	0.802	24.2
HARDNESS, TOTAL	13	143.1	22.5	110	160	13	0.384	-1.713	0.912	9.6
HARDNESS, NONCARBONATE	13	45.0	9.8	34	66	13	0.127	-2.965	0.693	7.4
TURBIDITY (JTU)	13	61.9	35.3	15	110	13	-0.350	193.830	-0.529*	31.3
FLUORIDE, DISSOLVED	12	0.26	0.08	0.1	0.4	12	0.0003	0.1552	0.185*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
80	17.89	12.69	2.77	96	1.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	5	5	0	2
CADMIUM (CD), UG/L	5	0	16	5	0	5
CHROMIUM (CR), UG/L	5	<10	40	4	0	5
COBALT (CO), UG/L	4	0	3	4	0	0
COPPER (CU), UG/L	5	7	35	5	3	16
IRON (FE), UG/L	4	1600	6700	5	0	90
LEAD (PB), UG/L	5	4	130	5	0	24
MANGANESE (MN), UG/L	5	120	290	5	0	20
MERCURY (HG), UG/L	5	0.0	0.3	5	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	5	40	290	5	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	2.30				
BIOMASS, ASH WT., G/SQ M	1	0.80				
CHLOROPHYLL A, MG/SQ M	1	24.000				
CHLOROPHYLL B, MG/SQ M	1	26.000				
ORGANIC CARBON, MG/L	5	3.600	7.800			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, E	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.38	7.35	6.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	112.4	49.5	54	200					
STREAMFLOW (CUBIC FT/SEC)	12	6420.3	7036.4	646	24900	12	-103.442	18048.887	-0.727	5066.1
PH (STANDARD UNITS)	12	6.67	0.48	5.9	7.5	12	0.0037	6.2487	0.387*	0.46
PHOSPHORUS, TOTAL	12	0.316	0.170	0.16	0.75	12	-0.00166	0.50252	-0.482*	0.157
NITRITE + NITRATE, TOTAL	12	0.191	0.125	0.03	0.42	12	-0.00096	0.29917	-0.382*	0.121
NITROGEN, KJELDAHL, TOTAL	12	1.042	0.302	0.64	1.50	12	-0.00250	1.32234	-0.409*	0.289
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	17670.0	28198.7	270	77000	12	405.567	-27924.695	0.711	20784.3
SEDIMENT SUSPENDED	11	290.5	169.7	106	646					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	3563.6	8179.0	<10	28000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1034.1	1403.1	<5	4999					
SILICA, DISSOLVED	12	9.01	3.54	4.7	15.0	12	0.0699	1.1505	0.975	0.82
CALCIUM, DISSOLVED	12	8.78	4.95	4.0	19.0	12	0.0938	-1.7577	0.937	1.81
MAGNESIUM, DISSOLVED	12	3.34	2.15	1.3	7.3	12	0.0421	-1.3858	0.966	0.58
SODIUM, DISSOLVED	12	8.91	3.69	2.7	15.0	12	0.0666	1.4269	0.892	1.75
POTASSIUM, DISSOLVED	12	2.82	0.77	1.9	4.0	12	-0.0057	3.4625	-0.364*	0.75
BICARBONATE, ION	12	38.9	23.4	15	81	12	0.453	-11.965	0.956	7.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	8.70	2.18	5.8	12.0	12	0.0234	6.0737	0.529*	1.94
CHLORIDE, DISSOLVED	12	9.89	4.61	2.9	16.0	12	0.0798	0.9244	0.857	2.49
DISSOLVED SOLIDS, SUM OF CONST	12	71.0	29.4	33	120	12	0.590	4.701	0.991	4.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	82.6	22.2	54	122	12	0.382	39.590	0.851	12.2
HARDNESS, TOTAL	12	35.8	21.3	15	78	12	0.410	-10.377	0.954	6.7
HARDNESS, NONCARBONATE	12	4.4	3.5	0	11	12	0.040	-0.065	0.559*	3.1
TURBIDITY (JTU)	12	110.8	71.4	4	250	12	-0.892	211.056	-0.618	56.9
FLUORIDE, DISSOLVED	12	0.21	0.10	0.0	0.4	12	-0.0009	0.3129	-0.462*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	18.62	9.33	2.76	88	2.83

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	9	4	1	2
CADMIUM (CD), UG/L	4	0	4	4	0	7
CHROMIUM (CR), UG/L	3	<10	30	4	0	1
COBALT (CO), UG/L	4	2	4	4	0	2
COPPER (CU), UG/L	4	12	35	4	8	14
IRON (FE), UG/L	4	6700	17000	4	150	370
LEAD (PB), UG/L	4	10	36	4	0	31
MANGANESE (MN), UG/L	4	110	660	4	20	170
MERCURY (HG), UG/L	4	0.1	0.2	4	0.0	0.5
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	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	9.600	17.000			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.17	7.52	6.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	77.3	12.7	62	98					
STREAMFLOW (CUBIC FT/SEC)	12	729.6	315.5	243	1380	12	-9.887	1493.392	-0.399*	303.4
PH (STANDARD UNITS)	12	6.80	0.46	6.2	7.5	12	-0.0025	6.9908	-0.068*	0.48
PHOSPHORUS, TOTAL	12	0.061	0.070	0.01	0.26	12	-0.00135	0.16529	-0.246*	0.071
NITRITE + NITRATE, TOTAL	12	0.053	0.026	0.01	0.10	12	-0.00041	0.08494	-0.203*	0.026
NITROGEN, KJELDAHL, TOTAL	12	0.425	0.205	0.09	0.76	12	-0.00455	0.77637	-0.283*	0.206
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1873.3	2092.4	140	6600	12	70.573	-3578.432	0.430*	1981.7
SEDIMENT SUSPENDED	12	225.0	172.9	55	679					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	600.6	1194.7	< 5	3800					
STREPTOCOCCI, FECAL (COL/100 ML)	10	2139.5	6276.5	<10	20000					
SILICA, DISSOLVED	12	13.32	1.26	9.9	14.0	12	0.0419	10.0898	0.425*	1.19
CALCIUM, DISSOLVED	12	3.84	1.25	2.5	7.0	12	0.0087	3.1716	0.089*	1.30
MAGNESIUM, DISSOLVED	12	1.30	0.36	0.8	2.0	12	0.0008	1.2394	0.027*	0.38
SODIUM, DISSOLVED	12	9.13	1.22	7.3	11.0	12	0.0712	3.6305	0.742	0.86
POTASSIUM, DISSOLVED	12	1.49	0.22	1.3	2.0	12	-0.0055	1.9193	-0.328*	0.21
BICARBONATE, ION	12	16.1	4.1	8	20	12	0.110	7.565	0.344*	4.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.30	0.94	2.0	4.9	12	-0.0051	3.6939	-0.069*	0.98
CHLORIDE, DISSOLVED	12	14.67	2.19	11.0	19.0	12	0.1121	6.0076	0.652	1.74
DISSOLVED SOLIDS, SUM OF CONST	12	55.2	6.6	43	63	12	0.284	33.238	0.549*	5.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	59.3	11.0	46	77	12	0.323	34.395	0.373*	10.7
HARDNESS, TOTAL	12	15.1	3.7	10	23	12	0.022	13.362	0.076*	3.9
HARDNESS, NONCARBONATE	12	2.2	2.4	0	8	12	-0.033	4.699	-0.174*	2.5
TURBIDITY (JTU)	12	22.2	32.1	2	120	12	-0.594	68.082	-0.236*	32.7
FLUORIDE, DISSOLVED	12	0.10	0.04	0.0	0.2	12	-0.0006	0.1433	-0.167*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	21.36	9.76	2.91	83	3.39

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	1	3	0	0
CADMIUM (CD), UG/L	3	1	17	3	1	3
CHROMIUM (CR), UG/L	3	10	30	3	0	3
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	12	25	3	3	12
IRON (FE), UG/L	3	140	1400	3	10	80
LEAD (PB), UG/L	3	5	170	3	0	24
MANGANESE (MN), UG/L	3	80	90	3	60	90
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.2
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	20	80	3	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.20				
BIOMASS, ASH WT., G/SQ M	1	0.20				
CHLOROPHYLL A, MG/SQ M	1	0.300				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	2.600	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	16.10	8.33	0.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	27697.0	14454.8	1130	40500					
STREAMFLOW (CUBIC FT/SEC)	10	8.2	9.9	0	30	10	-0.001	26.087	-0.934	3.8
PH (STANDARD UNITS)	10	7.90	0.16	7.6	8.1	10	0.0000	7.8037	0.306*	0.16
PHOSPHORUS, TOTAL	9	0.222	0.400	0.01	0.99	9	-0.00003	0.92588	-0.972	0.101
NITRITE + NITRATE, TOTAL	9	0.190	0.339	0.00	0.90	9	-0.00002	0.77776	-0.959	0.103
NITROGEN, KJELDAHL, TOTAL	9	0.770	1.086	0.07	2.80	9	-0.00007	2.65140	-0.957	0.337
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	9993.8	25069.7	310	72000	8	-1.033	37059.113	-0.643*	20732.1
SEDIMENT SUSPENDED	9	5317.1	10584.2	3	26400					
SEDIMENT, CLAY-SILT (PERCENT)	9	74.7	23.2	29	100					
COLIFORM, FECAL (COL/100 ML)	9	12925.0	25386.4	1	68000					
STREPTOCOCCI, FECAL (COL/100 ML)	9	10605.1	21097.5	5	53000					
SILICA, DISSOLVED	10	21.57	6.79	8.0	26.0	10	0.0005	8.8445	0.971	1.74
CALCIUM, DISSOLVED	10	814.90	391.88	89.0	1200.0	10	0.0270	61.7656	0.996	37.99
MAGNESIUM, DISSOLVED	10	201.40	100.10	14.0	290.0	10	0.0069	9.2695	0.995	11.07
SODIUM, DISSOLVED	10	5773.00	3069.95	130.0	8700.0	10	0.2120	-142.0859	0.998	186.84
POTASSIUM, DISSOLVED	10	102.90	54.14	5.5	160.0	10	0.0037	-0.4724	0.989	8.37
BICARBONATE, ION	10	143.5	26.7	76	162	10	0.002	98.001	0.883	13.3
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	2166.00	957.22	340.0	2800.0	10	0.0649	356.2419	0.980	203.87
CHLORIDE, DISSOLVED	10	9329.00	5041.39	120.0	4000.0	10	0.3482	-383.3672	0.998	318.31
DISSOLVED SOLIDS, SUM OF CONST	10	18492.9	9613.5	744	27100	10	0.664	-37.848	0.999	504.7
DISSOLVED SOLIDS, ROE 180 DEG C	9	18666.9	10357.2	772	27800	9	0.676	-63.891	1.000	292.3
HARDNESS, TOTAL	10	2871.0	1394.9	280	4200	10	0.096	188.495	0.996	124.3
HARDNESS, NONCARBONATE	10	2745.0	1370.0	220	4100	10	0.094	112.510	0.996	135.1
TURBIDITY (JTU)	9	1761.6	3604.4	1	9500	9	-0.225	8030.184	-0.957	1114.7
FLUORIDE, DISSOLVED	10	0.97	0.19	0.5	1.2	10	0.0000	0.7049	0.727	0.14

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 274

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%
	47000	44100	42300	40200	37700	28400	23200	7790	3040	1300

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
270	18.63	9.58	2.93	73	4.30

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	3	3	0	3
CADMIUM (CD), UG/L	3	0	0	3	0	3
CHROMIUM (CR), UG/L	3	20	50	3	0	5
COBALT (CO), UG/L	3	0	2	3	0	0
COPPER (CU), UG/L	3	7	8	3	0	0
IRON (FE), UG/L	3	160	280	3	70	100
LEAD (PB), UG/L	3	0	3	3	0	2
MANGANESE (MN), UG/L	3	290	790	3	300	780
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.3
SELENIUM (SE), UG/L	3	2	3	3	2	2
ZINC (ZN), UG/L	3	30	110	3	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.20	53.00			
BIOMASS, ASH WT., G/SQ M	3	0.69	47.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	3.300			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.000			
ORGANIC CARBON, MG/L	2	1.000	1.400			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	21	19.17	9.10	0.0	33.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	20	3065.5	314.9	2220	3600					
STREAMFLOW (CUBIC FT/SEC)	21	22.7	17.0	5	81	20	-0.032	121.539	-0.592	14.1
PH (STANDARD UNITS)	21	8.00	0.28	7.4	8.7	20	-0.0004	9.2469	-0.451	0.26
PHOSPHORUS, TOTAL	20	0.078	0.081	0.00	0.31	19	-0.00012	0.44467	-0.461	0.076
NITRITE + NITRATE, TOTAL	12	0.965	0.571	0.44	2.10	12	0.00068	-1.16510	0.428*	0.541
NITROGEN, KJELDAHL, TOTAL	12	0.424	0.289	0.01	1.10	12	-0.00044	1.76754	-0.541*	0.254
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7220.8	14874.1	690	54000	12	0.370	6061.473	0.004*	15599.3
SEDIMENT SUSPENDED	12	441.7	1058.3	7	3640					
SEDIMENT, CLAY-SILT (PERCENT)	12	59.2	31.9	4	98					
COLIFORM, FECAL (COL/100 ML)	12	426.0	808.9	6	2800					
STREPTOCOCCI, FECAL (COL/100 ML)	12	670.2	1028.2	32	3700					
SILICA, DISSOLVED	12	20.17	2.04	17.0	23.0	12	0.0022	13.1836	0.393*	1.97
CALCIUM, DISSOLVED	12	480.83	99.40	240.0	580.0	12	0.2026	-153.4500	0.731	71.11
MAGNESIUM, DISSOLVED	12	84.25	9.28	60.0	96.0	12	0.0250	6.0092	0.966	2.53
SODIUM, DISSOLVED	12	190.00	35.68	130.0	240.0	12	0.0338	84.0960	0.340*	35.18
POTASSIUM, DISSOLVED	12	4.37	0.73	3.6	5.7	12	-0.0007	6.4840	-0.331*	0.72
BICARBONATE, ION	12	193.5	41.0	126	296	12	0.042	60.546	0.372*	39.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	1360.83	246.89	730.0	1600.0	12	0.5643	-405.7964	0.820	148.19
CHLORIDE, DISSOLVED	21	251.76	52.45	167.0	340.0	20	0.0348	148.0416	0.212*	52.03
DISSOLVED SOLIDS, SUM OF CONST	12	2495.8	358.8	1550	2990	12	0.914	-364.923	0.914	153.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	2699.2	392.6	1650	3190	12	1.002	-439.164	0.916	165.2
HARDNESS, TOTAL	21	1559.7	254.6	850	2000	20	0.557	-89.087	0.648	204.2
HARDNESS, NONCARBONATE	12	1390.8	276.8	690	1700	12	0.555	-347.355	0.720	201.6
TURBIDITY (JTU)	21	42.3	77.6	3	360	20	-0.170	565.171	-0.677	59.8
FLUORIDE, DISSOLVED	11	0.64	0.14	0.3	0.9	11	-0.0001	1.0366	-0.338*	0.14

*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%
	3640	3430	3380	3320	3250	3150	3070	2900	2790	2030

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
339	20.26	10.04	2.83	67	5.00

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	0	2	4	0	2
CADMIUM (CD), UG/L	7	0	<10	4	0	0
CHROMIUM (CR), UG/L	7	5	30	4	0	2
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	7	0	10	4	0	2
IRON (FE), UG/L	14	100	1500	4	0	50
LEAD (PB), UG/L	7	0	30	4	0	0
MANGANESE (MN), UG/L	14	30	220	4	10	30
MERCURY (HG), UG/L	5	0.0	<0.5	4	0.0	0.2
SELENIUM (SE), UG/L	5	0	29	4	0	11
ZINC (ZN), UG/L	7	<10	90	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	9.40	166.00			
BIOMASS, ASH WT., G/SQ M	5	8.40	162.00			
CHLOROPHYLL A, MG/SQ M	5	1.100	57.000			
CHLOROPHYLL B, MG/SQ M	5	0.000	1.800			
ORGANIC CARBON, MG/L	4	1.000	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	18.13	9.49	5.0	34.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	46	6537.6	3137.5	694	13900					
STREAMFLOW (CUBIC FT/SEC)	47	311.4	972.6	8	6640	46	-0.136	1202.875	-0.434	895.8
PH (STANDARD UNITS)	45	7.95	0.32	7.3	8.7	45	0.0000	7.8878	0.096*	0.32
PHOSPHORUS, TOTAL	10	0.156	0.208	0.00	0.59	10	-0.00007	0.61403	-0.959	0.063
NITRITE + NITRATE, TOTAL	10	0.293	0.396	0.00	1.20	10	-0.00003	0.50066	-0.228*	0.409
NITROGEN, KJELDAHL, TOTAL	10	1.177	1.089	0.56	4.20	10	-0.00029	3.05278	-0.751	0.763
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	23063.3	24244.3	970	72000	9	-0.216	24498.113	-0.027*	25908.7
SEDIMENT SUSPENDED	1	84.0	0.0	84						
SEDIMENT, CLAY-SILT (PERCENT)	1	48.0	0.0	48						
COLIFORM, FECAL (COL/100 ML)	5	724.6	1579.5	1	3550					
STREPTOCOCCI, FECAL (COL/100 ML)	5	1916.8	4183.3	6	9400					
SILICA, DISSOLVED	10	5.31	3.03	0.4	9.3	10	-0.0007	10.2314	-0.708	2.27
CALCIUM, DISSOLVED	45	248.62	87.39	48.0	530.0	44	0.0262	74.7291	0.912	36.55
MAGNESIUM, DISSOLVED	45	81.53	34.38	10.0	130.0	44	0.0103	13.1674	0.913	14.36
SODIUM, DISSOLVED	45	1083.69	554.72	76.0	2500.0	44	0.1780	-92.5854	0.975	127.16
POTASSIUM, DISSOLVED	45	9.41	2.18	5.2	19.0	44	0.0005	6.1262	0.691	1.61
BICARBONATE, ION	45	191.7	49.2	104	294	44	0.009	134.952	0.527	42.6
CARBONATE, ION	42	0.0	0.0	0	0	41	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	43	749.84	291.07	73.0	1400.0	42	0.0916	153.4863	0.959	84.10
CHLORIDE, DISSOLVED	43	1667.91	891.01	150.0	4100.0	42	0.2913	-214.6917	0.991	121.20
DISSOLVED SOLIDS, SUM OF CONST	10	3962.2	1667.5	672	5440	10	0.571	207.173	0.982	334.1
DISSOLVED SOLIDS, ROE 180 DEG C	45	4138.3	1909.2	478	9040	44	0.625	5.801	0.995	193.5
HARDNESS, TOTAL	45	955.6	342.0	160	1700	44	0.108	238.713	0.961	96.3
HARDNESS, NONCARBONATE	45	797.8	319.7	73	1600	44	0.101	129.115	0.960	92.0
TURBIDITY (JTU)	10	108.4	206.3	2	580	10	-0.066	541.065	-0.915	88.5
FLUORIDE, DISSOLVED	10	0.39	0.07	0.3	0.5	10	0.0000	0.3076	0.487*	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%
	10700	9670	9310	8910	8550	7790	5910	2930	1860	1200

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	17.03	10.46	2.93	81	3.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	18	3	1	6
CADMIUM (CD), UG/L	3	1	30	3	0	7
CHROMIUM (CR), UG/L	3	<10	30	3	0	0
COBALT (CO), UG/L	3	0	100	3	0	0
COPPER (CU), UG/L	3	12	50	3	3	6
IRON (FE), UG/L	10	<100	3000	3	20	40
LEAD (PB), UG/L	3	14	100	3	3	64
MANGANESE (MN), UG/L	10	27	970	3	0	50
MERCURY (HG), UG/L	2	0.1	0.4	3	0.0	0.0
SELENIUM (SE), UG/L	3	1	2	3	0	1
ZINC (ZN), UG/L	3	20	1400	3	0	610
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	7.000	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	17.95	8.75	0.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	6415.2	2417.7	1300	10700					
STREAMFLOW (CUBIC FT/SEC)	22	861.5	1558.6	65	7000	21	-0.371	3260.680	-0.562	1352.3
PH (STANDARD UNITS)	22	8.13	0.28	7.6	8.7	21	0.0000	7.8130	0.411*	0.26
PHOSPHORUS, TOTAL	22	0.312	0.335	0.00	1.12	21	-0.00007	0.72709	-0.505	0.289
NITRITE + NITRATE, TOTAL	12	0.167	0.261	0.00	0.87	12	0.00003	-0.01721	0.254*	0.265
NITROGEN, KJELDAHL, TOTAL	12	2.017	3.234	0.37	12.00	12	-0.00102	9.24832	-0.808	2.000
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	65873.3	90798.8	280	260000	12	0.451	62663.422	0.013*	95221.7
SEDIMENT SUSPENDED	12	1323.8	2289.3	42	7490					
SEDIMENT, CLAY-SILT (PERCENT)	12	46.8	31.1	8	91					
COLIFORM, FECAL (COL/100 ML)	12	3434.8	7959.9	1	27000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3201.1	5749.0	4	16000					
SILICA, DISSOLVED	12	6.69	3.50	1.0	13.0	12	-0.0004	9.3790	-0.278*	3.52
CALCIUM, DISSOLVED	12	350.75	112.02	79.0	490.0	12	0.0431	43.6477	0.991	16.10
MAGNESIUM, DISSOLVED	12	108.42	44.86	16.0	150.0	12	0.0166	-9.7879	0.952	14.40
SODIUM, DISSOLVED	12	1130.83	456.68	150.0	1800.0	12	0.1770	-128.9873	0.997	38.41
POTASSIUM, DISSOLVED	12	10.61	2.06	6.5	14.0	12	0.0003	8.7179	0.332*	2.04
BICARBONATE, ION	12	162.8	68.6	71	312	12	0.020	19.527	0.755	47.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	1054.17	363.78	190.0	1400.0	12	0.1388	66.0464	0.981	73.14
CHLORIDE, DISSOLVED	22	1675.45	680.83	230.0	2900.0	21	0.2803	-121.8647	0.971	170.15
DISSOLVED SOLIDS, SUM OF CONST	12	4562.2	1731.4	726	6910	12	0.672	-223.824	0.999	89.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	4621.4	1668.1	777	6600	12	0.647	18.668	0.997	136.1
HARDNESS, TOTAL	22	1244.0	457.0	260	1800	21	0.173	160.875	0.919	183.4
HARDNESS, NONCARBONATE	12	1190.0	422.1	190	1600	12	0.159	56.155	0.971	106.7
TURBIDITY (JTU)	22	247.5	529.4	1	1800	21	-0.098	885.734	-0.438	498.0
FLUORIDE, DISSOLVED	11	0.51	0.11	0.3	0.6	11	0.0000	0.3976	0.373*	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%
	12100	9620	9180	8760	8460	7830	6350	3810	2650	1240

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
256	17.71	9.69	2.95	75	3.90

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	8	2	21	4	1	5
CADMIUM (CD), UG/L	8	0	10	4	0	4
CHROMIUM (CR), UG/L	8	6	140	4	0	0
COBALT (CO), UG/L	4	0	2	4	0	0
COPPER (CU), UG/L	8	1	70	4	0	2
IRON (FE), UG/L	14	0	44000	4	10	40
LEAD (PB), UG/L	8	0	50	4	0	6
MANGANESE (MN), UG/L	14	0	940	4	0	20
MERCURY (HG), UG/L	6	0.0	0.5	4	0.0	0.2
SELENIUM (SE), UG/L	5	1	6	4	0	4
ZINC (ZN), UG/L	8	8	250	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	35.70			
BIOMASS, ASH WT., G/SQ M	4	0.00	34.00			
CHLOROPHYLL A, MG/SQ M	4	0.000	1.800			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.000			
ORGANIC CARBON, MG/L	4	2.400	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	17.54	8.68	3.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	1453.8	387.8	550	1910					
STREAMFLOW (CUBIC FT/SEC)	13	829.2	1411.7	67	5490	13	-2.348	4242.563	-0.645	1126.7
PH (STANDARD UNITS)	12	8.21	0.39	7.5	8.9	12	0.0002	7.8775	0.234*	0.40
PHOSPHORUS, TOTAL	12	0.243	0.227	0.04	0.85	12	-0.00049	0.95723	-0.874	0.116
NITRITE + NITRATE, TOTAL	12	0.428	0.388	0.00	0.92	12	-0.00017	0.67391	-0.176*	0.400
NITROGEN, KJELDAHL, TOTAL	12	1.134	0.507	0.47	2.10	12	-0.00051	1.87253	-0.406*	0.486
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	246981.8	392603.4	4200	1100000	11	-339.816	769063.313	-0.262*	399427.4
SEDIMENT SUSPENDED	10	756.9	1711.2	26	5611					
SEDIMENT, CLAY-SILT (PERCENT)	10	44.9	24.7	16	94					
COLIFORM, FECAL (COL/100 ML)	6	75.5	65.7	22	202					
STREPTOCOCCI, FECAL (COL/100 ML)	5	391.6	609.7	15	1450					
SILICA, DISSOLVED	12	9.19	2.82	5.9	15.0	12	0.0021	6.0900	0.306*	2.82
CALCIUM, DISSOLVED	12	151.58	43.85	59.0	210.0	12	0.0943	14.4534	0.871	22.58
MAGNESIUM, DISSOLVED	12	65.58	21.28	19.0	81.0	12	0.0477	-3.7471	0.908	9.36
SODIUM, DISSOLVED	12	78.92	23.54	25.0	110.0	12	0.0492	7.4170	0.846	13.16
POTASSIUM, DISSOLVED	12	4.47	1.12	3.1	6.3	12	-0.0010	5.8647	-0.348*	1.10
BICARBONATE, ION	12	248.7	69.0	162	360	12	0.134	54.392	0.785	44.9
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	467.27	160.44	100.0	660.0	11	0.3536	-45.3967	0.936	59.68
CHLORIDE, DISSOLVED	11	97.27	30.67	31.0	140.0	11	0.0559	16.2144	0.774	20.47
DISSOLVED SOLIDS, SUM OF CONST	11	993.6	290.8	326	1270	11	0.667	27.061	0.973	70.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	1073.1	297.7	372	1350	12	0.704	48.769	0.958	89.2
HARDNESS, TOTAL	12	648.3	180.8	230	820	12	0.427	27.391	0.956	55.3
HARDNESS, NONCARBONATE	12	445.3	143.9	93	620	12	0.324	-26.216	0.913	61.7
TURBIDITY (JTU)	12	68.3	96.0	3	290	12	-0.182	332.375	-0.766	64.7
FLUORIDE, DISSOLVED	12	0.42	0.11	0.3	0.7	12	-0.0001	0.6089	-0.485*	0.10

*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%
	1910	1770	1750	1700	1650	1500	1290	904	815	652

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
353	19.34	10.22	2.85	81	3.51

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

07331000 -- WASHITA RIVER NR DURWOOD, OK

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	5	1	38	5	0	5
CADMIUM (CD), UG/L	4	1	20	5	0	5
CHROMIUM (CR), UG/L	4	0	20	5	0	10
COBALT (CO), UG/L	4	16	50	5	0	1
COPPER (CU), UG/L	4	10	45	5	1	10
IRON (FE), UG/L	10	200	39000	5	0	40
LEAD (PB), UG/L	4	34	100	5	0	24
MANGANESE (MN), UG/L	10	74	1400	5	0	20
MERCURY (HG), UG/L	3	0.0	0.1	5	0.0	0.0
SELENIUM (SE), UG/L	5	0	1	5	0	1
ZINC (ZN), UG/L	4	30	100	5	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	4	5.600	15.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	16.74	5.66	5.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	1506.1	229.1	925	1760					
STREAMFLOW (CUBIC FT/SEC)	23	2979.3	1672.0	373	7000	22	0.696	1934.510	0.093*	1745.9
PH (STANDARD UNITS)	19	7.72	0.54	6.2	8.4	19	-0.0011	9.4059	-0.451*	0.50
PHOSPHORUS, TOTAL	23	0.070	0.051	0.01	0.20	22	0.00004	0.00496	0.167*	0.053
NITRITE + NITRATE, TOTAL	11	0.057	0.033	0.01	0.11	11	-0.00011	0.23157	-0.668	0.026
NITROGEN, KJELDAHL, TOTAL	12	0.482	0.176	0.30	0.85	12	0.00035	-0.06442	0.381*	0.171
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	9809.1	16110.5	2400	58000	11	-45.068	79049.375	-0.529*	14410.7
SEDIMENT SUSPENDED	12	6.7	3.5	3	14					
SEDIMENT, CLAY-SILT (PERCENT)	12	70.3	24.1	9	93					
COLIFORM, FECAL (COL/100 ML)	12	23.8	18.7	0	60					
STREPTOCOCCI, FECAL (COL/100 ML)	12	48.2	46.6	1	170					
SILICA, DISSOLVED	12	4.78	1.33	3.3	6.9	12	0.0058	-4.1997	0.835	0.76
CALCIUM, DISSOLVED	12	92.67	10.26	76.0	110.0	12	0.0496	15.4737	0.926	4.05
MAGNESIUM, DISSOLVED	12	29.92	4.81	22.0	36.0	12	0.0242	-7.7176	0.963	1.36
SODIUM, DISSOLVED	12	182.50	26.33	140.0	210.0	12	0.1357	-28.5088	0.987	4.42
POTASSIUM, DISSOLVED	12	5.92	0.85	5.0	8.0	12	0.0005	5.0945	0.120*	0.89
BICARBONATE, ION	12	156.9	9.6	140	168	12	0.042	91.609	0.835	5.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	216.67	35.50	160.0	250.0	12	0.1832	-68.1434	0.988	5.75
CHLORIDE, DISSOLVED	23	291.04	38.54	200.0	350.0	22	0.1290	94.5339	0.760	24.32
DISSOLVED SOLIDS, SUM OF CONST	12	901.7	128.9	677	1030	12	0.668	-136.523	0.992	17.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	930.9	142.8	719	1100	11	0.723	-183.579	0.983	27.3
HARDNESS, TOTAL	23	360.3	39.2	280	430	22	0.143	144.318	0.624	23.0
HARDNESS, NONCARBONATE	12	225.8	38.0	170	260	12	0.187	-65.339	0.944	13.2
TURBIDITY (JTU)	23	2.2	1.4	1	5	22	-0.003	7.333	-0.550	1.2
FLUORIDE, DISSOLVED	11	0.39	0.16	0.2	0.8	11	-0.0003	0.9271	-0.350*	0.16

*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	1780	1770	1740	1730	1570	1470	1260	1250	1230

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
248	16.30	9.70	2.47	96	1.50

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	<1	4	4	1	3
CADMIUM (CD), UG/L	8	0	<10	4	0	2
CHROMIUM (CR), UG/L	8	4	40	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	7	0	10	4	0	1
IRON (FE), UG/L	15	<100	700	4	0	110
LEAD (PB), UG/L	8	0	20	4	0	3
MANGANESE (MN), UG/L	16	<1	750	4	0	370
MERCURY (HG), UG/L	6	0.0	1.0	4	0.0	0.6
SELENIUM (SE), UG/L	5	0	<3	4	0	0
ZINC (ZN), UG/L	7	5	40	4	0	4
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	1.800	4.200			

Table 12. 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	19.86	7.49	2.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	746.9	312.9	206	1270					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	14	7.90	0.27	7.2	8.2	14	0.0005	7.5232	0.587	0.23
PHOSPHORUS, TOTAL	14	0.127	0.077	0.07	0.32	14	-0.00012	0.21330	-0.470*	0.071
NITRITE + NITRATE, TOTAL	14	0.037	0.072	0.00	0.24	14	-0.00015	0.14613	-0.633	0.058
NITROGEN, KJELDAHL, TOTAL	13	0.761	0.232	0.47	1.30	13	-0.00020	0.90661	-0.275*	0.233
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	74983.3	86965.6	1500	240000	12	80.717	14936.461	0.314*	86593.5
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	619.5	1171.2	25	3700					
STREPTOCOCCI, FECAL (COL/100 ML)	12	436.4	1131.4	8	>4000					
SILICA, DISSOLVED	14	5.26	1.22	2.9	7.6	14	0.0023	3.5445	0.587	1.03
CALCIUM, DISSOLVED	11	53.91	23.09	19.0	90.0	11	0.0657	6.5482	0.981	4.70
MAGNESIUM, DISSOLVED	11	13.97	6.85	4.2	28.0	11	0.0193	0.0777	0.971	1.74
SODIUM, DISSOLVED	12	72.33	38.34	14.0	140.0	12	0.1120	-11.0073	0.989	6.01
POTASSIUM, DISSOLVED	12	3.71	1.00	1.9	5.4	12	0.0026	1.7578	0.891	0.47
BICARBONATE, ION	14	150.1	49.7	73	219	14	0.134	50.151	0.842	27.9
CARBONATE, ION	14	0.0	0.0	0	0	14	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	14	80.14	39.33	14.0	150.0	14	0.1226	-11.4270	0.975	9.02
CHLORIDE, DISSOLVED	14	110.50	57.07	18.0	210.0	14	0.1780	-22.4758	0.976	12.86
DISSOLVED SOLIDS, SUM OF CONST	11	403.5	197.0	111	737	11	0.569	-6.730	0.996	18.4
DISSOLVED SOLIDS, ROE 180 DEG C	14	442.4	189.4	108	760	14	0.601	-6.569	0.994	22.4
HARDNESS, TOTAL	11	190.8	84.2	65	340	11	0.242	16.534	0.990	12.6
HARDNESS, NONCARBONATE	11	75.7	47.5	5	160	11	0.131	-18.766	0.951	15.5
TURBIDITY (JTU)	14	31.4	18.6	15	80	14	-0.045	64.770	-0.749	12.9
FLUORIDE, DISSOLVED	14	0.26	0.12	0.0	0.5	14	0.0002	0.1450	0.384*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	19.52	9.93	2.75	88	2.79

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	13	1	9	11	1	3
CADMIUM (CD), UG/L	13	0	2	11	0	1
CHROMIUM (CR), UG/L	13	10	20	6	0	0
COBALT (CO), UG/L	8	0	5	6	0	1
COPPER (CU), UG/L	12	2	55	10	2	13
IRON (FE), UG/L	6	570	14000	11	0	120
LEAD (PB), UG/L	13	0	11	11	0	2
MANGANESE (MN), UG/L	8	80	460	6	0	70
MERCURY (HG), UG/L	13	0.0	0.6	11	0.0	0.2
SELENIUM (SE), UG/L	8	0	1	6	0	0
ZINC (ZN), UG/L	13	10	70	11	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	13	4.700	15.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	20.96	7.09	9.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	562.8	257.5	233	999					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.77	0.26	7.4	8.2	12	0.0009	7.2941	0.836	0.15
PHOSPHORUS, TOTAL	12	0.183	0.109	0.08	0.50	12	-0.00019	0.28770	-0.440*	0.102
NITRITE + NITRATE, TOTAL	12	0.067	0.079	0.00	0.20	12	-0.00014	0.14329	-0.445*	0.074
NITROGEN, KJELDAHL, TOTAL	12	0.899	0.250	0.59	1.50	12	0.00005	0.86864	0.056*	0.262
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	81236.3	137799.6	7300	430000	11	335.828	-110948.938	0.653	110024.3
SEDIMENT SUSPENDED	1	335.0	0.0	335						
SEDIMENT, CLAY-SILT (PERCENT)	1	93.0	0.0	93						
COLIFORM, FECAL (COL/100 ML)	11	743.6	1209.4	150	4300					
STREPTOCOCCI, FECAL (COL/100 ML)	10	212.5	330.2	10	1100					
SILICA, DISSOLVED	12	5.34	1.44	1.9	6.6	12	0.0007	4.9254	0.132*	1.50
CALCIUM, DISSOLVED	12	42.50	18.73	19.0	73.0	12	0.0709	2.6014	0.975	4.38
MAGNESIUM, DISSOLVED	12	11.35	5.75	5.0	22.0	12	0.0216	-0.8304	0.970	1.47
SODIUM, DISSOLVED	12	51.83	26.91	18.0	100.0	12	0.1036	-6.4915	0.992	3.62
POTASSIUM, DISSOLVED	12	3.23	0.53	2.4	4.0	12	0.0020	2.1349	0.940	0.19
BICARBONATE, ION	12	121.2	48.5	71	214	12	0.163	29.562	0.864	25.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	55.17	30.00	17.0	100.0	12	0.1127	-8.2568	0.967	8.00
CHLORIDE, DISSOLVED	12	79.42	42.59	25.0	150.0	12	0.1632	-12.4271	0.987	7.29
DISSOLVED SOLIDS, SUM OF CONST	12	308.9	143.2	128	552	12	0.556	-3.744	0.999	6.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	324.8	145.7	130	560	12	0.563	8.071	0.994	16.1
HARDNESS, TOTAL	12	152.8	68.6	68	270	12	0.260	6.176	0.977	15.3
HARDNESS, NONCARBONATE	12	53.3	36.1	10	110	12	0.131	-20.506	0.935	13.4
TURBIDITY (JTU)	12	52.9	31.1	15	130	12	-0.059	86.084	-0.488*	28.4
FLUORIDE, DISSOLVED	12	0.31	0.23	0.1	0.9	12	0.0001	0.2461	0.125*	0.24

*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%
	1130	959	916	786	718	525	381	247	225	201

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	19.75	8.70	2.79	90	2.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	2	3	2	1	2
CADMIUM (CD), UG/L	1	0		2	0	0
CHROMIUM (CR), UG/L	1	10		2	0	0
COBALT (CO), UG/L	1	0		2	0	0
COPPER (CU), UG/L	2	2	9	4	2	10
IRON (FE), UG/L	1	590		2	30	40
LEAD (PB), UG/L	1	12		2	0	0
MANGANESE (MN), UG/L	1	130		2	0	0
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	1	20		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	4	7.600	27.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	18.30	8.02	7.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	102.9	25.3	74	149					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	10	6.95	0.20	6.5	7.2	10	0.0008	6.8686	0.102*	0.21
PHOSPHORUS, TOTAL	10	0.044	0.027	0.00	0.10	10	0.00043	-0.00025	0.400*	0.026
NITRITE + NITRATE, TOTAL	10	0.325	0.277	0.09	1.00	10	0.00861	-0.56101	0.785	0.182
NITROGEN, KJELDAHL, TOTAL	10	0.435	0.204	0.23	0.77	10	-0.00040	0.47642	-0.050*	0.216
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	498.0	273.9	140	960	10	-1.746	677.617	-0.161*	286.7
SEDIMENT SUSPENDED	10	71.2	99.0	18	340					
SEDIMENT, CLAY-SILT (PERCENT)	10	87.0	18.3	37	100					
COLIFORM, FECAL (COL/100 ML)	10	56.1	86.9	8	300					
STREPTOCOCCI, FECAL (COL/100 ML)	9	97.8	138.1	4	440					
SILICA, DISSOLVED	10	4.37	1.09	2.9	6.4	10	0.0045	3.9055	0.104*	1.15
CALCIUM, DISSOLVED	10	8.92	1.45	7.0	11.0	10	0.0538	3.3838	0.939	0.53
MAGNESIUM, DISSOLVED	10	1.63	0.37	0.9	2.1	10	0.0097	0.6314	0.666	0.29
SODIUM, DISSOLVED	10	6.90	2.65	3.5	12.0	10	0.0901	-2.3671	0.858	1.45
POTASSIUM, DISSOLVED	10	1.71	0.55	1.1	2.9	10	0.0202	-0.3650	0.922	0.23
BICARBONATE, ION	10	20.6	2.1	17	24	10	-0.002	20.786	-0.022*	2.2
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	10.81	4.94	5.2	21.0	10	0.1598	-5.6334	0.817	3.02
CHLORIDE, DISSOLVED	10	10.68	3.56	6.3	17.0	10	0.1282	-2.5146	0.912	1.55
DISSOLVED SOLIDS, SUM OF CONST	10	55.4	12.2	39	78	10	0.461	7.958	0.959	3.7
DISSOLVED SOLIDS, ROE 180 DEG C	10	61.2	15.3	44	91	10	0.593	0.203	0.978	3.4
HARDNESS, TOTAL	10	29.0	4.5	23	35	10	0.171	11.417	0.961	1.3
HARDNESS, NONCARBONATE	10	12.2	4.9	6	20	10	0.179	-6.209	0.924	2.0
TURBIDITY (JTU)	10	15.7	6.7	10	30	10	0.102	5.224	0.384*	6.6
FLUORIDE, DISSOLVED	10	0.15	0.07	0.1	0.3	10	0.0006	0.0919	0.202*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
98	17.81	9.53	2.59	79	1.86

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	1
CADMIUM (CD), UG/L	3	0	10	4	0	2
CHROMIUM (CR), UG/L	3	0	10	4	0	0
COBALT (CO), UG/L	3	50	50	4	0	0
COPPER (CU), UG/L	3	0	10	4	0	8
IRON (FE), UG/L	3	1000	4100	4	80	210
LEAD (PB), UG/L	3	<100	<100	4	0	3
MANGANESE (MN), UG/L	3	80	210	4	50	80
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	3	40	400	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	0.000	8.600			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	20.63	7.69	7.5	33.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	238.7	136.6	97	605					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.02	0.13	6.7	7.2	12	0.0003	6.9474	0.297*	0.13
PHOSPHORUS, TOTAL	11	0.075	0.022	0.05	0.13	11	0.00011	0.05287	0.382*	0.022
NITRITE + NITRATE, TOTAL	11	0.327	0.188	0.07	0.61	11	0.00262	-0.08770	0.623	0.113
NITROGEN, KJELDAHL, TOTAL	11	0.668	0.201	0.42	0.98	11	0.00173	0.31347	0.656	0.160
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	497.0	761.2	53	2600	10	-0.389	590.072	-0.075*	605.1
SEDIMENT SUSPENDED	11	38.8	7.2	28	54					
SEDIMENT, CLAY-SILT (PERCENT)	11	87.9	10.6	65	100					
COLIFORM, FECAL (COL/100 ML)	12	85.8	160.2	<5	530					
STREPTOCOCCI, FECAL (COL/100 ML)	12	37.1	54.0	<5	200					
SILICA, DISSOLVED	12	7.62	1.17	5.9	9.3	12	0.0059	6.2101	0.692	0.89
CALCIUM, DISSOLVED	12	11.84	5.62	6.7	27.0	12	0.0404	2.1899	0.983	1.09
MAGNESIUM, DISSOLVED	12	2.22	1.14	1.1	5.3	12	0.0081	0.2820	0.973	0.28
SODIUM, DISSOLVED	12	28.25	18.02	11.0	78.0	12	0.1315	-3.1376	0.997	1.50
POTASSIUM, DISSOLVED	12	2.14	0.36	1.7	2.9	12	0.0024	1.5780	0.908	0.16
BICARBONATE, ION	12	28.5	13.2	12	56	12	0.073	11.190	0.750	9.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	12.48	3.62	7.3	20.0	12	0.0157	8.7460	0.591	3.06
CHLORIDE, DISSOLVED	12	46.75	32.49	19.0	140.0	12	0.2336	-9.0059	0.982	6.46
DISSOLVED SOLIDS, SUM OF CONST	12	125.8	64.6	61	300	12	0.472	13.066	0.999	3.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	143.6	71.9	74	337	12	0.522	18.943	0.992	9.3
HARDNESS, TOTAL	12	38.8	18.6	21	89	12	0.134	6.739	0.984	3.5
HARDNESS, NONCARBONATE	12	15.3	12.4	6	52	12	0.077	-2.949	0.646	6.9
TURBIDITY (JTU)	12	17.3	8.8	5	35	12	-0.037	26.012	-0.569*	7.6
FLUORIDE, DISSOLVED	12	0.20	0.09	0.0	0.3	12	-0.0000	0.2047	-0.031*	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 316

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%
	492	427	373	325	300	250	206	133	108	98

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
316	20.94	9.22	2.62	91	2.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	1	1	2	1	1
CADMIUM (CD), UG/L	2	0	0	2	0	0
CHROMIUM (CR), UG/L	2	<10	20	2	0	0
COBALT (CO), UG/L	2	0	0	2	0	0
COPPER (CU), UG/L	2	4	7	2	4	7
IRON (FE), UG/L	2	1200	1400	2	290	380
LEAD (PB), UG/L	2	4	8	2	0	3
MANGANESE (MN), UG/L	2	80	280	2	60	210
MERCURY (HG), UG/L	2	0.0	0.1	2	0.0	0.0
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	10	20	2	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	13.00	67.00			
BIOMASS, ASH WT., G/SQ M	2	9.70	57.00			
CHLOROPHYLL A, MG/SQ M	2	37.000	82.000			
CHLOROPHYLL B, MG/SQ M	2	6.100	7.100			
ORGANIC CARBON, MG/L	4	1.000	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.58	6.99	8.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	384.8	176.5	112	650					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.76	0.28	7.3	8.1	12	0.0007	7.4697	0.476*	0.26
PHOSPHORUS, TOTAL	11	0.282	0.256	0.11	0.91	11	-0.00107	0.68958	-0.772	0.172
NITRITE + NITRATE, TOTAL	11	0.625	0.783	0.00	2.40	11	-0.00221	1.46653	-0.522*	0.704
NITROGEN, KJELDAHL, TOTAL	11	1.094	0.497	0.72	2.40	11	-0.00189	1.81396	-0.703	0.372
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	3997.0	8877.3	120	29000	10	35.086	-9532.164	0.586*	7628.7
SEDIMENT SUSPENDED	11	259.2	316.0	30	924					
SEDIMENT, CLAY-SILT (PERCENT)	11	93.5	6.6	80	100					
COLIFORM, FECAL (COL/100 ML)	11	315.7	472.4	<5	1100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	305.4	476.7	<5	1600					
SILICA, DISSOLVED	12	14.80	4.99	6.2	21.0	12	0.0265	4.5887	0.939	1.81
CALCIUM, DISSOLVED	12	41.33	19.32	14.0	68.0	12	0.1079	-0.1997	0.986	3.39
MAGNESIUM, DISSOLVED	12	13.05	6.42	3.3	22.0	12	0.0360	-0.7987	0.989	1.00
SODIUM, DISSOLVED	12	18.43	11.33	4.0	40.0	12	0.0628	-5.7253	0.978	2.49
POTASSIUM, DISSOLVED	12	3.72	0.52	2.9	4.4	12	0.0006	3.4750	0.219*	0.54
BICARBONATE, ION	12	205.1	105.9	55	366	12	0.596	-24.366	0.994	11.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	8.74	3.05	4.6	15.0	12	0.0089	5.3203	0.515*	2.74
CHLORIDE, DISSOLVED	12	13.41	7.46	4.1	25.0	12	0.0415	-2.5703	0.983	1.44
DISSOLVED SOLIDS, SUM OF CONST	12	214.8	102.5	67	364	12	0.579	-7.843	0.996	9.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	219.9	105.1	66	374	12	0.592	-8.004	0.995	11.1
HARDNESS, TOTAL	12	156.0	73.5	49	260	12	0.411	-2.059	0.987	12.4
HARDNESS, NONCARBONATE	12	1.3	2.2	0	7	12	-0.005	3.239	-0.392*	2.2
TURBIDITY (JTU)	12	92.9	133.8	15	380	12	-0.557	307.191	-0.734	95.3
FLUORIDE, DISSOLVED	12	0.26	0.08	0.1	0.4	12	0.0002	0.1861	0.418*	0.08

*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%
	649	638	611	561	512	351	252	186	168	151

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
198	31.19	15.55	0.82	23	21.25

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	3	7	2	2	5
CADMIUM (CD), UG/L	2	0	0	2	0	0
CHROMIUM (CR), UG/L	2	10	10	2	0	0
COBALT (CO), UG/L	2	0	0	2	0	0
COPPER (CU), UG/L	2	4	10	2	1	10
IRON (FE), UG/L	2	1300	2600	2	10	40
LEAD (PB), UG/L	2	2	9	2	0	1
MANGANESE (MN), UG/L	2	140	520	2	80	380
MERCURY (HG), UG/L	2	0.0	0.0	2	0.0	0.0
SELENIUM (SE), UG/L	2	0	1	2	0	0
ZINC (ZN), UG/L	2	20	40	2	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.80				
BIOMASS, ASH WT., G/SQ M	1	0.20				
CHLOROPHYLL A, MG/SQ M	1	0.300				
CHLOROPHYLL B, MG/SQ M	1	0.200				
ORGANIC CARBON, MG/L	4	3.800	10.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	17.75	7.91	5.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	367.6	58.0	291	448					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.77	0.21	7.4	8.1	12	0.0013	7.3017	0.357*	0.21
PHOSPHORUS, TOTAL	11	0.233	0.082	0.11	0.44	11	-0.00007	0.25641	-0.045*	0.087
NITRITE + NITRATE, TOTAL	11	1.099	0.425	0.48	1.70	11	-0.00365	2.41983	-0.490*	0.391
NITROGEN, KJELDAHL, TOTAL	9	0.663	0.076	0.49	0.77	9	-0.00038	0.79819	-0.296*	0.077
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3575.8	2533.9	810	9500	12	15.368	-2073.343	0.352*	2487.6
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	176.5	135.6	<5	380					
STREPTOCOCCI, FECAL (COL/100 ML)	10	103.7	101.9	<5	240					
SILICA, DISSOLVED	12	5.24	1.80	1.4	6.9	12	-0.0223	13.4528	-0.718	1.32
CALCIUM, DISSOLVED	12	36.83	4.02	32.0	42.0	12	0.0569	15.9312	0.821	2.41
MAGNESIUM, DISSOLVED	12	11.26	1.70	9.0	14.0	12	0.0216	3.3351	0.735	1.21
SODIUM, DISSOLVED	12	19.33	7.46	10.0	32.0	12	0.1193	-24.5096	0.927	2.93
POTASSIUM, DISSOLVED	12	2.84	0.44	2.0	3.5	12	0.0059	0.6889	0.769	0.30
BICARBONATE, ION	12	119.3	13.5	103	141	12	0.186	50.807	0.802	8.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	51.00	10.31	39.0	70.0	12	0.1561	-6.3893	0.878	5.17
CHLORIDE, DISSOLVED	12	19.75	8.26	12.0	40.0	12	0.1060	-19.2286	0.745	5.78
DISSOLVED SOLIDS, SUM OF CONST	12	205.3	31.5	162	261	12	0.535	8.724	0.984	5.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	216.0	34.8	166	288	12	0.546	15.475	0.911	15.1
HARDNESS, TOTAL	12	138.3	15.3	120	160	12	0.221	56.999	0.840	8.7
HARDNESS, NONCARBONATE	12	40.2	7.3	31	53	12	0.086	8.376	0.691	5.5
TURBIDITY (JTU)	12	56.7	22.7	10	80	12	-0.217	136.611	-0.556*	19.8
FLUORIDE, DISSOLVED	12	0.24	0.07	0.1	0.3	12	0.0007	-0.0315	0.645	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%
	456	444	437	424	411	387	345	302	294	286

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	18.01	10.56	2.64	96	1.53

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	12	2	6	12	1	2
CADMIUM (CD), UG/L	12	0	10	12	0	0
CHROMIUM (CR), UG/L	11	10	70	9	0	0
COBALT (CO), UG/L	8	0	3	9	0	0
COPPER (CU), UG/L	11	5	120	12	2	7
IRON (FE), UG/L	8	2400	8100	12	0	120
LEAD (PB), UG/L	11	4	16	12	0	4
MANGANESE (MN), UG/L	8	0	260	9	0	70
MERCURY (HG), UG/L	12	0.0	0.2	12	0.0	0.2
SELENIUM (SE), UG/L	9	0	1	9	0	1
ZINC (ZN), UG/L	11	10	70	12	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	12	3.200	8.400			

Table 12. 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: 10/01/75 - 09/30/76

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)	11	17.59	8.15	6.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	396.3	60.5	309	481					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.88	0.34	6.9	8.2	12	-0.0004	8.0281	-0.064*	0.36
PHOSPHORUS, TOTAL	12	0.240	0.086	0.12	0.43	12	-0.00106	0.66049	-0.745	0.060
NITRITE + NITRATE, TOTAL	12	1.180	0.445	0.63	1.80	12	-0.00484	3.09796	-0.659	0.351
NITROGEN, KJELDAHL, TOTAL	12	0.638	0.229	0.44	1.30	12	-0.00196	1.41585	-0.517*	0.206
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1479.2	967.7	480	4100	12	4.424	-274.051	0.277*	975.3
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	7	135.7	93.9	<5	220					
STREPTOCOCCI, FECAL (COL/100 ML)	10	828.0	841.3	30	2400					
SILICA, DISSOLVED	12	5.37	2.03	0.8	7.5	12	-0.0237	14.7673	-0.707	1.51
CALCIUM, DISSOLVED	12	35.67	4.08	34.0	45.0	12	0.0612	15.3989	0.910	1.78
MAGNESIUM, DISSOLVED	12	11.68	1.69	9.5	14.0	12	0.0268	1.0428	0.963	0.48
SODIUM, DISSOLVED	12	21.50	6.13	13.0	29.0	12	0.0967	-16.8336	0.956	1.89
POTASSIUM, DISSOLVED	12	2.89	0.32	2.4	3.3	12	0.0047	1.0115	0.896	0.15
BICARBONATE, ION	12	119.6	15.6	94	144	12	0.188	45.082	0.729	11.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	56.92	13.37	43.0	88.0	12	0.1782	-13.7171	0.807	8.29
CHLORIDE, DISSOLVED	12	22.83	6.19	16.0	33.0	12	0.0818	-9.5783	0.800	3.90
DISSOLVED SOLIDS, SUM OF CONST	12	220.4	32.1	171	264	12	0.520	14.145	0.981	6.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	222.3	35.3	170	270	12	0.557	1.559	0.955	10.9
HARDNESS, TOTAL	12	147.5	17.6	120	170	12	0.277	37.877	0.949	5.8
HARDNESS, NONCARBONATE	12	49.5	12.2	37	83	12	0.115	3.881	0.572*	10.5
TURBIDITY (JTU)	12	47.5	34.1	2	110	12	-0.509	249.068	-0.903	15.4
FLUORIDE, DISSOLVED	12	0.52	0.15	0.3	0.8	12	0.0011	0.0727	0.465*	0.14

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 339

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	509	491	470	450	434	410	384	342	334	315

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
341	21.33	7.81	2.64	11	15.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	2
CADMIUM (CD), UG/L	3	0	0	4	0	0
CHROMIUM (CR), UG/L	3	0	20	4	0	0
COBALT (CO), UG/L	3	0	4	4	0	0
COPPER (CU), UG/L	4	3	26	5	1	7
IRON (FE), UG/L	3	780	7200	3	0	10
LEAD (PB), UG/L	3	2	13	4	0	2
MANGANESE (MN), UG/L	3	70	320	4	0	40
MERCURY (HG), UG/L	3	0.0	0.3	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	60	4	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	3.600	11.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	117	19.59	5.84	11.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	52.0	8.4	39	70					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	6.75	0.31	6.2	7.1	12	0.0117	6.1438	0.319*	0.30
PHOSPHORUS, TOTAL	11	0.098	0.031	0.05	0.15	11	0.00005	0.09575	0.013*	0.033
NITRITE + NITRATE, TOTAL	11	0.218	0.109	0.04	0.37	11	-0.00888	0.68211	-0.708	0.081
NITROGEN, KJELDAHL, TOTAL	11	0.507	0.287	0.24	1.20	11	-0.01277	1.17473	-0.388*	0.279
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2956.4	4858.2	410	17000	11	182.254	-6570.535	0.328*	4838.4
SEDIMENT SUSPENDED	9	103.3	77.7	16	262					
SEDIMENT, CLAY-SILT (PERCENT)	9	83.0	17.8	43	99					
COLIFORM, FECAL (COL/100 ML)	10	1041.0	1643.4	20	5200					
STREPTOCOCCI, FECAL (COL/100 ML)	10	1734.4	2654.7	4	7800					
SILICA, DISSOLVED	4	10.02	2.94	6.9	13.0					
CALCIUM, DISSOLVED	4	2.97	0.92	1.9	4.1					
MAGNESIUM, DISSOLVED	4	0.95	0.67	0.4	1.9					
SODIUM, DISSOLVED	3	4.50	0.95	3.6	5.5					
POTASSIUM, DISSOLVED	4	2.05	0.56	1.3	2.6					
BICARBONATE, ION	12	14.8	3.1	10	22	12	0.256	1.413	0.696	2.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	3.62	1.71	1.6	5.7					
CHLORIDE, DISSOLVED	3	5.53	1.11	4.5	6.7					
DISSOLVED SOLIDS, SUM OF CONST	3	34.7	3.8	32	39					
DISSOLVED SOLIDS, ROE 180 DEG C	4	52.3	23.3	35	86					
HARDNESS, TOTAL	4	11.3	4.6	8	18					
HARDNESS, NONCARBONATE	4	0.0	0.0	0	0					
TURBIDITY (JTU)	11	33.2	14.2	10	60	11	-0.947	83.533	-0.511*	12.9
FLUORIDE, DISSOLVED	4	0.12	0.05	0.1	0.2					

*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%
	80	66	62	57	54	52	50	45	39	30

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
296	25.14	10.70	3.48	20	14.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	10	4	0	0
COBALT (CO), UG/L	4	0	3	4	0	0
COPPER (CU), UG/L	3	2	1900	2	4	26
IRON (FE), UG/L	4	1600	5000	9	50	220
LEAD (PB), UG/L	4	0	12	4	0	0
MANGANESE (MN), UG/L	4	190	390	4	10	300
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	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	4	0.600	12.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.04	7.55	6.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	379.5	77.2	258	477					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.75	0.47	6.8	8.6	12	0.0006	7.5211	0.096*	0.49
PHOSPHORUS, TOTAL	12	0.177	0.064	0.08	0.31	12	-0.00043	0.34050	-0.524*	0.057
NITRITE + NITRATE, TOTAL	12	0.843	0.328	0.34	1.40	12	-0.00239	1.75068	-0.563*	0.284
NITROGEN, KJELDAHL, TOTAL	12	0.688	0.120	0.45	0.91	12	-0.00079	0.99003	-0.513*	0.108
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	8981.8	15400.0	1000	48000	11	98.658	-28140.473	0.513*	13934.5
SEDIMENT SUSPENDED	1	204.0	0.0	204						
SEDIMENT, CLAY-SILT (PERCENT)	1	88.0	0.0	88						
COLIFORM, FECAL (COL/100 ML)	12	205.4	225.6	5	790					
STREPTOCOCCI, FECAL (COL/100 ML)	11	159.2	173.2	20	510					
SILICA, DISSOLVED	12	5.57	1.62	2.3	6.8	12	-0.0107	9.6464	-0.512*	1.46
CALCIUM, DISSOLVED	12	35.83	6.28	27.0	46.0	12	0.0730	8.1207	0.897	2.91
MAGNESIUM, DISSOLVED	12	10.67	2.04	7.9	14.0	12	0.0238	1.6453	0.898	0.94
SODIUM, DISSOLVED	12	23.25	8.50	11.0	34.0	12	0.1039	-16.1718	0.943	2.96
POTASSIUM, DISSOLVED	12	2.90	0.40	2.4	3.6	12	0.0043	1.2699	0.838	0.23
BICARBONATE, ION	12	113.6	18.1	89	140	12	0.194	39.842	0.830	10.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	47.17	12.61	31.0	72.0	12	0.1474	-8.7801	0.902	5.71
CHLORIDE, DISSOLVED	12	28.00	11.58	14.0	50.0	12	0.1160	-16.0260	0.773	7.70
DISSOLVED SOLIDS, SUM OF CONST	12	209.7	43.1	145	273	12	0.555	-1.116	0.995	4.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	223.0	42.8	152	294	12	0.537	19.021	0.969	11.1
HARDNESS, TOTAL	12	133.3	24.2	100	170	12	0.281	26.702	0.894	11.4
HARDNESS, NONCARBONATE	12	40.3	11.1	23	61	12	0.128	-8.335	0.888	5.4
TURBIDITY (JTU)	12	65.8	39.9	15	150	12	-0.215	147.574	-0.417*	38.0
FLUORIDE, DISSOLVED	12	0.27	0.12	0.1	0.5	12	0.0007	0.0035	0.454*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
234	18.06	10.49	2.68	96	1.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	2	4	3	1	1
CADMIUM (CD), UG/L	3	0	1	3	0	0
CHROMIUM (CR), UG/L	3	<10	30	3	0	3
COBALT (CO), UG/L	3	0	1	3	0	0
COPPER (CU), UG/L	3	6	9	3	3	6
IRON (FE), UG/L	3	1500	6900	3	10	130
LEAD (PB), UG/L	3	0	8	3	0	0
MANGANESE (MN), UG/L	3	120	260	3	0	20
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	40	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	4.600	5.600			

Table 12. 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:　10/01/75 - 09/30/76

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)	11	21.68	6.58	12.5	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	188.9	69.5	107	327					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.47	0.24	6.9	7.7	12	0.0020	7.0880	0.574*	0.21
PHOSPHORUS, TOTAL	12	0.279	0.104	0.12	0.51	12	0.00050	0.18489	0.334*	0.103
NITRITE + NITRATE, TOTAL	12	0.267	0.100	0.14	0.49	12	0.00010	0.24882	0.069*	0.105
NITROGEN, KJELDAHL, TOTAL	12	0.722	0.191	0.26	0.97	12	-0.00022	0.76303	-0.080*	0.199
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	191.1	169.1	41	540	10	1.029	-7.040	0.432*	161.8
SEDIMENT SUSPENDED	11	48.7	19.4	18	80					
SEDIMENT, CLAY-SILT (PERCENT)	11	86.4	12.7	52	98					
COLIFORM, FECAL (COL/100 ML)	10	542.9	647.2	5	2100					
STREPTOCOCCI, FECAL (COL/100 ML)	11	756.4	1167.2	40	3800					
SILICA, DISSOLVED	12	10.04	2.46	6.8	14.0	12	0.0308	4.2232	0.871	1.26
CALCIUM, DISSOLVED	12	15.92	6.29	8.2	24.0	12	0.0855	-0.2328	0.945	2.16
MAGNESIUM, DISSOLVED	12	5.81	2.39	2.3	10.0	12	0.0334	-0.5060	0.973	0.58
SODIUM, DISSOLVED	12	12.76	5.18	8.0	26.0	12	0.0704	-0.5506	0.944	1.79
POTASSIUM, DISSOLVED	12	2.97	0.54	2.0	3.8	12	0.0044	2.1358	0.564*	0.47
BICARBONATE, ION	12	71.8	27.9	36	123	12	0.394	-2.750	0.981	5.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.59	3.50	4.9	16.0	12	0.0198	5.8501	0.393*	3.38
CHLORIDE, DISSOLVED	12	16.42	6.74	9.4	33.0	12	0.0892	-0.4396	0.919	2.79
DISSOLVED SOLIDS, SUM OF CONST	12	108.9	37.0	65	178	12	0.528	9.081	0.992	5.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	119.3	36.3	70	182	12	0.482	28.242	0.922	14.7
HARDNESS, TOTAL	12	63.5	25.1	30	100	12	0.349	-2.404	0.966	6.8
HARDNESS, NONCARBONATE	12	5.2	4.9	0	13	12	0.023	0.730	0.333*	4.8
TURBIDITY (JTU)	12	32.4	14.2	9	55	12	-0.186	67.488	-0.907	6.3
FLUORIDE, DISSOLVED	12	0.18	0.06	0.1	0.3	12	0.0005	0.0908	0.589	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE　　　SAMPLE SIZE = 353

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%
	413	336	289	245	216	174	144	112	104	91

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
353	21.04	7.96	2.82	86	2.27

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	3		1	2	
CADMIUM (CD), UG/L	1	0		1	0	
CHROMIUM (CR), UG/L	1	10		1	0	
COBALT (CO), UG/L	1	0		1	0	
COPPER (CU), UG/L	1	8		1	8	
IRON (FE), UG/L	1	1100		1	70	
LEAD (PB), UG/L	1	3		1	0	
MANGANESE (MN), UG/L	1	210		1	200	
MERCURY (HG), UG/L	1	0.0		1	0.0	
SELENIUM (SE), UG/L	1	0		1	0	
ZINC (ZN), UG/L	1	30		1	10	
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	31.00				
BIOMASS, ASH WT., G/SQ M	1	26.00				
CHLOROPHYLL A, MG/SQ M	1	60.000				
CHLOROPHYLL B, MG/SQ M	1	5.700				
ORGANIC CARBON, MG/L	4	4.600	16.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.54	7.13	9.5	31.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	564.1	1250.8	39	4440					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	6.72	0.29	6.3	7.2	12	0.0001	6.6492	0.574*	0.25
PHOSPHORUS, TOTAL	12	0.075	0.026	0.05	0.15	12	-0.00001	0.07902	-0.346*	0.025
NITRITE + NITRATE, TOTAL	12	0.064	0.032	0.01	0.10	12	0.00001	0.05952	0.325*	0.032
NITROGEN, KJELDAHL, TOTAL	12	0.607	0.234	0.36	1.20	12	-0.00004	0.63282	-0.240*	0.238
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	983.9	1595.0	30	5200	12	-0.304	1155.331	-0.238*	1624.7
SEDIMENT SUSPENDED	11	51.5	41.7	17	160					
SEDIMENT, CLAY-SILT (PERCENT)	11	81.2	15.8	44	96					
COLIFORM, FECAL (COL/100 ML)	10	590.6	1313.4	40	4300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1469.2	3652.6	30	13000					
SILICA, DISSOLVED	12	12.80	4.13	5.8	20.0	12	0.0016	11.8929	0.487*	3.78
CALCIUM, DISSOLVED	12	7.30	9.16	2.2	35.0	12	0.0071	3.2937	0.970	2.35
MAGNESIUM, DISSOLVED	12	12.12	24.36	0.8	86.0	12	0.0189	1.4824	0.968	6.40
SODIUM, DISSOLVED	12	105.22	213.10	4.0	750.0	12	0.1651	12.0930	0.969	55.23
POTASSIUM, DISSOLVED	12	5.32	8.73	1.2	32.0	12	0.0068	1.4878	0.974	2.06
BICARBONATE, ION	12	18.5	6.4	10	33	12	0.003	16.602	0.654	5.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	27.45	50.42	3.5	180.0	12	0.0392	5.3501	0.972	12.44
CHLORIDE, DISSOLVED	12	188.92	398.57	4.9	1400.0	12	0.3091	14.5917	0.970	101.88
DISSOLVED SOLIDS, SUM OF CONST	12	351.8	654.7	29	2320	12	0.505	67.069	0.964	182.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	381.2	718.7	38	2560	12	0.557	66.924	0.970	184.5
HARDNESS, TOTAL	12	67.7	122.7	9	440	12	0.095	14.015	0.970	31.3
HARDNESS, NONCARBONATE	12	53.4	117.4	0	410	12	0.091	1.917	0.972	28.7
TURBIDITY (JTU)	12	23.8	8.8	10	35	12	-0.003	25.672	-0.483*	8.1
FLUORIDE, DISSOLVED	11	0.15	0.10	0.0	0.3	11	-0.0000	0.1539	-0.110*	0.11

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE										SAMPLE SIZE = 353
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%
	4680	2670	1820	724	343	92	66	49	46	37

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
352	21.91	7.42	2.65	87	2.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	1	1	2	0	1
CADMIUM (CD), UG/L	2	0	1	3	0	0
CHROMIUM (CR), UG/L	2	10	20	2	0	0
COBALT (CO), UG/L	2	0	0	3	0	0
COPPER (CU), UG/L	2	2	7	3	2	7
IRON (FE), UG/L	2	730	1400	3	80	250
LEAD (PB), UG/L	2	4	6	3	0	0
MANGANESE (MN), UG/L	2	90	410	3	40	370
MERCURY (HG), UG/L	2	0.0	0.1	2	0.0	0.1
SELENIUM (SE), UG/L	2	0	0	3	0	0
ZINC (ZN), UG/L	2	30	60	3	20	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	4	4.200	18.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08030500   NAME: SABINE RIVER NR RULIFF, TEX.

LAT 30018M13S LONG 093044M37S
DRAINAGE AREA: 9329 SQ MI (24162 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	20.42	4.82	13.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	19	128.1	36.7	57	179					
STREAMFLOW (CUBIC FT/SEC)	19	4615.3	3752.5	1070	12000	19	-37.727	9446.340	-0.369*	3588.3
PH (STANDARD UNITS)	12	6.07	0.21	5.7	6.4	12	0.0013	5.8857	0.215*	0.22
PHOSPHORUS, TOTAL	12	0.062	0.056	0.02	0.22	12	-0.00037	0.11146	-0.226*	0.057
NITRITE + NITRATE, TOTAL	12	0.053	0.030	0.01	0.10	12	-0.00021	0.08255	-0.249*	0.030
NITROGEN, KJELDAHL, TOTAL	12	0.517	0.265	0.05	1.10	12	0.00247	0.18141	0.324*	0.263
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2906.7	5420.0	170	19000	12	29.199	-1064.382	0.167*	5584.4
SEDIMENT SUSPENDED	12	81.3	142.8	14	523					
SEDIMENT, CLAY-SILT (PERCENT)	12	84.1	26.7	3	97					
COLIFORM, FECAL (COL/100 ML)	12	99.2	186.6	10	680					
STREPTOCOCCI, FECAL (COL/100 ML)	12	96.9	187.2	12	680					
SILICA, DISSOLVED	12	10.12	4.67	5.2	18.0	12	-0.0085	11.2763	-0.063*	4.69
CALCIUM, DISSOLVED	12	6.54	1.92	3.1	9.2	12	0.0461	0.2675	0.835	1.11
MAGNESIUM, DISSOLVED	12	2.03	0.92	0.2	3.2	12	0.0215	-0.8842	0.810	0.56
SODIUM, DISSOLVED	12	13.70	4.20	6.6	22.0	12	0.1025	-0.2456	0.847	2.34
POTASSIUM, DISSOLVED	12	2.13	0.52	1.5	3.4	12	0.0105	0.7105	0.691	0.40
BICARBONATE, ION	12	24.0	8.7	9	42	12	0.228	-7.047	0.906	3.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	19	13.76	3.59	6.8	22.0	19	0.0609	5.9579	0.623	2.89
CHLORIDE, DISSOLVED	19	15.31	3.98	8.3	23.0	19	0.0973	2.6506	0.898	1.60
DISSOLVED SOLIDS, SUM OF CONST	12	75.7	17.5	40	98	12	0.469	11.695	0.929	6.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	87.9	21.9	62	136	12	0.418	31.068	0.662	17.2
HARDNESS, TOTAL	12	24.7	8.1	9	36	12	0.200	-2.544	0.853	4.4
HARDNESS, NONCARBONATE	12	5.3	3.7	0	10	12	0.019	2.710	0.181*	3.8
TURBIDITY (JTU)	12	27.1	13.7	15	55	12	-0.317	70.188	-0.800	8.6
FLUORIDE, DISSOLVED	11	0.19	0.08	0.1	0.4	11	-0.0006	0.2750	-0.257*	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%
	181	176	173	162	149	137	126	94	82	66

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	20.14	8.17	2.71	90	1.95

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

08030500 — SABINE RIVER NR RULIFF, TEX.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED 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	<10	10	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	0	4	0	2
IRON (FE), UG/L	4	780	1900	4	20	220
LEAD (PB), UG/L	4	1	17	4	0	0
MANGANESE (MN), UG/L	4	60	640	4	0	580
MERCURY (HG), UG/L	4	0.0	0.6	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	100	4	0	100
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	1.70	7.80			
BIOMASS, ASH WT., G/SQ M	5	0.60	5.40			
CHLOROPHYLL A, MG/SQ M	5	0.000	35.000			
CHLOROPHYLL B, MG/SQ M	5	0.000	0.100			
ORGANIC CARBON, MG/L	12	3.000	11.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08041000 NAME: NECHES RIVER AT EVADALE, TEX.

LAT 30D21M22S LONG 094D05M36S
DRAINAGE AREA: 7951 SQ MI (20593 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	21.33	5.50	12.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	165.8	33.0	104	216					
STREAMFLOW (CUBIC FT/SEC)	12	3321.0	4641.3	155	14500	12	-84.835	17389.508	-0.603	3882.1
PH (STANDARD UNITS)	12	6.25	0.26	5.9	6.6	12	0.0003	6.2056	0.034*	0.27
PHOSPHORUS, TOTAL	12	0.066	0.036	0.02	0.17	12	0.00047	-0.01182	0.426*	0.034
NITRITE + NITRATE, TOTAL	12	0.030	0.022	0.00	0.06	12	-0.00045	0.10500	-0.674	0.017
NITROGEN, KJELDAHL, TOTAL	12	0.622	0.231	0.08	0.91	12	0.00042	0.55227	0.061*	0.242
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	7460.9	13617.2	140	47000	11	257.669	-34867.109	0.646	10954.3
SEDIMENT SUSPENDED	12	34.5	7.2	16	42					
SEDIMENT, CLAY-SILT (PERCENT)	12	89.9	9.7	70	98					
COLIFORM, FECAL (COL/100 ML)	12	48.0	44.8	14	170					
STREPTOCOCCI, FECAL (COL/100 ML)	12	114.8	279.1	14	1000					
SILICA, DISSOLVED	12	11.77	2.71	8.0	17.0	12	0.0118	9.8162	0.144*	2.81
CALCIUM, DISSOLVED	12	6.12	2.03	4.8	12.0	12	0.0547	-0.9425	0.866	0.98
MAGNESIUM, DISSOLVED	12	2.77	0.78	1.4	3.9	12	0.0229	-1.0241	0.965	0.22
SODIUM, DISSOLVED	12	15.63	3.31	9.5	20.0	12	0.0991	-0.8045	0.988	0.54
POTASSIUM, DISSOLVED	12	2.66	0.39	2.0	3.5	12	0.0081	1.3075	0.690	0.30
BICARBONATE, ION	12	21.5	4.5	11	28	12	0.097	5.461	0.706	3.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	19.00	5.53	12.0	30.0	12	0.1451	-5.0647	0.867	2.89
CHLORIDE, DISSOLVED	12	21.58	5.02	13.0	29.0	12	0.1448	-2.4284	0.953	1.60
DISSOLVED SOLIDS, SUM OF CONST	12	92.6	17.8	59	119	12	0.533	4.210	0.987	3.1
DISSOLVED SOLIDS, ROE 180 DEG C	11	109.8	20.2	80	138	11	0.461	33.721	0.788	13.1
HARDNESS, TOTAL	12	31.7	8.0	18	46	12	0.232	-6.850	0.958	2.4
HARDNESS, NONCARBONATE	12	14.0	6.1	7	26	12	0.149	-10.757	0.801	3.9
TURBIDITY (JTU)	12	37.5	9.4	20	50	12	0.076	24.907	0.266*	9.5
FLUORIDE, DISSOLVED	11	0.20	0.06	0.1	0.3	11	-0.0001	0.2129	-0.042*	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%
	226	216	205	183	170	162	151	136	122	110

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
267	20.94	7.64	2.69	88	2.09

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	2	3	0	1
CADMIUM (CD), UG/L	3	0	0	3	0	0
CHROMIUM (CR), UG/L	3	10	20	3	0	0
COBALT (CO), UG/L	3	0	0	3	0	0
COPPER (CU), UG/L	3	0	4	3	0	4
IRON (FE), UG/L	3	2000	2200	3	70	130
LEAD (PB), UG/L	3	3	6	3	0	0
MANGANESE (MN), UG/L	3	120	160	3	10	10
MERCURY (HG), UG/L	3	0.2	0.3	3	0.2	0.2
SELENIUM (SE), UG/L	3	0	1	4	0	0
ZINC (ZN), UG/L	3	20	30	3	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	14.00	35.80			
BIOMASS, ASH WT., G/SQ M	4	9.77	30.20			
CHLOROPHYLL A, MG/SQ M	4	1.300	10.200			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.700			
ORGANIC CARBON, MG/L	12	3.200	32.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.37	7.30	8.0	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	583.8	194.5	294	893					
STREAMFLOW (CUBIC FT/SEC)	12	4955.4	9751.2	600	33500	12	-32.137	23715.336	-0.641	7848.6
PH (STANDARD UNITS)	12	7.54	0.26	7.3	8.0	12	-0.0001	7.6109	-0.090*	0.27
PHOSPHORUS, TOTAL	12	1.786	1.486	0.33	4.80	12	0.00677	-2.16761	0.886	0.722
NITRITE + NITRATE, TOTAL	9	2.412	1.354	0.41	4.70	9	0.00624	-1.19532	0.904	0.618
NITROGEN, KJELDAHL, TOTAL	12	2.813	2.344	0.77	8.50	12	0.00782	-1.75198	0.649	1.870
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	18515.8	26838.1	690	85000	12	70.883	-22862.273	0.514*	24148.3
SEDIMENT SUSPENDED	11	76.3	80.2	15	254					
SEDIMENT, CLAY-SILT (PERCENT)	11	81.5	23.1	18	99					
COLIFORM, FECAL (COL/100 ML)	11	73.6	62.8	10	190					
STREPTOCOCCI, FECAL (COL/100 ML)	11	143.3	150.3	20	470					
SILICA, DISSOLVED	12	11.27	2.33	8.1	15.0	12	0.0105	5.1242	0.880	1.16
CALCIUM, DISSOLVED	12	47.17	7.22	37.0	60.0	12	0.0230	33.7376	0.620	5.94
MAGNESIUM, DISSOLVED	12	5.62	1.76	2.8	8.0	12	0.0086	0.6165	0.948	0.59
SODIUM, DISSOLVED	12	53.92	30.40	11.0	110.0	12	0.1544	-36.2097	0.988	4.90
POTASSIUM, DISSOLVED	12	6.61	1.73	4.1	9.0	12	0.0084	1.7192	0.943	0.61
BICARBONATE, ION	12	149.3	34.8	104	199	12	0.142	66.305	0.795	22.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	57.67	20.14	24.0	84.0	12	0.1000	-0.7206	0.966	5.44
CHLORIDE, DISSOLVED	12	53.83	27.91	13.0	95.0	12	0.1421	-29.1200	0.991	4.02
DISSOLVED SOLIDS, SUM OF CONST	12	310.5	100.9	160	469	12	0.518	8.108	0.998	5.8
DISSOLVED SOLIDS, RDE 180 DEG C	12	340.8	110.0	176	515	12	0.563	12.329	0.995	11.1
HARDNESS, TOTAL	12	140.0	22.6	100	170	12	0.095	84.525	0.819	13.6
HARDNESS, NONCARBONATE	12	20.1	14.7	0	47	12	-0.017	29.965	-0.224*	15.0
TURBIDITY (JTU)	12	52.5	45.5	20	150	12	-0.190	163.179	-0.811	27.9
FLUORIDE, DISSOLVED	11	0.65	0.28	0.3	1.2	11	0.0012	-0.0410	0.768	0.19

*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%
	893	843	827	781	759	610	453	310	279	259

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	20.28	9.08	2.77	90	2.17

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

08065350 -- TRINITY RIVER NR CROCKETT, TEX.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	7	4	3	6
CADMIUM (CD), UG/L	4	0	2	4	0	1
CHROMIUM (CR), UG/L	4	10	30	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	2	58	4	2	5
IRON (FE), UG/L	4	780	2600	4	0	740
LEAD (PB), UG/L	4	9	72	4	0	16
MANGANESE (MN), UG/L	4	60	190	4	20	20
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	80	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.20				
BIOMASS, ASH WT., G/SQ M	1	0.10				
CHLOROPHYLL A, MG/SQ M	1	0.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	12	3.400	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.04	6.18	8.5	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	357.2	40.7	272	425					
STREAMFLOW (CUBIC FT/SEC)	12	6784.2	9521.0	730	29000	12	51.175	-11493.742	0.219*	9743.2
PH (STANDARD UNITS)	12	7.05	0.43	6.6	8.0	12	0.0012	6.6256	0.113*	0.45
PHOSPHORUS, TOTAL	12	0.172	0.113	0.04	0.42	12	-0.00197	0.87678	-0.710	0.084
NITRITE + NITRATE, TOTAL	12	0.099	0.081	0.01	0.26	12	-0.00026	0.19206	-0.132*	0.084
NITROGEN, KJELDAHL, TOTAL	12	0.698	0.118	0.54	0.86	12	-0.00026	0.79294	-0.092*	0.123
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	62541.7	87253.7	4000	270000	12	-212.090	138292.938	-0.099*	91061.6
SEDIMENT SUSPENDED	12	49.5	47.3	12	164					
SEDIMENT, CLAY-SILT (PERCENT)	12	77.9	28.3	21	99					
COLIFORM, FECAL (COL/100 ML)	12	86.1	127.7	6	410					
STREPTOCOCCI, FECAL (COL/100 ML)	12	239.1	565.6	4	2000					
SILICA, DISSOLVED	12	7.47	1.91	3.1	11.0	12	-0.0269	17.0892	-0.574*	1.64
CALCIUM, DISSOLVED	12	38.92	4.64	29.0	46.0	12	0.0964	4.4827	0.846	2.59
MAGNESIUM, DISSOLVED	12	3.68	0.34	3.3	4.2	12	0.0056	1.6793	0.682	0.26
SODIUM, DISSOLVED	12	23.08	3.42	18.0	30.0	12	0.0751	-3.7537	0.894	1.61
POTASSIUM, DISSOLVED	12	3.91	0.51	3.2	4.5	12	0.0045	2.2907	0.363*	0.50
BICARBONATE, ION	12	116.2	15.2	80	136	12	0.302	8.284	0.809	9.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	29.08	5.47	23.0	40.0	12	0.1027	-7.6134	0.765	3.69
CHLORIDE, DISSOLVED	12	27.92	3.65	23.0	35.0	12	0.0426	12.6935	0.475*	3.37
DISSOLVED SOLIDS, SUM OF CONST	12	191.9	18.8	155	217	12	0.448	31.928	0.970	4.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	205.4	27.5	160	254	12	0.553	7.809	0.820	16.5
HARDNESS, TOTAL	12	111.5	12.3	88	130	12	0.236	26.656	0.769	7.9
HARDNESS, NONCARBONATE	12	17.1	5.2	8	24	12	0.011	13.115	0.087*	5.4
TURBIDITY (JTU)	12	21.3	18.1	8	60	12	-0.209	95.736	-0.470*	16.7
FLUORIDE, DISSOLVED	11	0.35	0.09	0.2	0.5	11	0.0009	0.0289	0.416*	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%
	452	427	415	397	383	366	343	325	308	260

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
285	19.53	8.19	2.70	88	2.09

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	9	4	1	7
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	<10	24	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	1	3	4	0	2
IRON (FE), UG/L	4	410	2300	4	0	80
LEAD (PB), UG/L	4	0	8	4	0	3
MANGANESE (MN), UG/L	4	60	140	4	0	60
MERCURY (HG), UG/L	4	0.1	0.4	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	140	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	3.90	38.00			
BIOMASS, ASH WT., G/SQ M	5	2.40	33.00			
CHLOROPHYLL A, MG/SQ M	5	0.300	3.500			
CHLOROPHYLL B, MG/SQ M	5	0.000	0.200			
ORGANIC CARBON, MG/L	12	4.000	14.000			

Table 12. 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: 10/01/75 - 09/30/76

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)	12	18.67	5.50	8.5	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	268.9	60.5	128	362					
STREAMFLOW (CUBIC FT/SEC)	12	633.5	762.1	24	2200	12	-4.294	1788.361	-0.341*	751.5
PH (STANDARD UNITS)	12	6.57	0.26	6.0	6.9	12	0.0023	5.9468	0.535*	0.23
PHOSPHORUS, TOTAL	12	0.199	0.137	0.03	0.46	12	0.00032	0.11201	0.143*	0.142
NITRITE + NITRATE, TOTAL	12	0.179	0.141	0.03	0.55	12	0.00107	-0.10887	0.460*	0.131
NITROGEN, KJELDAHL, TOTAL	12	0.679	0.285	0.33	1.30	12	-0.00265	1.39051	-0.561*	0.248
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	13953.3	27796.4	280	100000	12	-179.698	62277.211	-0.391*	26834.2
SEDIMENT SUSPENDED	12	51.3	31.8	20	117					
SEDIMENT, CLAY-SILT (PERCENT)	12	74.0	28.8	21	99					
COLIFORM, FECAL (COL/100 ML)	12	1261.5	1999.8	34	6100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	666.7	1467.2	56	5200					
SILICA, DISSOLVED	12	11.74	6.35	5.4	23.0	12	0.0575	-3.7270	0.547*	5.58
CALCIUM, DISSOLVED	12	27.32	6.61	9.9	36.0	12	0.0811	5.5078	0.742	4.64
MAGNESIUM, DISSOLVED	12	2.35	0.56	1.3	3.3	12	0.0069	0.4947	0.747	0.39
SODIUM, DISSOLVED	12	18.17	6.51	10.0	28.0	12	0.0901	-6.0698	0.837	3.73
POTASSIUM, DISSOLVED	12	2.79	0.27	2.2	3.1	12	0.0017	2.3268	0.385*	0.26
BICARBONATE, ION	12	76.4	17.6	29	97	12	0.148	36.505	0.509*	15.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	6.51	1.17	5.2	9.2	12	0.0113	3.4620	0.583	1.00
CHLORIDE, DISSOLVED	12	35.00	12.45	18.0	58.0	12	0.1831	-14.2467	0.889	5.98
DISSOLVED SOLIDS, SUM OF CONST	12	141.8	31.4	70	193	12	0.507	5.393	0.976	7.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	166.5	37.9	78	232	12	0.566	14.161	0.904	17.0
HARDNESS, TOTAL	12	77.6	17.7	30	100	12	0.224	17.436	0.762	12.0
HARDNESS, NONCARBONATE	12	15.3	8.7	6	32	12	0.111	-14.619	0.769	5.9
TURBIDITY (JTU)	12	26.8	19.1	7	70	12	-0.215	84.641	-0.681	14.7
FLUORIDE, DISSOLVED	11	0.21	0.13	0.0	0.5	11	0.0003	0.1259	0.151*	0.14

*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%
	567	421	395	357	345	307	270	224	193	164

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
335	21.90	7.31	2.87	80	2.56

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	1	2	4	0	2
IRON (FE), UG/L	4	490	1200	4	10	50
LEAD (PB), UG/L	4	0	6	4	0	3
MANGANESE (MN), UG/L	4	60	200	4	0	20
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	3	3.50	67.20			
BIOMASS, ASH WT., G/SQ M	3	2.50	52.40			
CHLOROPHYLL A, MG/SQ M	3	0.300	9.200			
CHLOROPHYLL B, MG/SQ M	3	0.000	2.100			
ORGANIC CARBON, MG/L	12	4.000	13.000			

Table 12. 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	19.54	7.43	7.5	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	36403.3	26102.0	3540	86000					
STREAMFLOW (CUBIC FT/SEC)	12	112.8	155.0	0	532	12	-0.004	247.234	-0.622	127.3
PH (STANDARD UNITS)	12	7.83	0.19	7.5	8.1	12	0.0000	7.8314	0.007*	0.20
PHOSPHORUS, TOTAL	12	0.506	0.729	0.01	1.80	12	-0.00002	1.26429	-0.746	0.509
NITRITE + NITRATE, TOTAL	12	0.450	0.388	0.06	1.20	12	0.00000	0.38413	0.122*	0.404
NITROGEN, KJELDAHL, TOTAL	12	3.464	8.203	0.00	29.00	12	-0.00016	9.43009	-0.522*	7.340
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	5607.3	5778.4	380	19000	11	-0.105	9730.676	-0.455*	5423.0
SEDIMENT SUSPENDED	12	3186.1	5152.2	3	14500					
SEDIMENT, CLAY-SILT (PERCENT)	12	84.9	18.5	37	100					
COLIFORM, FECAL (COL/100 ML)	12	3286.3	6061.8	1	20000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6457.0	11291.8	22	34000					
SILICA, DISSOLVED	12	7.02	2.85	1.8	11.0	12	-0.0000	7.1214	-0.024*	2.99
CALCIUM, DISSOLVED	12	726.67	367.18	220.0	1300.0	12	0.0136	231.6572	0.967	98.65
MAGNESIUM, DISSOLVED	12	204.00	126.53	30.0	370.0	12	0.0045	38.6948	0.937	46.45
SODIUM, DISSOLVED	12	8320.83	6644.07	510.0	2000.0	12	0.2536	-910.3555	0.996	605.23
POTASSIUM, DISSOLVED	12	27.84	18.38	6.8	70.0	12	0.0007	2.6505	0.983	3.55
BICARBONATE, ION	12	139.6	44.4	68	210	12	0.001	107.301	0.521*	39.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	1998.33	1083.97	620.0	4100.0	12	0.0377	627.3147	0.907	479.02
CHLORIDE, DISSOLVED	12	3149.16	0572.68	790.0	5000.0	12	0.4034	1535.6055	0.996	1003.44
DISSOLVED SOLIDS, SUM OF CONST	12	24500.0	18679.8	2330	62900	12	0.714	-1486.082	0.997	1391.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	24904.2	18857.1	2500	63400	12	0.721	-1336.477	0.998	1318.3
HARDNESS, TOTAL	12	2665.8	1443.9	710	4800	12	0.053	729.707	0.961	416.3
HARDNESS, NONCARBONATE	12	2547.5	1411.6	630	4600	12	0.052	654.443	0.962	406.5
TURBIDITY (JTU)	12	1475.8	2422.1	0	7000	12	-0.068	3947.361	-0.732	1731.6
FLUORIDE, DISSOLVED	11	0.75	0.27	0.2	1.2	11	0.0000	0.5653	0.503*	0.25

*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%
	96700	70000	58200	51700	48300	43100	33600	12000	7980	4800

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
356	18.21	10.93	2.88	81	3.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

08082000 -- SALT FK BRAZOS R NR ASPERMONT, TX

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	1	3	4	1	2
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	20	160	4	0	2
COBALT (CO), UG/L	4	0	35	4	0	0
COPPER (CU), UG/L	4	5	160	4	0	2
IRON (FE), UG/L	4	350	120000	4	20	130
LEAD (PB), UG/L	4	0	25	4	0	2
MANGANESE (MN), UG/L	4	180	700	4	20	480
MERCURY (HG), UG/L	3	0.0	0.4	4	0.0	0.3
SELENIUM (SE), UG/L	3	1	5	4	1	5
ZINC (ZN), UG/L	4	40	460	4	20	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.20	100.00			
BIOMASS, ASH WT., G/SQ M	4	1.50	94.00			
CHLOROPHYLL A, MG/SQ M	4	0.500	8.700			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.000			
ORGANIC CARBON, MG/L	4	1.800	5.000			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.63	9.97	0.0	33.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	14774.2	7638.1	2610	26600					
STREAMFLOW (CUBIC FT/SEC)	12	126.3	135.6	11	400	12	-0.013	312.046	-0.709	100.3
PH (STANDARD UNITS)	12	7.92	0.14	7.7	8.1	12	0.0000	7.9010	0.058*	0.15
PHOSPHORUS, TOTAL	12	0.292	0.449	0.00	1.10	12	-0.00004	0.89281	-0.693	0.339
NITRITE + NITRATE, TOTAL	12	0.160	0.192	0.01	0.59	12	-0.00000	0.16505	-0.014*	0.201
NITROGEN, KJELDAHL, TOTAL	12	0.692	0.461	0.18	1.50	12	-0.00004	1.31997	-0.705	0.343
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	10695.5	21531.4	170	74000	11	-1.126	28580.289	-0.363*	21151.9
SEDIMENT SUSPENDED	12	1272.0	2166.8	3	7350					
SEDIMENT, CLAY-SILT (PERCENT)	12	66.8	37.7	2	100					
COLIFORM, FECAL (COL/100 ML)	12	1244.8	2550.0	3	7600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1181.8	2226.2	14	6200					
SILICA, DISSOLVED	12	6.04	2.99	1.0	10.0	12	-0.0003	9.9596	-0.676	2.30
CALCIUM, DISSOLVED	12	525.83	171.81	210.0	770.0	12	0.0210	215.4043	0.934	64.31
MAGNESIUM, DISSOLVED	12	139.50	74.54	31.0	220.0	12	0.0093	2.8127	0.948	24.88
SODIUM, DISSOLVED	12	2779.17	1611.37	320.0	5500.0	12	0.2106	-331.6113	0.998	105.10
POTASSIUM, DISSOLVED	12	15.79	4.28	8.0	21.0	12	0.0005	7.9428	0.948	1.44
BICARBONATE, ION	12	149.8	61.8	66	274	12	0.007	45.974	0.869	32.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	1560.83	597.68	550.0	2300.0	12	0.0713	507.4385	0.911	258.27
CHLORIDE, DISSOLVED	12	4431.66	2567.71	480.0	8600.0	12	0.3358	-529.9727	0.999	120.53
DISSOLVED SOLIDS, SUM OF CONST	12	9530.0	4974.0	1640	17300	12	0.651	-82.824	0.999	215.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	9695.0	5071.0	1700	17600	12	0.663	-104.820	0.999	224.7
HARDNESS, TOTAL	12	1909.2	739.5	650	2800	12	0.092	545.708	0.953	234.4
HARDNESS, NONCARBONATE	12	1772.5	689.9	600	2600	12	0.086	507.493	0.948	230.4
TURBIDITY (JTU)	12	677.2	1234.1	0	4000	12	-0.120	2453.684	-0.744	864.4
FLUORIDE, DISSOLVED	11	0.76	0.20	0.4	1.1	11	0.0000	0.7049	0.154*	0.21

*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%
	25600	21700	21100	19700	18500	14200	10200	5230	4520	2950

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T*(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
339	21.76	9.54	2.87	72	4.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	10	4	1	3
CADMIUM (CD), UG/L	4	0	0	4	0	6
CHROMIUM (CR), UG/L	4	<10	30	4	0	10
COBALT (CO), UG/L	4	0	13	4	0	0
COPPER (CU), UG/L	4	1	32	4	0	2
IRON (FE), UG/L	4	170	16000	4	0	40
LEAD (PB), UG/L	4	0	17	4	0	0
MANGANESE (MN), UG/L	4	20	80	4	5	80
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	5	4	0	3
ZINC (ZN), UG/L	4	40	80	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	9.46	39.00			
BIOMASS, ASH WT., G/SQ M	3	8.62	34.00			
CHLOROPHYLL A, MG/SQ M	3	0.400	11.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.200			
ORGANIC CARBON, MG/L	4	3.600	7.300			

Table 12. 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.25	6.03	9.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1315.9	414.4	375	1780					
STREAMFLOW (CUBIC FT/SEC)	12	1894.8	2063.2	206	6950	12	-3.520	6527.414	-0.707	1530.1
PH (STANDARD UNITS)	12	8.08	0.37	7.5	8.6	12	0.0005	7.4241	0.567*	0.32
PHOSPHORUS, TOTAL	12	0.267	0.236	0.09	0.92	12	-0.00014	0.44723	-0.240*	0.240
NITRITE + NITRATE, TOTAL	12	0.117	0.175	0.00	0.63	12	-0.00018	0.35424	-0.425*	0.167
NITROGEN, KJELDAHL, TOTAL	12	0.865	0.481	0.23	2.10	12	-0.00029	1.25040	-0.252*	0.468
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	51341.7	50016.3	400	140000	12	24.972	18480.539	0.207*	51321.8
SEDIMENT SUSPENDED	12	266.9	720.3	9	2550					
SEDIMENT, CLAY-SILT (PERCENT)	12	84.9	13.7	53	100					
COLIFORM, FECAL (COL/100 ML)	12	1766.7	5743.0	15	20000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2954.2	9150.0	84	32000					
SILICA, DISSOLVED	12	4.97	2.44	1.1	8.1	12	-0.0039	10.0918	-0.661	1.92
CALCIUM, DISSOLVED	12	83.67	17.55	46.0	100.0	12	0.0369	32.5164	0.918	7.31
MAGNESIUM, DISSOLVED	12	18.82	6.84	4.4	25.0	12	0.0158	-2.0235	0.959	2.04
SODIUM, DISSOLVED	12	162.67	64.00	22.0	240.0	12	0.1539	-39.8261	0.996	5.70
POTASSIUM, DISSOLVED	12	4.84	0.82	3.2	6.0	12	0.0017	2.5555	0.878	0.41
BICARBONATE, ION	12	181.3	33.8	134	238	12	0.041	126.821	0.508*	30.5
CARBONATE, ION	12	2.6	4.9	0	14	12	0.002	-0.632	0.208*	5.0
SULFATE, DISSOLVED	12	135.75	46.66	31.0	190.0	12	0.1123	-12.0370	0.997	3.47
CHLORIDE, DISSOLVED	12	245.75	99.42	29.0	370.0	12	0.2378	-67.1470	0.991	13.83
DISSOLVED SOLIDS, SUM OF CONST	12	749.6	240.8	211	1010	12	0.580	-14.150	0.994	12.1
DISSOLVED SOLIDS, ROE 180 DEG C	9	752.3	233.1	198	944	9	0.592	-15.406	0.996	15.0
HARDNESS, TOTAL	12	285.8	72.2	130	350	12	0.164	69.426	0.944	24.9
HARDNESS, NONCARBONATE	12	134.5	53.1	21	200	12	0.126	-31.230	0.983	10.3
TURBIDITY (JTU)	11	36.4	48.8	4	180	11	-0.067	122.168	-0.578*	41.9
FLUORIDE, DISSOLVED	11	0.34	0.14	0.0	0.5	11	0.0002	0.0821	0.619	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%
	1810	1790	1750	1660	1620	1480	1170	467	375	318

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
345	21.50	9.20	2.76	81	3.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	4	2	3
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	<10	30	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	2	9	4	0	5
IRON (FE), UG/L	4	690	1200	4	0	30
LEAD (PB), UG/L	4	0	8	4	0	8
MANGANESE (MN), UG/L	4	60	160	4	0	20
MERCURY (HG), UG/L	4	0.1	0.8	4	0.0	0.5
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	20	60	4	0	4
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	12.00	41.20			
BIOMASS, ASH WT., G/SQ M	2	9.50	35.90			
CHLOROPHYLL A, MG/SQ M	2	3.900	7.200			
CHLOROPHYLL B, MG/SQ M	2	0.100	0.400			
ORGANIC CARBON, MG/L	4	2.000	9.200			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08116650 NAME: BRAZOS RIVER NR ROSHARON, TEX.

LAT 29D20M58S LONG 095D34M56S
DRAINAGE AREA: 44340 SQ MI (114841 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	21.25	5.64	8.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	991.2	367.9	311	1470					
STREAMFLOW (CUBIC FT/SEC)	12	7410.8	10851.7	1150	34000	12	-19.435	26674.543	-0.659	8562.0
PH (STANDARD UNITS)	12	7.39	0.40	6.6	7.9	12	0.0007	6.7137	0.635	0.32
PHOSPHORUS, TOTAL	12	0.325	0.284	0.09	0.93	12	-0.00057	0.89321	-0.743	0.199
NITRITE + NITRATE, TOTAL	12	0.176	0.238	0.00	0.70	12	-0.00038	0.54953	-0.583	0.203
NITROGEN, KJELDAHL, TOTAL	12	1.137	0.545	0.26	2.10	12	-0.00073	1.86161	-0.494*	0.497
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	86160.9	73078.5	470	210000	11	53.549	31022.230	0.265*	74283.3
SEDIMENT SUSPENDED	11	217.8	283.7	15	834					
SEDIMENT, CLAY-SILT (PERCENT)	11	90.0	15.1	49	100					
COLIFORM, FECAL (COL/100 ML)	12	1481.5	2110.2	12	5600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1148.6	2191.5	12	7500					
SILICA, DISSOLVED	12	7.83	2.09	4.9	11.0	12	-0.0041	11.8493	-0.713	1.54
CALCIUM, DISSOLVED	12	67.33	20.57	35.0	94.0	12	0.0486	19.1560	0.869	10.67
MAGNESIUM, DISSOLVED	12	14.82	6.14	4.9	22.0	12	0.0140	0.9638	0.837	3.52
SODIUM, DISSOLVED	12	107.83	50.84	16.0	170.0	12	0.1338	-24.7468	0.968	13.42
POTASSIUM, DISSOLVED	12	4.21	0.39	3.5	4.7	12	0.0006	3.6522	0.533*	0.34
BICARBONATE, ION	12	181.6	51.3	100	262	12	0.097	85.331	0.696	38.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	84.67	38.93	23.0	140.0	12	0.1000	-14.4408	0.945	13.37
CHLORIDE, DISSOLVED	12	160.50	79.52	20.0	270.0	12	0.2083	-45.9568	0.964	22.29
DISSOLVED SOLIDS, SUM OF CONST	12	537.4	202.5	169	811	12	0.549	-6.879	0.998	14.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	554.7	203.0	176	838	12	0.548	11.666	0.993	25.7
HARDNESS, TOTAL	12	230.8	76.7	110	330	12	0.181	51.273	0.869	39.8
HARDNESS, NONCARBONATE	12	80.8	40.5	14	140	12	0.101	-19.730	0.921	16.5
TURBIDITY (JTU)	12	114.6	111.4	15	300	12	-0.212	324.911	-0.700	83.4
FLUORIDE, DISSOLVED	11	0.44	0.10	0.3	0.6	11	0.0001	0.3283	0.407*	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%
	1510	1400	1340	1200	1070	906	649	372	340	323

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	21.39	7.76	2.79	85	2.36

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	44	5	3	4
CADMIUM (CD), UG/L	5	0	1	5	0	0
CHROMIUM (CR), UG/L	5	<10	140	5	0	0
COBALT (CO), UG/L	5	0	18	5	0	0
COPPER (CU), UG/L	5	1	43	5	0	4
IRON (FE), UG/L	5	690	63000	5	0	60
LEAD (PB), UG/L	5	0	30	5	0	3
MANGANESE (MN), UG/L	5	40	1500	5	0	50
MERCURY (HG), UG/L	5	0.0	0.4	5	0.0	0.1
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	20	640	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.77	4.30			
BIOMASS, ASH WT., G/SQ M	2	0.62	4.00			
CHLOROPHYLL A, MG/SQ M	2	0.000	0.700			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.200			
ORGANIC CARBON, MG/L	4	3.600	15.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08123800   NAME: BEALS CRK NR WESTBROOK, TX

LAT 32D11M57S LONG 101D00M49S
DRAINAGE AREA: 9903 SQ MI (25649 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	20.50	8.96	4.5	34.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	7084.2	3342.5	1980	10700					
STREAMFLOW (CUBIC FT/SEC)	12	10.6	13.3	1	45	12	-0.002	21.420	-0.384*	12.9
PH (STANDARD UNITS)	12	8.51	0.66	7.7	10.0	12	0.0001	7.7746	0.527*	0.59
PHOSPHORUS, TOTAL	12	0.876	0.529	0.21	1.90	12	0.00002	0.73828	0.123*	0.551
NITRITE + NITRATE, TOTAL	12	0.626	0.559	0.01	1.50	12	0.00002	0.50176	0.105*	0.583
NITROGEN, KJELDAHL, TOTAL	12	2.107	1.314	0.99	5.80	12	0.00020	0.68331	0.511*	1.184
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	72175.0	117491.3	1900	400000	12	8.762	10102.676	0.249*	119334.6
SEDIMENT SUSPENDED	12	86.9	111.0	6	306					
SEDIMENT, CLAY-SILT (PERCENT)	12	92.5	10.9	62	100					
COLIFORM, FECAL (COL/100 ML)	12	246.0	396.9	2	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	400.3	382.6	24	940					
SILICA, DISSOLVED	12	5.04	3.53	0.4	9.9	12	-0.0006	9.5681	-0.605	2.95
CALCIUM, DISSOLVED	12	222.25	86.46	87.0	330.0	12	0.0253	42.8932	0.979	16.58
MAGNESIUM, DISSOLVED	12	229.00	124.52	48.0	380.0	12	0.0369	-32.1357	0.990	18.87
SODIUM, DISSOLVED	12	1062.50	545.98	250.0	1700.0	12	0.1630	-91.8589	0.998	39.49
POTASSIUM, DISSOLVED	12	24.58	9.62	11.0	39.0	12	0.0027	5.3925	0.941	3.42
BICARBONATE, ION	12	142.2	55.5	38	266	12	-0.002	156.780	-0.124*	57.7
CARBONATE, ION	12	8.8	11.1	0	30	12	0.001	-1.051	0.421*	10.5
SULFATE, DISSOLVED	12	1123.33	583.38	260.0	1900.0	12	0.1649	-44.8752	0.945	200.42
CHLORIDE, DISSOLVED	12	1785.00	959.96	420.0	2900.0	12	0.2833	-221.6179	0.986	166.24
DISSOLVED SOLIDS, SUM OF CONST	12	4532.5	2265.1	1150	7180	12	0.676	-256.785	0.998	164.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	4741.7	2348.5	1180	7560	12	0.701	-227.555	0.998	140.9
HARDNESS, TOTAL	12	1502.5	724.3	420	2300	12	0.216	-30.052	0.998	43.1
HARDNESS, NONCARBONATE	12	1366.7	719.3	310	2200	12	0.214	-146.521	0.993	91.5
TURBIDITY (JTU)	12	56.1	64.5	3	220	12	-0.009	118.255	-0.455*	60.3
FLUORIDE, DISSOLVED	11	0.75	0.18	0.5	1.0	11	0.0000	0.4788	0.719	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%
	12100	11600	11400	11100	10600	9280	5670	2360	1460	828

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
350	18.83	9.84	2.86	81	3.34

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	10
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	<10	20	4	0	3
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	2	10	4	2	4
IRON (FE), UG/L	4	240	570	4	20	40
LEAD (PB), UG/L	4	0	27	4	0	0
MANGANESE (MN), UG/L	4	160	480	4	10	70
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
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	4	4.40	31.00			
BIOMASS, ASH WT., G/SQ M	4	3.30	27.00			
CHLOROPHYLL A, MG/SQ M	4	0.700	22.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.800			
ORGANIC CARBON, MG/L	4	5.100	54.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08136700 NAME: COLORADO RIVER NEAR STACY, TEX.

LAT 31D29M37S LONG 099D34M25S
DRAINAGE AREA: 24040 SQ MI (62264 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.67	7.11	6.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1897.2	481.6	976	2450					
STREAMFLOW (CUBIC FT/SEC)	12	179.8	315.1	26	1130	12	-0.199	557.574	-0.304*	314.8
PH (STANDARD UNITS)	12	7.97	0.23	7.5	8.3	12	0.0002	7.6350	0.371*	0.22
PHOSPHORUS, TOTAL	12	0.063	0.040	0.01	0.14	12	-0.00004	0.13147	-0.434*	0.038
NITRITE + NITRATE, TOTAL	12	2.201	2.237	0.00	7.10	12	0.00266	-2.83958	0.572*	1.924
NITROGEN, KJELDAHL, TOTAL	12	0.980	0.676	0.22	2.50	12	-0.00009	1.14238	-0.061*	0.708
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	94236.3	84811.6	2800	210000	11	-119.831	320672.750	-0.713	62716.6
SEDIMENT SUSPENDED	12	93.0	58.7	8	239					
SEDIMENT, CLAY-SILT (PERCENT)	11	88.1	12.9	54	99					
COLIFORM, FECAL (COL/100 ML)	12	219.8	515.8	7	1800					
STREPTOCOCCI, FECAL (COL/100 ML)	12	325.1	656.9	2	2300					
SILICA, DISSOLVED	12	12.74	4.94	4.7	19.0	12	-0.0049	22.0067	-0.476*	4.56
CALCIUM, DISSOLVED	12	132.08	37.85	72.0	180.0	12	0.0717	-3.9490	0.912	16.26
MAGNESIUM, DISSOLVED	12	60.33	19.67	25.0	86.0	12	0.0365	-8.9252	0.894	9.24
SODIUM, DISSOLVED	12	172.08	48.60	74.0	220.0	12	0.0986	-15.0605	0.977	10.76
POTASSIUM, DISSOLVED	12	4.94	1.18	3.8	6.5	12	-0.0001	5.1418	-0.043*	1.24
BICARBONATE, ION	12	175.3	38.9	132	244	12	0.047	86.436	0.580	33.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	291.67	114.40	110.0	480.0	12	0.2215	-126.5193	0.932	43.37
CHLORIDE, DISSOLVED	12	356.67	97.45	160.0	460.0	12	0.1893	-2.5520	0.936	36.05
DISSOLVED SOLIDS, SUM OF CONST	12	1118.0	312.6	524	1520	12	0.636	-88.940	0.980	65.0
DISSOLVED SOLIDS, RDE 180 DEG C	11	1200.7	328.6	572	1560	11	0.633	4.541	0.972	81.8
HARDNESS, TOTAL	12	579.2	168.9	290	800	12	0.325	-38.186	0.928	66.1
HARDNESS, NONCARBONATE	12	435.8	155.0	180	660	12	0.290	-113.902	0.900	70.8
TURBIDITY (JTU)	12	35.4	22.5	10	70	12	-0.009	51.616	-0.183*	23.2
FLUORIDE, DISSOLVED	11	0.53	0.13	0.3	0.7	11	0.0002	0.1817	0.724	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%
	2590	2430	2350	2300	2200	1960	1800	1230	1020	860

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
309	19.59	8.65	2.85	83	2.71

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	2	5	4	1	4
CADMIUM (CD), UG/L	4	0	1	3	0	1
CHROMIUM (CR), UG/L	4	10	10	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	1	11	3	0	4
IRON (FE), UG/L	4	390	2300	4	0	310
LEAD (PB), UG/L	4	5	15	3	0	3
MANGANESE (MN), UG/L	4	10	160	4	0	90
MERCURY (HG), UG/L	3	0.1	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	3	1	4	4	0	3
ZINC (ZN), UG/L	4	20	30	3	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	22.00	64.20			
BIOMASS, ASH WT., G/SQ M	3	20.00	57.90			
CHLOROPHYLL A, MG/SQ M	3	6.300	17.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.900			
ORGANIC CARBON, MG/L	4	4.400	12.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT, B	CONSTANT, b	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.04	4.03	13.5	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	553.5	27.4	504	600					
STREAMFLOW (CUBIC FT/SEC)	12	1324.7	1320.2	72	3300	12	-14.515	9358.464	-0.301*	1320.6
PH (STANDARD UNITS)	12	7.49	0.24	7.1	7.8	12	0.0040	5.2816	0.464*	0.22
PHOSPHORUS, TOTAL	12	0.022	0.016	0.00	0.05	12	0.00017	-0.07048	0.277*	0.017
NITRITE + NITRATE, TOTAL	12	0.262	0.180	0.08	0.62	12	0.00225	-0.98466	0.343*	0.177
NITROGEN, KJELDAHL, TOTAL	12	0.307	0.104	0.12	0.53	12	-0.00103	0.87423	-0.270*	0.105
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4525.8	12803.5	140	45000	12	-56.216	35642.352	-0.120*	13331.0
SEDIMENT SUSPENDED	12	9.0	8.7	2	31					
SEDIMENT, CLAY-SILT (PERCENT)	12	54.8	27.9	6	88					
COLIFORM, FECAL (COL/100 ML)	12	298.7	636.5	17	2300					
STREPTOCOCCI, FECAL (COL/100 ML)	12	120.8	87.4	27	260					
SILICA, DISSOLVED	12	9.24	1.00	7.5	11.0	12	-0.0031	10.9596	-0.085*	1.05
CALCIUM, DISSOLVED	12	53.92	7.49	45.0	67.0	12	0.1964	-54.6082	0.717	5.47
MAGNESIUM, DISSOLVED	12	21.08	1.74	18.0	23.0	12	0.0255	6.9925	0.561*	1.08
SODIUM, DISSOLVED	12	26.50	2.50	20.0	29.0	12	0.0242	13.1154	0.264*	2.53
POTASSIUM, DISSOLVED	12	2.93	0.27	2.5	3.3	12	-0.0014	3.7198	-0.145*	0.28
BICARBONATE, ION	12	221.5	20.9	196	256	12	0.582	-100.717	0.762	14.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	32.67	2.19	28.0	37.0	12	0.0441	8.2515	0.551*	1.91
CHLORIDE, DISSOLVED	12	46.08	5.42	33.0	52.0	12	0.0227	33.5394	0.114*	5.65
DISSOLVED SOLIDS, SUM OF CONST	12	302.2	16.9	275	327	12	0.604	-32.337	0.980	3.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	313.1	16.0	276	338	12	0.416	83.056	0.709	11.9
HARDNESS, TOTAL	12	221.7	21.7	200	260	12	0.668	-148.260	0.843	12.2
HARDNESS, NONCARBONATE	12	40.1	5.2	32	47	12	0.115	-23.712	0.601	4.4
TURBIDITY (JTU)	12	3.0	2.2	1	9	12	-0.007	6.966	-0.069*	2.3
FLUORIDE, DISSOLVED	11	0.31	0.08	0.2	0.5	11	-0.0004	0.5105	-0.125*	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%
	609	599	592	577	556	541	526	475	446	426

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
268	18.32	4.28	2.47	71	1.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

08158000 -- COLORADO RIVER AT AUSTIN, TEX.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	20	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	6	16	4	0	5
IRON (FE), UG/L	4	0	200	4	0	10
LEAD (PB), UG/L	4	0	7	4	0	5
MANGANESE (MN), UG/L	4	20	40	4	0	10
MERCURY (HG), UG/L	4	0.0	0.7	4	0.0	0.4
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	20	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	12.00	192.00			
BIOMASS, ASH WT., G/SQ M	5	8.50	177.00			
CHLOROPHYLL A, MG/SQ M	5	0.100	38.000			
CHLOROPHYLL B, MG/SQ M	5	0.200	2.300			
ORGANIC CARBON, MG/L	12	1.600	8.300			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.33	5.68	12.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	564.8	124.0	248	711					
STREAMFLOW (CUBIC FT/SEC)	12	2311.0	2949.4	134	11000	12	-21.498	14451.855	-0.904	1321.7
PH (STANDARD UNITS)	12	7.22	0.31	6.8	7.6	12	0.0004	7.0204	0.146*	0.32
PHOSPHORUS, TOTAL	12	0.225	0.175	0.05	0.67	12	-0.00105	0.81637	-0.741	0.124
NITRITE + NITRATE, TOTAL	12	0.317	0.219	0.09	0.70	12	-0.00056	0.63410	-0.318*	0.218
NITROGEN, KJELDAHL, TOTAL	12	0.712	0.468	0.28	2.00	12	-0.00292	2.36238	-0.775	0.310
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2546.7	3014.6	240	11000	12	-3.255	4384.984	-0.134*	3133.2
SEDIMENT SUSPENDED	10	73.0	78.3	6	227					
SEDIMENT, CLAY-SILT (PERCENT)	10	88.9	15.2	60	100					
COLIFORM, FECAL (COL/100 ML)	11	463.3	1242.6	1	4200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	514.2	1522.2	6	5100					
SILICA, DISSOLVED	12	8.89	2.77	5.9	14.0	12	-0.0036	10.9289	-0.161*	2.87
CALCIUM, DISSOLVED	12	56.75	14.36	28.0	76.0	12	0.1057	-2.9465	0.913	6.14
MAGNESIUM, DISSOLVED	12	17.17	5.08	4.0	21.0	12	0.0359	-3.0862	0.876	2.57
SODIUM, DISSOLVED	12	28.50	7.04	11.0	37.0	12	0.0554	-2.8110	0.977	1.57
POTASSIUM, DISSOLVED	12	3.56	0.45	3.1	4.8	12	0.0009	3.0602	0.242*	0.46
BICARBONATE, ION	12	215.8	53.5	101	293	12	0.407	-13.869	0.943	18.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	35.75	9.03	13.0	49.0	12	0.0614	1.0629	0.844	5.08
CHLORIDE, DISSOLVED	12	45.50	11.44	15.0	55.0	12	0.0840	-1.9312	0.911	4.95
DISSOLVED SOLIDS, SUM OF CONST	12	303.3	67.5	132	383	12	0.541	-2.443	0.995	7.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	310.1	69.0	140	387	12	0.540	5.040	0.971	17.4
HARDNESS, TOTAL	12	213.8	52.5	86	270	12	0.412	-19.077	0.975	12.3
HARDNESS, NONCARBONATE	12	35.8	12.6	4	51	12	0.078	-8.287	0.765	8.5
TURBIDITY (JTU)	12	78.3	100.0	5	350	12	-0.737	494.601	-0.914	42.6
FLUORIDE, DISSOLVED	11	0.39	0.10	0.3	0.6	11	0.0001	0.3459	0.099*	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%
	725	703	688	653	630	578	549	431	345	301

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	21.04	7.88	2.80	81	2.69

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	2	5	4	2	3
CADMIUM (CD), UG/L	4	0	2	4	0	0
CHROMIUM (CR), UG/L	4	10	40	4	0	1
COBALT (CO), UG/L	4	0	6	4	0	4
COPPER (CU), UG/L	3	0	5	4	0	3
IRON (FE), UG/L	4	360	7700	4	0	30
LEAD (PB), UG/L	3	3	6	4	0	2
MANGANESE (MN), UG/L	4	40	180	4	0	10
MERCURY (HG), UG/L	3	0.0	0.2	4	0.0	0.4
SELENIUM (SE), UG/L	3	0	0	4	0	1
ZINC (ZN), UG/L	4	20	600	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.80				
BIOMASS, ASH WT., G/SQ M	1	0.80				
CHLOROPHYLL A, MG/SQ M	1	1.200				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	12	1.800	12.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08164500   NAME: NAVIDAD RIVER NR GANADO, TEX.

LAT 29D01M32S LONG 096D33M08S
DRAINAGE AREA: 1063 SQ MI (2753 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	21.71	4.82	14.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	624.2	207.7	209	975					
STREAMFLOW (CUBIC FT/SEC)	12	284.7	657.0	32	2350	12	-2.262	1696.745	-0.715	481.6
PH (STANDARD UNITS)	12	7.90	0.33	7.2	8.6	12	0.0010	7.2833	0.627	0.27
PHOSPHORUS, TOTAL	12	0.111	0.093	0.01	0.32	12	-0.00017	0.22006	-0.390*	0.090
NITRITE + NITRATE, TOTAL	12	0.113	0.122	0.00	0.44	12	-0.00038	0.34877	-0.643	0.098
NITROGEN, KJELDAHL, TOTAL	12	0.983	0.752	0.17	2.60	12	-0.00130	1.79379	-0.359*	0.736
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10354.2	19069.4	390	69000	12	-1.960	11589.938	-0.022*	19995.2
SEDIMENT SUSPENDED	12	70.6	93.0	1	285					
SEDIMENT, CLAY-SILT (PERCENT)	12	80.3	18.3	33	98					
COLIFORM, FECAL (COL/100 ML)	12	1551.4	3978.2	25	14000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	15064.3	45813.9	32	160000					
SILICA, DISSOLVED	12	24.92	10.86	10.0	44.0	12	0.0231	10.4844	0.442*	10.21
CALCIUM, DISSOLVED	12	69.83	30.42	22.0	110.0	12	0.1187	-4.2572	0.810	18.69
MAGNESIUM, DISSOLVED	12	7.05	3.42	2.9	14.0	12	0.0066	2.9460	0.399*	3.29
SODIUM, DISSOLVED	12	53.92	22.94	16.0	110.0	12	0.1013	-9.3000	0.917	9.59
POTASSIUM, DISSOLVED	12	4.26	3.89	2.1	16.0	12	0.0009	3.6854	0.049*	4.08
BICARBONATE, ION	12	240.4	85.9	78	334	12	0.373	7.657	0.902	38.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	14.50	3.57	7.2	19.0	12	0.0110	7.6383	0.640	2.87
CHLORIDE, DISSOLVED	12	76.92	34.28	19.0	160.0	12	0.1479	-15.4088	0.896	15.95
DISSOLVED SOLIDS, SUM OF CONST	12	370.4	123.5	118	569	12	0.593	0.332	0.997	9.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	375.8	123.7	126	607	12	0.584	11.257	0.980	25.5
HARDNESS, TOTAL	12	203.9	76.5	67	300	12	0.329	-1.425	0.894	36.0
HARDNESS, NONCARBONATE	12	8.6	9.0	0	24	12	0.017	-2.140	0.398*	8.6
TURBIDITY (JTU)	12	36.6	53.8	3	160	12	-0.207	165.476	-0.797	34.1
FLUORIDE, DISSOLVED	11	0.40	0.13	0.1	0.6	11	0.0005	0.0819	0.738	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%
	950	772	740	700	672	620	512	280	212	171

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
258	19.94	6.94	2.89	79	2.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	7	4	3	5
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	0	30	4	0	11
COBALT (CO), UG/L	4	0	4	4	0	2
COPPER (CU), UG/L	4	5	14	4	0	3
IRON (FE), UG/L	4	200	7200	4	0	330
LEAD (PB), UG/L	4	0	14	4	0	2
MANGANESE (MN), UG/L	4	20	220	4	0	20
MERCURY (HG), UG/L	4	0.1	0.4	4	0.1	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	1	18.00				
BIOMASS, ASH WT., G/SQ M	1	10.90				
CHLOROPHYLL A, MG/SQ M	1	3.100				
CHLOROPHYLL B, MG/SQ M	1	0.200				
ORGANIC CARBON, MG/L	12	1.800	14.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08176500 NAME: GUADALUPE RIVER AT VICTORIA, TEX.

LAT 28D47M34S LONG 097D00M46S
DRAINAGE AREA: 5198 SQ MI (13463 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	22.83	4.85	14.5	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	565.9	60.3	469	637					
STREAMFLOW (CUBIC FT/SEC)	12	1756.1	1147.2	800	3950	12	-17.015	11385.270	-0.894	539.5
PH (STANDARD UNITS)	12	7.9D	0.09	7.7	8.0	12	0.0010	7.3558	0.680	0.07
PHOSPHORUS, TOTAL	12	0.090	0.045	0.04	0.18	12	-0.00042	0.32815	-0.564*	0.039
NITRITE + NITRATE, TOTAL	12	1.018	0.221	0.72	1.30	12	0.00236	-0.31984	0.644	0.178
NITROGEN, KJELDAHL, TOTAL	12	0.387	0.200	0.14	0.89	12	-0.00226	1.66454	-0.680	0.154
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	338.1	334.4	62	1200	11	-0.132	413.116	-0.025*	352.4
SEDIMENT SUSPENDED	12	88.7	113.9	9	327					
SEDIMENT, CLAY-SILT (PERCENT)	12	87.8	8.5	69	96					
COLIFORM, FECAL (COL/100 ML)	12	459.5	884.6	16	2400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	955.3	1828.8	27	5200					
SILICA, DISSOLVED	12	11.38	2.27	5.7	14.0	12	-0.0252	25.6708	-0.671	1.76
CALCIUM, DISSOLVED	12	71.42	8.27	59.0	86.0	12	0.1297	-1.9874	0.945	2.84
MAGNESIUM, DISSOLVED	12	16.08	2.61	12.0	19.0	12	0.0369	-4.7714	0.851	1.44
SODIUM, DISSOLVED	12	27.75	4.43	21.0	33.0	12	0.0709	-12.3810	0.964	1.24
POTASSIUM, DISSOLVED	12	2.47	0.45	2.0	3.3	12	-0.0057	5.6785	-0.766	0.30
BICARBONATE, ION	12	260.8	31.2	210	298	12	0.500	-22.473	0.967	6.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	30.08	3.29	23.0	34.0	12	0.0337	10.9853	0.619	2.71
CHLORIDE, DISSOLVED	12	39.67	5.16	31.0	46.0	12	0.0795	-5.3507	0.929	2.00
DISSOLVED SOLIDS, SUM OF CONST	12	328.0	34.4	270	374	12	0.564	8.964	0.987	5.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	338.8	33.1	274	388	12	0.519	45.101	0.945	11.4
HARDNESS, TOTAL	12	244.2	29.4	200	280	12	0.479	-27.061	0.983	5.6
HARDNESS, NONCARBONATE	12	31.1	5.6	24	41	12	0.063	-4.731	0.679	4.3
TURBIDITY (JTU)	12	38.8	42.7	8	130	12	-0.569	360.963	-0.803	26.7
FLUORIDE, DISSOLVED	11	0.30	0.10	0.1	0.5	11	0.0005	-0.0022	0.334*	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%
	693	665	656	642	628	588	534	407	331	283

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
350	21.19	7.20	2.74	86	2.01

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	4	1	2
CADMIUM (CD), UG/L	4	0	3	4	0	0
CHROMIUM (CR), UG/L	4	10	30	4	0	12
COBALT (CO), UG/L	4	0	4	4	0	0
COPPER (CU), UG/L	4	2	12	4	0	2
IRON (FE), UG/L	4	570	6100	4	0	0
LEAD (PB), UG/L	4	7	17	4	0	0
MANGANESE (MN), UG/L	4	30	170	4	0	10
MERCURY (HG), UG/L	4	0.2	0.4	4	0.2	0.4
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	40	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	1.600	10.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	22.54	5.22	14.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	933.4	240.3	521	1210					
STREAMFLOW (CUBIC FT/SEC)	12	625.8	356.8	305	1260	12	-1.393	1926.099	-0.938	129.7
PH (STANDARD UNITS)	12	7.79	0.14	7.5	7.9	12	0.0005	7.2903	0.936	0.05
PHOSPHORUS, TOTAL	12	1.650	0.893	0.53	3.40	12	0.00276	-0.92244	0.742	0.628
NITRITE + NITRATE, TOTAL	12	3.975	1.692	1.50	6.80	12	0.00564	-1.28520	0.800	1.065
NITROGEN, KJELDAHL, TOTAL	12	1.018	0.384	0.47	1.60	12	-0.00105	1.99792	-0.657	0.303
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	36299.1	67557.8	290	190000	11	-135.578	161166.375	-0.498*	61771.5
SEDIMENT SUSPENDED	12	264.5	229.2	54	740					
SEDIMENT, CLAY-SILT (PERCENT)	12	95.7	2.3	92	98					
COLIFORM, FECAL (COL/100 ML)	12	485.7	687.3	88	2600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1431.7	2092.2	230	7600					
SILICA, DISSOLVED	12	17.00	1.71	14.0	19.0	12	0.0056	11.7994	0.785	1.11
CALCIUM, DISSOLVED	12	94.17	20.67	53.0	120.0	12	0.0834	16.3561	0.969	5.34
MAGNESIUM, DISSOLVED	12	19.88	5.82	9.5	27.0	12	0.0240	-2.5291	0.990	0.85
SODIUM, DISSOLVED	12	78.92	28.55	40.0	110.0	12	0.1169	-30.2301	0.964	5.35
POTASSIUM, DISSOLVED	12	5.95	0.56	5.0	6.8	12	-0.0003	6.2535	-0.139*	0.59
BICARBONATE, ION	12	268.6	52.9	160	318	12	0.214	68.623	0.973	12.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	102.00	31.46	49.0	140.0	12	0.1293	-18.6674	0.987	5.23
CHLORIDE, DISSOLVED	12	108.50	39.02	52.0	160.0	12	0.1588	-39.6909	0.978	8.60
DISSOLVED SOLIDS, SUM OF CONST	12	559.5	150.3	305	724	12	0.624	-22.632	0.997	11.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	598.3	172.9	258	770	12	0.713	-67.361	0.991	24.3
HARDNESS, TOTAL	12	315.8	74.2	170	390	12	0.304	32.254	0.984	13.7
HARDNESS, NONCARBONATE	12	97.1	33.1	40	140	12	0.131	-25.619	0.956	10.2
TURBIDITY (JTU)	12	102.3	89.3	20	270	12	-0.346	426.753	-0.935	33.3
FLUORIDE, DISSOLVED	11	0.45	0.14	0.2	0.7	11	0.0004	0.0758	0.701	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%
	1300	1230	1190	1170	1140	1060	858	544	436	328

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	17.70	6.78	2.64	67	3.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	9	4	1	4
CADMIUM (CD), UG/L	4	0	0	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	12
COBALT (CO), UG/L	4	0	6	4	0	0
COPPER (CU), UG/L	4	5	14	4	2	3
IRON (FE), UG/L	4	2200	9800	4	0	10
LEAD (PB), UG/L	4	7	18	4	0	1
MANGANESE (MN), UG/L	4	80	260	4	0	20
MERCURY (HG), UG/L	4	0.1	0.4	4	0.1	0.4
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	30	50	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	8.62				
BIOMASS, ASH WT., G/SQ M	1	3.85				
CHLOROPHYLL A, MG/SQ M	1	36.700				
CHLOROPHYLL B, MG/SQ M	1	7.300				
ORGANIC CARBON, MG/L	12	3.200	12.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	22.04	5.66	12.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1431.3	679.2	273	2330					
STREAMFLOW (CUBIC FT/SEC)	12	737.1	1545.4	42	5450	12	-1.561	2971.797	-0.686	1179.0
PH (STANDARD UNITS)	12	7.80	0.19	7.4	8.0	12	0.0002	7.5069	0.743	0.13
PHOSPHORUS, TOTAL	12	0.176	0.189	0.04	0.74	12	-0.00014	0.38164	-0.517*	0.170
NITRITE + NITRATE, TOTAL	12	2.117	1.152	0.32	4.30	12	0.00123	0.35737	0.725	0.632
NITROGEN, KJELDAHL, TOTAL	12	0.753	0.332	0.35	1.50	12	-0.00032	1.20766	-0.649	0.265
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	690.6	635.8	97	2500	12	-0.117	858.230	-0.125*	661.6
SEDIMENT SUSPENDED	12	133.3	132.6	19	377					
SEDIMENT, CLAY-SILT (PERCENT)	12	85.4	19.3	43	100					
COLIFORM, FECAL (COL/100 ML)	12	516.0	736.7	20	2600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	845.6	1188.7	73	3800					
SILICA, DISSOLVED	12	14.00	2.63	10.0	20.0	12	-0.0020	16.8054	-0.506*	2.38
CALCIUM, DISSOLVED	12	124.58	50.12	31.0	180.0	12	0.0714	22.4505	0.967	13.39
MAGNESIUM, DISSOLVED	12	23.67	12.17	2.6	40.0	12	0.0175	-1.3682	0.977	2.74
SODIUM, DISSOLVED	12	150.83	90.97	19.0	310.0	12	0.1318	-37.8296	0.984	16.90
POTASSIUM, DISSOLVED	12	5.82	1.47	3.3	8.1	12	-0.0004	6.3418	-0.170*	1.52
BICARBONATE, ION	12	210.6	50.9	98	290	12	0.068	113.921	0.901	23.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	179.50	104.02	21.0	310.0	12	0.1507	-36.2120	0.984	19.34
CHLORIDE, DISSOLVED	12	258.75	148.81	22.0	470.0	12	0.2176	-52.7566	0.993	17.87
DISSOLVED SOLIDS, SUM OF CONST	12	860.8	421.3	166	1450	12	0.619	-25.413	0.998	27.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	921.0	442.2	136	1470	12	0.647	-5.448	0.994	49.6
HARDNESS, TOTAL	12	408.2	173.3	88	580	12	0.250	51.052	0.978	38.1
HARDNESS, NONCARBONATE	12	237.4	138.0	8	370	12	0.196	-43.103	0.965	38.1
TURBIDITY (JTU)	12	71.3	76.2	8	210	12	-0.096	208.600	-0.855	41.4
FLUORIDE, DISSOLVED	11	0.32	0.12	0.2	0.5	11	0.0001	0.1706	0.635	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%
	2370	2280	2160	2020	1920	1650	750	520	435	314

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
218	22.31	6.74	2.71	83	2.07

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	11	4	2	3
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	4	4	0	0
COPPER (CU), UG/L	4	3	12	4	0	3
IRON (FE), UG/L	4	570	10000	4	0	30
LEAD (PB), UG/L	4	0	10	4	0	0
MANGANESE (MN), UG/L	4	30	180	4	0	30
MERCURY (HG), UG/L	4	0.1	0.5	4	0.1	0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.15				
BIOMASS, ASH WT., G/SQ M	1	0.08				
CHLOROPHYLL A, MG/SQ M	1	0.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	12	2.800	11.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	23.20	5.44	13.0	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	3692.5	2065.2	280	6390					
STREAMFLOW (CUBIC FT/SEC)	10	0.4	0.6	0	2	10	-0.000	1.812	-0.888	0.4
PH (STANDARD UNITS)	10	8.06	0.53	7.1	8.6	10	0.0002	7.1707	0.884	0.26
PHOSPHORUS, TOTAL	10	1.590	0.622	0.46	2.30	10	0.00025	0.61110	0.835	0.363
NITRITE + NITRATE, TOTAL	10	0.034	0.083	0.00	0.27	10	-0.00002	0.12073	-0.553*	0.073
NITROGEN, KJELDAHL, TOTAL	10	1.404	0.411	0.94	2.70	10	0.00001	1.36766	0.047*	0.436
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	101350.0	153348.5	2900	520000	10	37.461	-44468.313	0.505*	140433.1
SEDIMENT SUSPENDED	10	32.7	28.6	11	108					
SEDIMENT, CLAY-SILT (PERCENT)	10	89.7	21.5	30	100					
COLIFORM, FECAL (COL/100 ML)	10	1214.5	3097.1	15	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	11103.0	31257.4	110	100000					
SILICA, DISSOLVED	10	54.80	22.92	11.0	78.0	10	0.0105	13.7437	0.950	7.58
CALCIUM, DISSOLVED	10	183.50	45.60	21.0	290.0	10	0.0460	4.4818	0.991	13.24
MAGNESIUM, DISSOLVED	10	63.01	34.92	4.3	110.0	10	0.0169	-2.5948	0.997	2.94
SODIUM, DISSOLVED	10	631.80	370.50	22.0	1200.0	10	0.1776	-59.5098	0.990	55.50
POTASSIUM, DISSOLVED	10	46.60	21.56	12.0	72.0	10	0.0099	8.1446	0.946	7.40
BICARBONATE, ION	10	143.7	50.3	43	212	10	0.018	75.160	0.745	35.6
CARBONATE, ION	10	2.6	5.5	0	13	10	0.001	0.642	0.189*	5.7
SULFATE, DISSOLVED	10	1027.50	596.53	35.0	1900.0	10	0.2861	-86.2505	0.991	86.60
CHLORIDE, DISSOLVED	10	649.20	372.81	23.0	1200.0	10	0.1792	-48.2441	0.993	48.10
DISSOLVED SOLIDS, SUM OF CONST	10	2733.1	1528.4	181	4930	10	0.736	-132.708	0.995	164.5
DISSOLVED SOLIDS, ROE 180 DEG C	10	2802.6	1529.8	184	4700	10	0.740	-79.230	0.999	52.6
HARDNESS, TOTAL	10	720.8	385.0	70	1200	10	0.166	-2.257	0.996	34.4
HARDNESS, NONCARBONATE	10	600.6	357.4	3	1100	10	0.171	-66.682	0.990	52.2
TURBIDITY (JTU)	10	21.9	31.7	4	110	10	-0.010	60.861	-0.652	25.5
FLUORIDE, DISSOLVED	9	2.23	1.80	0.3	6.3	9	0.0005	0.1300	0.665*	1.44

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 305

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%
	6870	6590	6190	5680	5460	4580	3520	1280	614	126

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
239	20.09	7.42	2.71	73	3.03

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

08212400 -- LOS OLMOS CREEK NEAR FALFURRIAS, TEX.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	7	9	2	7	9
CADMIUM (CD), UG/L	2	0	0	2	0	0
CHROMIUM (CR), UG/L	2	20	20	2	0	15
COBALT (CO), UG/L	2	0	0	2	0	0
COPPER (CU), UG/L	2	6	11	2	4	6
IRON (FE), UG/L	2	130	1100	2	20	40
LEAD (PB), UG/L	2	4	8	2	0	0
MANGANESE (MN), UG/L	2	80	100	2	40	60
MERCURY (HG), UG/L	2	0.0	0.1	2	0.0	0.1
SELENIUM (SE), UG/L	2	5	9	2	4	8
ZINC (ZN), UG/L	2	20	30	2	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	9.00				
BIOMASS, ASH WT., G/SQ M	1	5.85				
CHLOROPHYLL A, MG/SQ M	1	33.800				
CHLOROPHYLL B, MG/SQ M	1	6.900				
ORGANIC CARBON, MG/L	2	15.000	15.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	9.50	8.65	0.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	294.0	67.5	203	400					
STREAMFLOW (CUBIC FT/SEC)	2	601.0	0.0	601	601					
PH (STANDARD UNITS)	12	7.93	0.36	7.2	8.4	12	0.0031	7.0248	0.583	0.30
PHOSPHORUS, TOTAL	12	0.121	0.054	0.06	0.24	12	0.00026	0.04389	0.325*	0.054
NITRITE + NITRATE, TOTAL	12	0.132	0.149	0.00	0.39	12	-0.00089	0.39539	-0.406*	0.142
NITROGEN, KJELDAHL, TOTAL	12	0.463	0.224	0.13	0.85	12	-0.00123	0.82583	-0.371*	0.218
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	9164.2	9108.5	740	24000	12	71.802	-11945.637	0.532*	8089.2
SEDIMENT SUSPENDED	12	39.3	28.9	4	115					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	27.3	30.0	<1	77					
STREPTOCOCCI, FECAL (COL/100 ML)	12	69.8	87.8	<1	310					
SILICA, DISSOLVED	12	24.42	4.10	20.0	33.0	12	-0.0140	28.5370	-0.231*	4.18
CALCIUM, DISSOLVED	12	28.17	5.91	18.0	36.0	12	0.0816	4.1665	0.933	2.23
MAGNESIUM, DISSOLVED	12	5.42	1.11	3.5	6.8	12	0.0152	0.9449	0.926	0.44
SODIUM, DISSOLVED	12	20.83	9.50	11.0	42.0	12	0.1251	-15.9387	0.888	4.58
POTASSIUM, DISSOLVED	12	3.57	0.94	2.4	5.2	12	0.0123	-0.0395	0.881	0.47
BICARBONATE, ION	12	97.2	19.3	67	132	12	0.206	36.676	0.720	14.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	53.17	22.71	25.0	86.0	12	0.3137	-39.0715	0.932	8.62
CHLORIDE, DISSOLVED	12	5.14	2.12	2.7	8.9	12	0.0290	-3.3843	0.923	0.85
DISSOLVED SOLIDS, SUM OF CONST	12	189.0	46.6	125	268	12	0.665	-6.646	0.963	13.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	192.4	46.4	131	273	12	0.664	-2.789	0.966	12.5
HARDNESS, TOTAL	12	93.3	20.3	59	120	12	0.279	11.261	0.928	8.0
HARDNESS, NONCARBONATE	12	12.9	12.9	1	46	12	0.100	-16.401	0.521*	11.6
TURBIDITY (JTU)	12	8.9	7.5	3	26	12	0.001	8.623	0.009*	7.9
FLUORIDE, DISSOLVED	12	0.32	0.13	0.2	0.6	12	0.0015	-0.1252	0.802	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%
	490	421	400	375	343	273	237	210	202	194

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
284	9.39	10.97	2.80	96	1.72

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	3	4	1	2
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	1
COPPER (CU), UG/L	4	<10	30	4	1	1
IRON (FE), UG/L	4	340	2500	4	30	100
LEAD (PB), UG/L	4	5	<100	4	0	2
MANGANESE (MN), UG/L	4	50	200	4	20	40
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	3	0	1	4	0	1
ZINC (ZN), UG/L	4	30	90	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	2.69	53.70			
BIOMASS, ASH WT., G/SQ M	5	1.92	50.40			
CHLOROPHYLL A, MG/SQ M	5	1.500	14.000			
CHLOROPHYLL B, MG/SQ M	5	0.000	0.800			
ORGANIC CARBON, MG/L	4	2.900	26.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	22	11.11	6.71	0.5	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	35	312.9	50.7	217	450					
STREAMFLOW (CUBIC FT/SEC)	22	1258.0	577.9	580	2540	15	-11.781	5065.781	-0.768	454.3
PH (STANDARD UNITS)	28	8.03	0.27	7.7	8.6	28	-0.0002	8.0948	-0.036*	0.26
PHOSPHORUS, TOTAL	12	0.257	0.157	0.10	0.52	12	-0.00019	0.31798	-0.054*	0.164
NITRITE + NITRATE, TOTAL	12	0.165	0.110	0.03	0.33	12	0.00026	0.06447	0.102*	0.114
NITROGEN, KJELDAHL, TOTAL	12	0.796	0.276	0.31	1.20	12	0.00043	0.65965	0.068*	0.289
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	7213.3	7046.1	170	25000	12	0.251	7134.261	0.002*	7369.9
SEDIMENT SUSPENDED	21	2890.4	3992.0	127	14300					
SEDIMENT, CLAY-SILT (PERCENT)	13	72.7	25.1	22	99					
COLIFORM, FECAL (COL/100 ML)	12	1020.8	1082.7	250	4100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	427.9	475.5	25	1400					
SILICA, DISSOLVED	35	18.34	2.80	12.0	23.0	35	0.0140	13.9617	0.254*	2.75
CALCIUM, DISSOLVED	35	35.11	7.89	22.0	51.0	35	0.1291	-5.2698	0.830	4.47
MAGNESIUM, DISSOLVED	35	6.85	1.15	4.6	10.0	35	0.0172	1.4514	0.757	0.77
SODIUM, DISSOLVED	35	18.63	4.43	12.0	27.0	35	0.0670	-2.3252	0.766	2.69
POTASSIUM, DISSOLVED	35	2.75	0.45	1.8	3.5	35	0.0067	0.6566	0.747	0.31
BICARBONATE, ION	35	113.2	18.7	79	147	35	0.298	20.005	0.808	11.2
CARBONATE, ION	28	0.0	0.0	0	0	28	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	35	56.49	15.16	31.0	110.0	35	0.2552	-21.3620	0.654	8.01
CHLORIDE, DISSOLVED	35	5.70	1.79	2.7	9.8	35	0.0238	-1.7538	0.672	1.35
DISSOLVED SOLIDS, SUM OF CONST	35	202.9	35.9	136	293	35	0.666	-5.391	0.940	12.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	201.2	32.6	163	263	12	0.633	1.447	0.847	18.2
HARDNESS, TOTAL	35	116.1	22.8	79	170	35	0.347	-8.167	0.682	10.9
HARDNESS, NONCARBONATE	35	23.1	11.2	6	61	35	0.150	-23.607	0.680	8.3
TURBIDITY (JTU)	12	115.2	73.3	30	250	12	0.228	43.188	0.135*	76.2
FLUORIDE, DISSOLVED	35	0.36	0.08	0.2	0.6	35	0.0004	0.2333	0.246*	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%
	474	409	387	368	343	310	284	255	242	211

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	11.57	9.23	2.86	94	1.69

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

08313000 -- RIO GRANDE AT OTOWI BRIDGE,NM

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	14	4	1	4
CADMIUM (CD), UG/L	4	0	10	4	0	1
CHROMIUM (CR), UG/L	4	10	20	4	0	2
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	10	20	4	1	3
IRON (FE), UG/L	4	3900	11000	12	0	530
LEAD (PB), UG/L	4	100	100	4	2	3
MANGANESE (MN), UG/L	4	220	440	4	0	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	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	6	0.00	9.30			
BIOMASS, ASH WT., G/SQ M	6	0.00	7.40			
CHLOROPHYLL A, MG/SQ M	6	0.000	3.900			
CHLOROPHYLL B, MG/SQ M	6	0.000	1.000			
ORGANIC CARBON, MG/L	2	4.100	11.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	29	11.46	6.62	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	26	658.3	432.6	483	2120					
STREAMFLOW (CUBIC FT/SEC)	30	799.6	743.9	0	2300	26	-1.192	1812.280	-0.689	554.0
PH (STANDARD UNITS)	12	8.14	0.25	7.8	8.6	12	0.0003	7.9344	0.230 *	0.26
PHOSPHORUS, TOTAL	26	0.470	0.360	0.05	1.20	26	-0.00051	0.90985	-0.617	0.289
NITRITE + NITRATE, TOTAL	26	0.310	0.213	0.01	0.76	26	-0.00006	0.35865	-0.114 *	0.216
NITROGEN, KJELDAHL, TOTAL	25	1.171	0.769	0.34	3.20	25	-0.00061	1.69496	-0.348 *	0.736
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	10916.7	21159.4	500	76000	12	12.784	1553.359	0.123 *	22023.4
SEDIMENT SUSPENDED	12	1857.9	2078.1	158	6550					
SEDIMENT, CLAY-SILT (PERCENT)	1	46.0	0.0	46						
COLIFORM, FECAL (COL/100 ML)	12	1450.0	2047.3	21	6700					
STREPTOCOCCI, FECAL (COL/100 ML)	12	705.8	665.6	90	2300					
SILICA, DISSOLVED	12	23.08	1.24	22.0	25.0	12	0.0037	20.3954	0.603	1.04
CALCIUM, DISSOLVED	12	68.50	16.11	45.0	100.0	12	0.0659	20.2251	0.833	9.35
MAGNESIUM, DISSOLVED	12	12.33	2.79	8.2	17.0	12	0.0119	3.6005	0.870	1.44
SODIUM, DISSOLVED	12	69.92	19.55	38.0	100.0	12	0.0819	9.9399	0.853	10.71
POTASSIUM, DISSOLVED	12	5.24	0.95	4.0	6.5	12	0.0040	2.3048	0.863	0.50
BICARBONATE, ION	12	198.8	31.0	143	240	12	0.132	102.470	0.865	16.3
CARBONATE, ION	12	0.3	0.9	0	3	12	0.002	-1.473	0.553 *	0.8
SULFATE, DISSOLVED	12	146.08	44.00	84.0	210.0	12	0.1870	9.1105	0.865	23.12
CHLORIDE, DISSOLVED	12	47.33	18.30	22.0	79.0	12	0.0757	-8.1446	0.843	10.34
DISSOLVED SOLIDS, SUM OF CONST	12	474.3	116.3	297	661	12	0.499	108.882	0.874	59.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	484.8	117.8	318	657	12	0.505	115.093	0.872	60.5
HARDNESS, TOTAL	12	225.0	52.3	150	320	12	0.215	67.691	0.836	30.1
HARDNESS, NONCARBONATE	12	56.4	29.4	27	120	12	0.131	-39.512	0.907	13.0
TURBIDITY (JTU)	26	147.2	121.6	2	390	26	-0.186	306.670	-0.661	93.1
FLUORIDE, DISSOLVED	12	0.50	0.10	0.4	0.7	12	0.0002	0.3508	0.435 *	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 363

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1320	986	955	917	870	778	616	505	484	457

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + 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	15.92	9.51	2.86	85	2.87

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	5	31	4	3	4
CADMIUM (CD), UG/L	4	0	10	4	0	1
CHROMIUM (CR), UG/L	4	<10	30	4	0	0
COBALT (CO), UG/L	4	10	50	4	0	3
COPPER (CU), UG/L	4	10	40	4	1	2
IRON (FE), UG/L	4	6600	21000	11	0	100
LEAD (PB), UG/L	4	34	<100	4	0	2
MANGANESE (MN), UG/L	4	290	820	4	0	10
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	90	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.20	22.00			
BIOMASS, ASH WT., G/SQ M	3	0.20	18.00			
CHLOROPHYLL A, MG/SQ M	3	0.1	17.0			
CHLOROPHYLL B, MG/SQ M	3	0.0	1.1			
ORGANIC CARBON, MG/L	1	11.0				

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	14.79	6.88	5.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	5393.8	1644.2	3400	8580					
STREAMFLOW (CUBIC FT/SEC)	3	96.7	68.1	51	175					
PH (STANDARD UNITS)	24	7.92	0.22	7.2	8.2	24	-0.0000	8.0957	-0.240*	0.22
PHOSPHORUS, TOTAL	12	0.630	0.650	0.09	2.00	12	-0.00022	1.93486	-0.656	0.515
NITRITE + NITRATE, TOTAL	12	0.277	0.303	0.00	0.84	12	-0.00007	0.70377	-0.461*	0.282
NITROGEN, KJELDAHL, TOTAL	12	2.262	1.354	0.94	5.00	12	-0.00050	5.24573	-0.720	0.986
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	84627.3	122073.6	8600	350000	11	-13.320	160536.500	-0.201*	126062.1
SEDIMENT SUSPENDED	12	192.2	207.5	28	619					
SEDIMENT, CLAY-SILT (PERCENT)	11	60.8	34.0	7	98					
COLIFORM, FECAL (COL/100 ML)	12	337.1	507.6	20	1800					
STREPTOCOCCI, FECAL (COL/100 ML)	12	378.7	507.3	40	1500					
SILICA, DISSOLVED	24	25.88	3.59	17.0	33.0	24	0.0007	21.9383	0.334*	3.46
CALCIUM, DISSOLVED	24	284.17	81.72	180.0	480.0	24	0.0484	22.8711	0.975	18.66
MAGNESIUM, DISSOLVED	24	75.96	27.49	45.0	130.0	24	0.0166	-13.4869	0.992	3.54
SODIUM, DISSOLVED	24	847.50	290.77	480.0	1400.0	24	0.1763	-103.1665	0.997	24.33
POTASSIUM, DISSOLVED	19	14.37	1.80	11.0	17.0	19	0.0003	12.4540	0.315*	1.76
BICARBONATE, ION	24	316.2	46.5	248	388	24	0.009	268.031	0.316*	45.1
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	24	903.75	262.06	550.0	1400.0	24	0.1578	52.8625	0.990	38.34
CHLORIDE, DISSOLVED	24	1190.00	470.69	660.0	2200.0	24	0.2841	-342.2534	0.992	59.41
DISSOLVED SOLIDS, SUM OF CONST	24	3499.6	1136.4	2070	5860	24	0.689	-216.661	0.997	91.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	3952.5	1294.9	2590	5840	12	0.667	-8.654	0.999	61.3
HARDNESS, TOTAL	24	1021.3	313.4	630	1700	24	0.188	5.398	0.988	49.5
HARDNESS, NONCARBONATE	24	763.8	299.6	410	1400	24	0.181	-210.255	0.991	41.3
TURBIDITY (JTU)	12	63.3	54.2	10	150	12	-0.002	77.553	-0.086*	56.6
FLUORIDE, DISSOLVED	13	0.88	0.10	0.8	1.1	13	0.0000	0.8367	0.156*	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%
	9290	6770	8440	7620	6670	5250	4300	3560	2930	2060

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	19.45	9.27	2.98	84	2.91

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

08370500 -- RIO GRANDE AT FORT QUITMAN, TEXAS

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	5	11	4	5	8
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	10	30	4	0	0
COBALT (CO), UG/L	4	0	3	4	0	0
COPPER (CU), UG/L	4	2	13	4	0	2
IRON (FE), UG/L	4	330	6300	4	10	40
LEAD (PB), UG/L	4	0	15	4	0	2
MANGANESE (MN), UG/L	4	70	780	4	10	760
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	3	0	1	4	0	2
ZINC (ZN), UG/L	4	10	110	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.50	160.00			
BIOMASS, ASH WT., G/SQ M	4	0.10	150.00			
CHLOROPHYLL A, MG/SQ M	4	0.100	66.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.700			
ORGANIC CARBON, MG/L	4	4.600	11.000			

Table 12. Summary of measurements at each station--Continued.

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: 10/01/75 - 09/30/76

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)	12	19.88	5.76	12.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	1148.5	168.3	700	1340					
STREAMFLOW (CUBIC FT/SEC)	2	1561.5	1200.0	713	2410					
PH (STANDARD UNITS)	24	7.90	0.11	7.6	8.1	24	0.0002	7.6348	0.352*	0.11
PHOSPHORUS, TOTAL	12	0.248	0.364	0.01	1.20	12	-0.00053	0.87010	-0.275*	0.367
NITRITE + NITRATE, TOTAL	11	0.573	0.213	0.19	0.92	11	-0.00071	1.39756	-0.647	0.171
NITROGEN, KJELDAHL, TOTAL	12	0.578	0.487	0.11	1.50	12	-0.00113	1.89845	-0.436*	0.459
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4260.8	3294.4	530	10000	12	6.036	-2786.199	0.344*	3244.1
SEDIMENT SUSPENDED	12	439.8	632.3	65	2120					
SEDIMENT, CLAY-SILT (PERCENT)	12	91.0	6.2	78	100					
COLIFORM, FECAL (COL/100 ML)	12	318.7	481.6	4	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	12	603.0	918.1	16	3200					
SILICA, DISSOLVED	24	23.83	3.20	16.0	31.0	24	0.0079	14.7576	0.416	2.97
CALCIUM, DISSOLVED	24	85.83	8.27	64.0	100.0	24	0.0349	45.7168	0.711	5.95
MAGNESIUM, DISSOLVED	23	18.70	4.96	10.0	24.0	23	0.0204	-4.8161	0.701	3.62
SODIUM, DISSOLVED	24	131.67	28.16	56.0	160.0	24	0.1598	-51.8267	0.955	8.53
POTASSIUM, DISSOLVED	19	5.83	0.61	4.4	7.0	19	0.0011	4.5242	0.290*	0.61
BICARBONATE, ION	24	183.7	12.7	162	212	24	0.026	153.701	0.345*	12.2
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	24	291.25	43.87	140.0	340.0	24	0.2182	40.5914	0.837	24.51
CHLORIDE, DISSOLVED	24	89.75	34.26	37.0	130.0	24	0.1610	-118.1216	0.889	16.02
DISSOLVED SOLIDS, SUM OF CONST	23	741.5	110.9	429	849	23	0.643	-0.521	0.969	16.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	760.8	122.1	434	856	12	0.633	21.562	0.974	29.2
HARDNESS, TOTAL	23	290.9	34.6	220	350	23	0.175	89.622	0.859	18.1
HARDNESS, NONCARBONATE	23	140.2	29.7	74	200	23	0.151	-34.511	0.868	15.1
TURBIDITY (JTU)	12	162.3	216.5	16	700	12	-0.334	552.185	-0.290*	217.3
FLUORIDE, DISSOLVED	13	1.54	0.30	1.0	2.2	13	0.0001	1.4491	0.048*	0.32

*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%
	1440	1350	1330	1290	1260	1160	1080	888	765	536

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	22.34	7.21	2.92	82	2.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	20	4	5	24
CADMIUM (CD), UG/L	4	0	3	4	0	2
CHROMIUM (CR), UG/L	4	<10	50	4	0	0
COBALT (CO), UG/L	4	0	13	4	0	0
COPPER (CU), UG/L	4	1	16	4	0	2
IRON (FE), UG/L	4	760	13000	4	0	30
LEAD (PB), UG/L	4	0	28	4	0	1
MANGANESE (MN), UG/L	4	30	440	4	0	0
MERCURY (HG), UG/L	3	0.0	0.5	4	0.0	0.3
SELENIUM (SE), UG/L	3	0	2	4	1	1
ZINC (ZN), UG/L	4	20	100	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	5.50				
BIOMASS, ASH WT., G/SQ M	1	0.80				
CHLOROPHYLL A, MG/SQ M	1	2.400				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	1.800	27.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, A	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	16.90	8.74	5.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	19240.0	6724.3	6900	31500					
STREAMFLOW (CUBIC FT/SEC)	10	30.6	20.5	9	60	10	-0.002	72.304	-0.921	8.5
PH (STANDARD UNITS)	10	7.86	0.21	7.5	8.0	10	0.0000	7.7902	0.153*	0.22
PHOSPHORUS, TOTAL	11	0.048	0.030	0.02	0.12	10	0.00000	0.01093	0.539*	0.026
NITRITE + NITRATE, TOTAL	11	0.267	0.312	0.01	1.00	10	-0.00002	0.61300	-0.458*	0.298
NITROGEN, KJELDAHL, TOTAL	11	1.582	0.663	0.63	2.50	10	-0.00006	2.69432	-0.711	0.506
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	19255.5	19288.7	55	47000	9	-2.069	62746.543	-0.961	5637.1
SEDIMENT SUSPENDED	9	17.8	6.8	8	27					
SEDIMENT, CLAY-SILT (PERCENT)	9	91.7	9.6	69	99					
COLIFORM, FECAL (COL/100 ML)	9	220.3	594.3	0	1800					
STREPTOCOCCI, FECAL (COL/100 ML)	10	51.2	73.3	0	200					
SILICA, DISSOLVED	11	4.71	3.60	0.1	11.0	10	0.0003	-0.6665	0.606*	3.38
CALCIUM, DISSOLVED	11	539.09	119.70	240.0	710.0	10	0.0110	321.4282	0.772	64.28
MAGNESIUM, DISSOLVED	11	281.82	85.54	180.0	450.0	10	0.0100	88.1677	0.970	23.13
SODIUM, DISSOLVED	11	3836.36	2150.01	1600.0	8000.0	10	0.2545	1036.8125	0.980	473.10
POTASSIUM, DISSOLVED	11	159.16	96.36	62.0	330.0	10	0.0115	-58.7396	0.991	14.39
BICARBONATE, ION	11	118.2	34.9	67	173	10	0.001	109.409	0.191*	33.9
CARBONATE, ION	11	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	2218.18	530.69	1600.0	3500.0	10	0.0543	1165.5742	0.848	314.32
CHLORIDE, DISSOLVED	11	6227.27	3419.09	2600.0	3000.0	10	0.4039	1530.3125	0.978	802.60
DISSOLVED SOLIDS, SUM OF CONST	11	13337.3	6338.5	6330	26100	10	0.747	-1009.070	0.975	1564.4
DISSOLVED SOLIDS, ROE 180 DEG C	11	13669.1	6179.6	6890	25400	10	0.734	-395.195	0.983	1250.7
HARDNESS, TOTAL	11	2518.2	611.3	1400	3600	10	0.068	1184.985	0.930	250.0
HARDNESS, NONCARBONATE	11	2390.9	612.3	1300	3500	10	0.069	1034.703	0.944	224.0
TURBIDITY (JTU)	11	4.3	3.4	0	8	10	-0.000	5.587	-0.231*	3.4
FLUORIDE, DISSOLVED	11	0.81	0.21	0.5	1.3	10	0.0000	0.4843	0.650	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%
	44200	38700	36200	28800	24000	17200	12500	10700	10500	10000

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	19.01	10.41	2.92	93	2.08

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	1	3	3	1	1
CADMIUM (CD), UG/L	3	0	30	3	0	0
CHROMIUM (CR), UG/L	3	10	30	3	0	30
COBALT (CO), UG/L	3	0	450	3	0	2
COPPER (CU), UG/L	3	2	30	3	0	2
IRON (FE), UG/L	3	80	370	11	10	100
LEAD (PB), UG/L	3	0	350	3	0	1
MANGANESE (MN), UG/L	3	30	210	3	10	130
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.1
SELENIUM (SE), UG/L	3	2	2	3	1	2
ZINC (ZN), UG/L	3	10	30	3	10	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	4.40	72.40			
BIOMASS, ASH WT., G/SQ M	2	2.90	64.80			
CHLOROPHYLL A, MG/SQ M	2	1.800	37.400			
CHLOROPHYLL B, MG/SQ M	2	0.100	2.200			
ORGANIC CARBON, MG/L	2	7.200	7.900			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.58	6.22	10.0	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	2981.2	931.4	718	4530					
STREAMFLOW (CUBIC FT/SEC)	1	448.0	0.0	448						
PH (STANDARD UNITS)	24	7.86	0.21	7.5	8.2	24	0.0000	7.6099	0.073*	0.21
PHOSPHORUS, TOTAL	12	0.009	0.008	0.00	0.03	12	-0.00000	0.01324	-0.128*	0.008
NITRITE + NITRATE, TOTAL	9	1.389	0.610	0.58	2.30	9	-0.00052	2.83985	-0.591*	0.526
NITROGEN, KJELDAHL, TOTAL	12	0.239	0.147	0.02	0.51	12	-0.00011	0.56917	-0.561*	0.127
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1144.2	947.2	280	3100	12	-0.318	2105.586	-0.253*	961.2
SEDIMENT SUSPENDED	12	13.3	9.0	4	34					
SEDIMENT, CLAY-SILT (PERCENT)	12	68.7	29.7	8	99					
COLIFORM, FECAL (COL/100 ML)	11	9.3	7.9	2	30					
STREPTOCOCCI, FECAL (COL/100 ML)	11	79.2	81.0	8	240					
SILICA, DISSOLVED	24	14.04	2.76	11.0	19.0	24	-0.0021	20.1642	-0.694	2.03
CALCIUM, DISSOLVED	24	136.42	29.70	73.0	190.0	24	0.0303	46.2242	0.949	9.58
MAGNESIUM, DISSOLVED	23	64.00	19.21	11.0	99.0	23	0.0223	-4.4164	0.996	1.81
SODIUM, DISSOLVED	24	409.25	137.05	62.0	660.0	24	0.1442	-20.5166	0.980	28.06
POTASSIUM, DISSOLVED	19	7.45	1.06	5.6	10.0	19	0.0013	3.2075	0.909	0.45
BICARBONATE, ION	24	179.8	16.6	144	200	24	-0.001	183.121	-0.062*	16.9
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	24	382.88	121.36	59.0	600.0	24	0.1266	5.4165	0.972	29.28
CHLORIDE, DISSOLVED	24	682.08	233.91	100.0	1100.0	24	0.2456	-50.0522	0.976	49.98
DISSOLVED SOLIDS, SUM OF CONST	23	1814.0	532.0	412	2770	23	0.619	-83.222	0.997	43.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	1863.3	502.6	1090	2600	12	0.665	-144.366	0.995	54.3
HARDNESS, TOTAL	23	609.6	149.7	230	860	23	0.173	80.209	0.989	23.1
HARDNESS, NONCARBONATE	23	461.9	149.8	73	720	23	0.174	-70.398	0.993	17.9
TURBIDITY (JTU)	11	4.7	3.2	2	10	11	-0.002	10.774	-0.482*	3.0
FLUORIDE, DISSOLVED	13	0.76	0.16	0.3	0.9	13	0.0001	0.4669	0.683	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%
	4810	4370	4140	3750	3560	3090	2810	1830	1770	510

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	19.21	8.34	2.87	95	1.50

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	1	2
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	40	4	0	3
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	0	6	4	0	5
IRON (FE), UG/L	4	80	120	4	0	20
LEAD (PB), UG/L	4	0	9	4	0	1
MANGANESE (MN), UG/L	4	10	70	4	0	10
MERCURY (HG), UG/L	3	0.1	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	4	0	2
ZINC (ZN), UG/L	4	10	40	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.40				
BIOMASS, ASH WT., G/SQ M	1	0.40				
CHLOROPHYLL A, MG/SQ M	1	1.100				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	1.400	6.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	23.33	5.19	15.0	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	933.0	183.5	395	1120					
STREAMFLOW (CUBIC FT/SEC)	2	5295.0	4872.0	1850	8740					
PH (STANDARD UNITS)	24	7.89	0.14	7.5	8.1	24	0.0004	7.4893	0.562	0.12
PHOSPHORUS, TOTAL	12	0.062	0.058	0.01	0.20	12	-0.00015	0.20010	-0.550*	0.051
NITRITE + NITRATE, TOTAL	12	0.542	0.290	0.23	1.30	12	-0.00086	1.34005	-0.635	0.235
NITROGEN, KJELDAHL, TOTAL	12	0.532	0.547	0.18	2.20	12	-0.00191	2.29970	-0.745	0.383
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	964.2	950.7	62	2200	11	-0.251	1198.830	-0.058*	1000.4
SEDIMENT SUSPENDED	12	223.3	426.2	16	1540					
SEDIMENT, CLAY-SILT (PERCENT)	12	86.6	14.2	50	99					
COLIFORM, FECAL (COL/100 ML)	12	1215.6	1645.2	28	4600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1553.9	2334.5	28	7900					
SILICA, DISSOLVED	14	14.91	2.50	9.8	19.0	14	0.0060	9.3541	0.481*	2.28
CALCIUM, DISSOLVED	24	76.13	9.10	53.0	91.0	24	0.0430	35.9805	0.868	4.61
MAGNESIUM, DISSOLVED	24	17.47	3.96	5.9	22.0	24	0.0209	-2.0377	0.969	1.00
SODIUM, DISSOLVED	24	94.67	28.16	19.0	130.0	24	0.1506	-45.8304	0.982	5.50
POTASSIUM, DISSOLVED	13	3.95	0.73	2.7	4.8	13	0.0029	1.2422	0.834	0.42
BICARBONATE, ION	24	161.0	10.3	144	194	24	0.015	146.763	0.271*	10.2
CARBONATE, ION	24	0.0	0.0	0	0	24	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	14	179.93	57.62	40.0	250.0	14	0.2789	-80.4203	0.974	13.49
CHLORIDE, DISSOLVED	24	106.29	30.01	25.0	140.0	24	0.1589	-42.0056	0.972	7.21
DISSOLVED SOLIDS, SUM OF CONST	14	579.8	139.5	232	731	14	0.682	-56.823	0.984	26.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	588.2	147.3	252	766	12	0.669	-30.018	0.969	38.3
HARDNESS, TOTAL	24	263.3	38.0	160	310	24	0.194	82.589	0.937	13.6
HARDNESS, NONCARBONATE	24	131.9	35.0	30	170	24	0.185	-40.892	0.972	8.4
TURBIDITY (JTU)	12	71.9	104.1	5	370	12	-0.354	399.040	-0.725	75.2
FLUORIDE, DISSOLVED	11	0.65	0.22	0.3	1.0	11	0.0008	-0.0752	0.800	0.14

*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%
	1270	1170	1150	1090	1050	981	909	662	588	404

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
151	21.76	7.08	2.97	83	2.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	2	5	4	2	3
CADMIUM (CD), UG/L	4	0	1	4	0	1
CHROMIUM (CR), UG/L	4	<10	20	4	0	9
COBALT (CO), UG/L	4	0	4	4	0	0
COPPER (CU), UG/L	4	4	14	4	0	2
IRON (FE), UG/L	4	380	5500	4	0	30
LEAD (PB), UG/L	4	0	9	4	0	0
MANGANESE (MN), UG/L	4	20	370	4	0	20
MERCURY (HG), UG/L	4	0.1	0.4	4	0.1	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	30	50	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	1.600	8.800			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 08475000 NAME: RIO GRANDE NEAR BROWNSVILLE, TEXAS

LAT 25D52M35S LONG 097D27M15S
DRAINAGE AREA: 182215 SQ MI (471937 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	26.10	4.12	17.5	30.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1314.6	287.5	806	1610					
STREAMFLOW (CUBIC FT/SEC)	20	5055.5	5377.5	140	14000	11	-14.024	21298.449	-0.853	2268.8
PH (STANDARD UNITS)	12	7.62	0.16	7.3	7.9	12	0.0001	7.5029	0.151*	0.17
PHOSPHORUS, TOTAL	12	0.307	0.180	0.12	0.67	12	0.00038	-0.18638	0.600	0.151
NITRITE + NITRATE, TOTAL	12	0.123	0.150	0.00	0.51	12	-0.00031	0.52460	-0.587	0.127
NITROGEN, KJELDAHL, TOTAL	12	1.853	0.920	0.79	3.50	12	0.00136	0.06114	0.426*	0.873
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	213800.0	249499.6	6600	710000	12	-93.041	336110.000	-0.107*	260166.2
SEDIMENT SUSPENDED	20	359.5	429.7	6	1820					
SEDIMENT, CLAY-SILT (PERCENT)	20	87.6	13.6	54	99					
COLIFORM, FECAL (COL/100 ML)	12	42030.0	80190.9	260	250000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	5056.7	7687.9	40	23000					
SILICA, DISSOLVED	12	14.77	2.70	9.2	18.0	12	0.0084	3.7802	0.891	1.28
CALCIUM, DISSOLVED	12	97.92	22.89	62.0	130.0	12	0.0753	-1.0643	0.946	7.81
MAGNESIUM, DISSOLVED	12	26.17	5.77	17.0	35.0	12	0.0188	1.4906	0.936	2.13
SODIUM, DISSOLVED	12	150.17	39.87	72.0	200.0	12	0.1346	-26.8279	0.971	10.00
POTASSIUM, DISSOLVED	12	5.37	1.03	3.5	6.5	12	0.0033	1.0377	0.920	0.42
BICARBONATE, ION	12	194.4	43.2	130	250	12	0.135	16.719	0.899	19.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	249.17	46.02	170.0	310.0	12	0.1505	51.2914	0.940	16.40
CHLORIDE, DISSOLVED	12	185.67	55.66	88.0	250.0	12	0.1925	-67.3386	0.994	6.31
DISSOLVED SOLIDS, SUM OF CONST	12	826.8	189.0	495	1030	12	0.652	-30.683	0.992	24.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	848.3	201.5	476	1060	12	0.689	-57.854	0.983	38.3
HARDNESS, TOTAL	12	352.5	81.8	220	450	12	0.271	-3.770	0.952	26.2
HARDNESS, NONCARBONATE	12	193.3	47.7	110	250	12	0.159	-15.040	0.955	14.9
TURBIDITY (JTU)	12	60.0	77.4	4	250	12	-0.234	368.049	-0.871	39.9
FLUORIDE, DISSOLVED	11	0.60	0.10	0.4	0.7	11	0.0002	0.3337	0.608	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%
	1830	1730	1660	1550	1500	1340	1180	948	911	824

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
342	27.39	2.91	1.72	66	1.49

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	5	4	3	5
CADMIUM (CD), UG/L	4	0	0	4	0	0
CHROMIUM (CR), UG/L	4	10	40	4	0	13
COBALT (CO), UG/L	4	0	4	4	0	0
COPPER (CU), UG/L	4	4	11	4	0	5
IRON (FE), UG/L	4	250	4000	4	10	40
LEAD (PB), UG/L	4	0	8	4	0	1
MANGANESE (MN), UG/L	4	170	210	4	10	180
MERCURY (HG), UG/L	4	0.0	1.7	4	0.0	0.7
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	50	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	3.100	8.200			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	12.32	5.91	3.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	1582.7	336.2	1340	2570					
STREAMFLOW (CUBIC FT/SEC)	11	12.5	4.0	9	23	11	0.010	-3.166	0.833	2.3
PH (STANDARD UNITS)	11	7.95	0.08	7.8	8.0	11	0.0001	7.8243	0.314*	0.08
PHOSPHORUS, TOTAL	11	0.642	1.766	0.01	5.90	11	0.00507	-7.37792	0.965	0.491
NITRITE + NITRATE, TOTAL	11	0.756	0.560	0.30	2.20	11	0.00151	-1.64139	0.909	0.246
NITROGEN, KJELDAHL, TOTAL	11	1.155	2.129	0.14	7.40	11	0.00598	-8.30960	0.944	0.738
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	1130.0	1141.1	130	3100	10	1.752	-1675.558	0.535*	1022.3
SEDIMENT SUSPENDED	11	3394.1	10560.5	23	35200					
SEDIMENT, CLAY-SILT (PERCENT)	11	73.6	19.4	33	96					
COLIFORM, FECAL (COL/100 ML)	10	545.3	933.6	0	2600					
STREPTOCOCCI, FECAL (COL/100 ML)	10	339.6	554.7	0	1700					
SILICA, DISSOLVED	11	11.79	2.58	6.6	15.0	11	-0.0047	19.1540	-0.606	2.17
CALCIUM, DISSOLVED	11	246.36	106.04	180.0	560.0	11	0.3112	-246.1710	0.987	16.26
MAGNESIUM, DISSOLVED	11	58.00	9.53	33.0	69.0	11	-0.0214	91.7917	-0.753	6.61
SODIUM, DISSOLVED	11	43.91	6.83	25.0	53.0	11	-0.0172	71.0591	-0.844	3.86
POTASSIUM, DISSOLVED	11	2.05	1.22	1.2	4.7	11	0.0023	-1.6571	0.646	0.98
BICARBONATE, ION	11	235.5	35.2	165	279	11	-0.069	344.831	-0.660	27.9
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	638.18	259.57	460.0	1400.0	11	0.7648	-572.2639	0.991	37.57
CHLORIDE, DISSOLVED	11	64.18	17.58	34.0	80.0	11	-0.0257	104.8432	-0.686	9.65
DISSOLVED SOLIDS, SUM OF CONST	11	1182.1	332.7	962	2150	11	0.979	-367.145	0.989	51.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	1263.6	336.8	1020	2240	11	0.991	-304.364	0.989	52.6
HARDNESS, TOTAL	11	850.9	224.8	680	1500	11	0.659	-191.513	0.985	40.9
HARDNESS, NONCARBONATE	11	660.9	253.0	490	1400	11	0.746	-520.573	0.992	33.8
TURBIDITY (JTU)	11	727.4	2248.9	3	7500	11	6.514	-9582.055	0.974	539.9
FLUORIDE, DISSOLVED	11	0.46	0.07	0.3	0.5	11	0.0001	0.3529	0.349*	0.07

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	1	3	0	1
CADMIUM (CD), UG/L	3	0	<10	3	0	0
CHROMIUM (CR), UG/L	3	10	30	3	0	10
COBALT (CO), UG/L	3	0	100	3	0	2
COPPER (CU), UG/L	3	0	10	3	0	1
IRON (FE), UG/L	3	680	840	11	0	40
LEAD (PB), UG/L	3	0	100	3	0	1
MANGANESE (MN), UG/L	3	60	90	3	20	40
MERCURY (HG), UG/L	3	0.0	0.3	3	0.0	0.3
SELENIUM (SE), UG/L	3	0	2	3	0	1
ZINC (ZN), UG/L	3	10	20	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	2.400	4.400			

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: 10/01/75 - 09/30/76

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, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.96	7.43	2.0	21.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1092.5	437.9	530	1950					
STREAMFLOW (CUBIC FT/SEC)	12	1892.0	969.2	734	3300	12	-1.410	3432.337	-0.637	783.6
PH (STANDARD UNITS)	12	8.11	0.24	7.8	8.4	12	-0.0001	8.2582	-0.251*	0.24
PHOSPHORUS, TOTAL	12	0.277	0.643	0.00	2.30	12	0.00082	-0.61414	0.555*	0.561
NITRITE + NITRATE, TOTAL	12	1.247	0.760	0.50	3.10	12	0.00162	-0.52009	0.932	0.290
NITROGEN, KJELDAHL, TOTAL	12	0.833	0.962	0.13	3.80	12	0.00131	-0.59824	0.596	0.810
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	4493.0	2929.2	23	10000	11	-0.102	4606.043	-0.016*	3087.2
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	67.7	70.7	<1	190					
STREPTOCOCCI, FECAL (COL/100 ML)	9	91.7	73.1	21	250					
SILICA, DISSOLVED	11	13.56	2.47	9.2	19.0	11	0.0046	8.4750	0.848	1.38
CALCIUM, DISSOLVED	11	120.27	63.87	57.0	240.0	11	0.1376	-32.2127	0.982	12.83
MAGNESIUM, DISSOLVED	11	39.27	16.44	17.0	67.0	11	0.0358	-0.3866	0.992	2.18
SODIUM, DISSOLVED	11	73.18	32.40	31.0	130.0	11	0.0708	-5.2523	0.996	3.22
POTASSIUM, DISSOLVED	11	4.24	1.84	2.5	8.7	11	0.0039	-0.0509	0.956	0.57
BICARBONATE, ION	11	180.9	42.6	114	245	11	0.090	81.329	0.960	12.6
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	446.36	251.88	180.0	930.0	11	0.5475	-160.3704	0.991	36.49
CHLORIDE, DISSOLVED	11	10.38	3.92	6.0	18.0	11	0.0085	0.9917	0.985	0.71
DISSOLVED SOLIDS, SUM OF CONST	11	796.5	389.4	359	1530	11	0.850	-145.341	0.995	42.9
DISSOLVED SOLIDS, ROE 180 DEG C	10	852.8	435.6	362	1610	10	0.908	-166.094	0.996	39.1
HARDNESS, TOTAL	11	460.0	227.0	210	880	11	0.494	-87.163	0.991	31.9
HARDNESS, NONCARBONATE	11	312.7	192.2	120	670	11	0.414	-145.983	0.981	38.9
TURBIDITY (JTU)	10	217.1	557.4	6	1800	10	0.709	-578.876	0.608*	469.2
FLUORIDE, DISSOLVED	11	0.45	0.18	0.2	0.7	11	0.0004	0.0378	0.956	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1930	1740	1680	1540	1350	1040	844	756	725	674

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
326	11.74	10.05	2.79	95	1.62

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	1	3	5	0	2
CADMIUM (CD), UG/L	3	<10	20	5	1	2
CHROMIUM (CR), UG/L	3	0	10	5	0	5
COBALT (CO), UG/L	3	<50	<50	5	0	3
COPPER (CU), UG/L	3	<10	10	5	0	5
IRON (FE), UG/L	3	330	3100	5	0	30
LEAD (PB), UG/L	3	<100	<100	5	0	3
MANGANESE (MN), UG/L	3	60	170	5	10	40
MERCURY (HG), UG/L	3	0.0	0.0	5	0.0	0.0
SELENIUM (SE), UG/L	5	9	19	5	9	19
ZINC (ZN), UG/L	3	20	30	5	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	5	3.900	9.500			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	11.13	7.86	0.5	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1215.8	388.0	575	1850					
STREAMFLOW (CUBIC FT/SEC)	12	4427.5	2872.2	1980	12700	12	-5.629	11271.301	-0.760	1956.6
PH (STANDARD UNITS)	12	7.69	0.26	7.2	8.1	12	-0.0000	7.7417	-0.062*	0.27
PHOSPHORUS, TOTAL	12	0.108	0.086	0.03	0.35	12	-0.00007	0.18751	-0.295*	0.086
NITRITE + NITRATE, TOTAL	12	0.843	0.315	0.46	1.50	12	0.00069	0.00075	0.853	0.173
NITROGEN, KJELDAHL, TOTAL	12	0.618	0.251	0.36	1.30	12	-0.00013	0.77219	-0.196*	0.258
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	5190.0	4739.5	1400	17000	10	2.316	2284.370	0.204*	4921.8
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	124.1	148.5	2	500					
STREPTOCOCCI, FECAL (COL/100 ML)	9	229.4	153.3	30	470					
SILICA, DISSOLVED	11	10.22	1.15	8.6	12.0	11	0.0012	8.7487	0.420*	1.10
CALCIUM, DISSOLVED	11	105.45	42.34	57.0	170.0	11	0.0960	-12.5202	0.916	17.90
MAGNESIUM, DISSOLVED	11	35.45	14.99	16.0	61.0	11	0.0353	-7.9796	0.953	4.81
SODIUM, DISSOLVED	11	101.64	34.15	37.0	150.0	11	0.0814	1.6294	0.963	9.75
POTASSIUM, DISSOLVED	11	4.16	1.12	2.2	6.1	11	0.0026	0.9523	0.941	0.40
BICARBONATE, ION	11	181.9	31.4	112	217	11	0.072	93.242	0.927	12.4
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	343.64	177.05	140.0	650.0	11	0.4103	-160.7117	0.936	65.45
CHLORIDE, DISSOLVED	11	93.18	31.01	34.0	130.0	11	0.0722	4.4595	0.941	11.09
DISSOLVED SOLIDS, SUM OF CONST	11	784.8	307.5	350	1290	11	0.738	-121.881	0.969	79.7
DISSOLVED SOLIDS, ROE 180 DEG C	10	806.6	345.4	352	1350	10	0.787	-147.556	0.961	101.3
HARDNESS, TOTAL	11	410.9	168.3	210	680	11	0.388	-65.714	0.931	64.8
HARDNESS, NONCARBONATE	11	261.8	145.3	120	500	11	0.326	-138.700	0.906	64.8
TURBIDITY (JTU)	10	38.9	28.0	6	85	10	-0.027	71.635	-0.407*	27.1
FLUORIDE, DISSOLVED	11	0.37	0.09	0.3	0.5	11	0.0002	0.1207	0.916	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C. THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1980	1720	1650	1470	1350	1170	1060	782	677	544

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
359	11.89	10.23	2.82	95	1.66

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	0	3	5	0	1
CADMIUM (CD), UG/L	3	10	10	5	0	3
CHROMIUM (CR), UG/L	3	0	20	5	0	5
COBALT (CO), UG/L	3	<50	<50	5	0	3
COPPER (CU), UG/L	3	<10	40	5	0	3
IRON (FE), UG/L	3	330	3300	5	0	140
LEAD (PB), UG/L	3	<100	100	5	0	3
MANGANESE (MN), UG/L	3	50	150	5	0	20
MERCURY (HG), UG/L	3	0.0	0.1	5	0.0	0.1
SELENIUM (SE), UG/L	5	6	15	5	5	13
ZINC (ZN), UG/L	3	10	120	5	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	2.900	4.800			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	21	11.74	7.81	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1235.4	350.2	550	1680					
STREAMFLOW (CUBIC FT/SEC)	21	4805.7	2984.6	1880	13100	12	-6.476	12896.793	-0.809	1725.3
PH (STANDARD UNITS)	12	8.36	0.12	8.2	8.6	12	0.0001	8.2559	0.249*	0.12
PHOSPHORUS, TOTAL	12	0.141	0.153	0.01	0.50	12	-0.00018	0.36631	-0.419*	0.145
NITRITE + NITRATE, TOTAL	12	0.806	0.263	0.51	1.40	12	0.00055	0.12024	0.738	0.186
NITROGEN, KJELDAHL, TOTAL	12	0.904	0.466	0.38	2.10	12	-0.00035	1.34174	-0.266*	0.471
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3463.6	1188.5	1800	5300	11	0.820	2480.960	0.236*	1217.5
SEDIMENT SUSPENDED	21	328.6	276.0	31	1090					
SEDIMENT, CLAY-SILT (PERCENT)	11	81.4	23.1	21	100					
COLIFORM, FECAL (COL/100 ML)	12	72.0	105.5	<1	370					
STREPTOCOCCI, FECAL (COL/100 ML)	12	115.2	163.0	3	540					
SILICA, DISSOLVED	12	9.73	1.57	7.1	12.0	12	0.0015	7.9383	0.324*	1.56
CALCIUM, DISSOLVED	12	101.50	33.55	57.0	160.0	12	0.0831	-1.2031	0.868	17.50
MAGNESIUM, DISSOLVED	12	34.00	12.11	16.0	58.0	12	0.0311	-4.4830	0.901	5.51
SODIUM, DISSOLVED	12	120.83	43.00	35.0	190.0	12	0.1110	-16.3086	0.904	19.28
POTASSIUM, DISSOLVED	12	5.40	1.52	2.1	7.4	12	0.0039	0.6322	0.890	0.73
BICARBONATE, ION	12	192.4	31.1	124	250	12	0.079	94.639	0.890	14.9
CARBONATE, ION	12	2.4	2.5	0	7	12	0.002	-0.077	0.282*	2.5
SULFATE, DISSOLVED	12	317.50	131.71	140.0	590.0	12	0.3256	-84.7417	0.866	69.15
CHLORIDE, DISSOLVED	12	125.58	48.60	31.0	200.0	12	0.1163	-18.1537	0.838	27.78
DISSOLVED SOLIDS, SUM OF CONST	12	811.8	258.3	351	1280	12	0.713	-68.914	0.966	69.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	854.8	282.4	364	1330	12	0.782	-111.696	0.970	71.9
HARDNESS, TOTAL	12	393.3	132.4	210	610	12	0.335	-20.879	0.887	64.2
HARDNESS, NONCARBONATE	12	230.8	112.7	100	450	12	0.265	-96.616	0.824	67.0
TURBIDITY (JTU)	10	50.5	61.8	4	210	10	0.004	45.187	0.019*	65.6
FLUORIDE, DISSOLVED	12	0.36	0.11	0.2	0.5	12	0.0002	0.1319	0.592	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 353

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%
	1900	1800	1700	1550	1400	1250	1160	776	669	570

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
351	11.57	10.24	2.89	93	2.02

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	4	0	2
CADMIUM (CD), UG/L	4	0	10	4	0	0
CHROMIUM (CR), UG/L	4	0	30	4	0	10
COBALT (CO), UG/L	4	2	<50	4	0	1
COPPER (CU), UG/L	4	9	10	4	1	7
IRON (FE), UG/L	4	1500	4800	4	0	10
LEAD (PB), UG/L	4	6	<100	4	3	5
MANGANESE (MN), UG/L	4	60	160	4	0	70
MERCURY (HG), UG/L	2	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	5	21	4	3	21
ZINC (ZN), UG/L	3	0	40	4	0	190
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.76	96.00			
BIOMASS, ASH WT., G/SQ M	3	2.46	88.00			
CHLOROPHYLL A, MG/SQ M	3	5.200	23.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.900			
ORGANIC CARBON, MG/L	4	3.600	14.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	5.33	1.56	3.0	8.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	726.3	20.8	680	760					
STREAMFLOW (CUBIC FT/SEC)	13	3517.7	998.9	1150	4390	12	-4.766	7075.698	-0.160*	1039.5
PH (STANDARD UNITS)	12	8.27	0.18	8.0	8.5	12	0.0009	7.6173	0.107*	0.18
PHOSPHORUS, TOTAL	12	0.012	0.010	0.00	0.03	12	0.00014	-0.08866	0.300*	0.010
NITRITE + NITRATE, TOTAL	12	0.734	0.062	0.66	0.89	12	0.00126	-0.17886	0.424*	0.059
NITROGEN, KJELDAHL, TOTAL	12	0.438	0.355	0.00	1.40	12	0.00494	-3.14663	0.289*	0.357
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	371.7	569.3	19	2100	12	-4.292	3489.023	-0.157*	589.7
SEDIMENT SUSPENDED	8	22.1	37.9	0	95					
SEDIMENT, CLAY-SILT (PERCENT)	7	77.0	23.1	44	100					
COLIFORM, FECAL (COL/100 ML)	12	0.9	0.3	0	<1					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1.1	0.3	<1	2					
SILICA, DISSOLVED	12	4.35	0.26	3.8	4.7	12	0.0002	4.2347	0.012*	0.28
CALCIUM, DISSOLVED	12	69.17	2.52	65.0	74.0	12	0.0005	68.7849	0.004*	2.64
MAGNESIUM, DISSOLVED	12	25.67	1.50	23.0	27.0	12	0.0189	11.9235	0.263*	1.52
SODIUM, DISSOLVED	12	56.92	5.65	52.0	72.0	12	0.1495	-51.6925	0.551*	4.95
POTASSIUM, DISSOLVED	12	2.63	0.13	2.5	2.9	12	0.0005	2.2532	0.084*	0.14
BICARBONATE, ION	12	191.4	4.3	185	200	12	0.063	145.810	0.303*	4.3
CARBONATE, ION	12	1.8	3.4	0	11	12	-0.002	2.979	-0.010*	3.5
SULFATE, DISSOLVED	12	220.00	15.37	200.0	240.0	12	0.3258	-16.5861	0.441*	14.47
CHLORIDE, DISSOLVED	12	16.42	1.08	15.0	19.0	12	0.0239	-0.9532	0.459*	1.01
DISSOLVED SOLIDS, SUM OF CONST	12	491.8	22.1	457	532	12	0.550	92.486	0.518*	19.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	511.5	24.1	474	552	12	0.505	144.608	0.436*	22.7
HARDNESS, TOTAL	12	278.3	12.7	260	300	12	0.037	251.661	0.060*	13.3
HARDNESS, NONCARBONATE	12	118.0	14.5	96	140	12	0.013	108.838	0.018*	15.3
TURBIDITY (JTU)	11	0.7	0.5	0	1	11	-0.002	2.199	-0.094*	0.5
FLUORIDE, DISSOLVED	12	0.32	0.07	0.2	0.5	12	0.0004	0.0492	0.107*	0.07

*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%
	890	880	815	795	790	780	760	715	705	700

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
249	5.91	1.67	1.16	87	0.46

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	2	4	2	3
CADMIUM (CD), UG/L	4	0	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	80	4	0	0
COBALT (CO), UG/L	4	0	60	4	0	0
COPPER (CU), UG/L	4	2	10	4	1	2
IRON (FE), UG/L	4	10	130	4	0	10
LEAD (PB), UG/L	4	0	<100	4	0	4
MANGANESE (MN), UG/L	4	0	20	4	0	10
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.2
SELENIUM (SE), UG/L	4	2	3	4	1	3
ZINC (ZN), UG/L	4	10	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.90	3.23			
BIOMASS, ASH WT., G/SQ M	3	0.50	1.69			
CHLOROPHYLL A, MG/SQ M	3	0.200	0.800			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	4	4.100	37.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	8.79	8.89	0.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	444.6	173.0	120	675					
STREAMFLOW (CUBIC FT/SEC)	12	1292.2	1836.3	149	5260	12	-7.916	4811.289	-0.746	1282.7
PH (STANDARD UNITS)	12	8.04	0.32	7.5	8.7	12	0.0000	8.0292	0.015*	0.33
PHOSPHORUS, TOTAL	12	0.142	0.202	0.01	0.57	12	0.00022	0.04523	0.188*	0.208
NITRITE + NITRATE, TOTAL	12	0.227	0.286	0.00	0.84	12	0.00078	-0.11906	0.470*	0.265
NITROGEN, KJELDAHL, TOTAL	12	0.667	0.564	0.16	2.00	12	0.00118	0.14128	0.362*	0.551
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2395.5	2610.1	36	7700	12	1.159	1880.085	0.077*	2729.4
SEDIMENT SUSPENDED	2	696.0	288.5	492	900					
SEDIMENT, CLAY-SILT (PERCENT)	1	72.0	0.0	72						
COLIFORM, FECAL (COL/100 ML)	11	34.2	30.8	1	80					
STREPTOCOCCI, FECAL (COL/100 ML)	12	190.3	477.9	3	1700					
SILICA, DISSOLVED	12	7.18	2.92	2.3	10.0	12	0.0028	5.9565	0.164*	3.02
CALCIUM, DISSOLVED	12	36.58	11.90	11.0	49.0	12	0.0610	9.4621	0.887	5.77
MAGNESIUM, DISSOLVED	12	18.18	8.13	3.8	31.0	12	0.0435	-1.1360	0.925	3.23
SODIUM, DISSOLVED	12	36.27	17.37	5.4	60.0	12	0.0941	-5.5706	0.937	6.35
POTASSIUM, DISSOLVED	12	2.71	1.17	0.8	5.1	12	0.0060	0.0276	0.891	0.56
BICARBONATE, ION	12	155.1	52.9	40	207	12	0.257	40.735	0.842	29.9
CARBONATE, ION	12	1.2	2.9	0	9	12	-0.004	2.738	-0.214*	2.9
SULFATE, DISSOLVED	12	98.08	56.01	15.0	200.0	12	0.2908	-31.1934	0.898	25.80
CHLORIDE, DISSOLVED	12	13.41	6.89	1.3	24.0	12	0.0334	-1.4225	0.838	3.94
DISSOLVED SOLIDS, SUM OF CONST	12	290.3	120.4	65	467	12	0.655	-0.847	0.941	42.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	298.8	122.4	87	470	12	0.664	3.457	0.939	44.2
HARDNESS, TOTAL	12	166.1	62.6	43	250	12	0.330	19.421	0.911	27.0
HARDNESS, NONCARBONATE	12	36.6	31.6	10	110	12	0.124	-18.728	0.680	24.3
TURBIDITY (JTU)	12	39.4	74.1	2	250	12	0.129	-17.723	0.300*	74.2
FLUORIDE, DISSOLVED	12	0.26	0.07	0.2	0.4	12	0.0001	0.2188	0.230*	0.07

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 297

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%
	825	725	700	580	539	460	358	157	135	124

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
117	8.61	13.25	2.83	95	1.72

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

09251000 -- YAMPA RIVER NEAR MAYBELL, CO.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	9	4	0	1
CADMIUM (CD), UG/L	3	<10	10	4	0	1
CHROMIUM (CR), UG/L	3	0	20	4	0	10
COBALT (CO), UG/L	3	<50	<50	4	0	1
COPPER (CU), UG/L	3	<10	20	4	1	7
IRON (FE), UG/L	3	170	13000	4	10	120
LEAD (PB), UG/L	3	<100	<100	4	0	3
MANGANESE (MN), UG/L	3	20	350	4	0	50
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	3	4	0	2
ZINC (ZN), UG/L	3	10	70	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	0.31				
BIOMASS, ASH WT., G/SQ M	1	0.15				
CHLOROPHYLL A, MG/SQ M	1	0.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	4.100	4.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.54	8.40	0.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	517.1	241.0	160	1160					
STREAMFLOW (CUBIC FT/SEC)	12	705.5	949.5	8	2840	12	-2.280	1884.258	-0.579	812.3
PH (STANDARD UNITS)	12	8.00	0.37	7.1	8.6	12	0.0003	7.8292	0.214*	0.38
PHOSPHORUS, TOTAL	11	0.373	0.352	0.01	1.10	11	-0.00034	0.55781	-0.220*	0.361
NITRITE + NITRATE, TOTAL	11	0.151	0.235	0.00	0.76	11	-0.00005	0.17606	-0.045*	0.248
NITROGEN, KJELDAHL, TOTAL	11	0.935	0.713	0.11	2.50	11	-0.00096	1.45837	-0.307*	0.716
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5273.9	8463.0	57	26000	12	6.084	2127.838	0.173*	8741.7
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	106.2	176.1	10	600					
STREPTOCOCCI, FECAL (COL/100 ML)	10	157.5	161.0	25	560					
SILICA, DISSOLVED	11	12.85	3.03	8.8	18.0	11	0.0042	10.5726	0.314*	3.03
CALCIUM, DISSOLVED	11	47.64	16.20	17.0	79.0	11	0.0612	14.1576	0.864	8.61
MAGNESIUM, DISSOLVED	11	13.15	4.77	3.8	21.0	11	0.0169	3.9112	0.809	2.96
SODIUM, DISSOLVED	11	58.97	28.81	8.7	130.0	11	0.1175	-5.2690	0.932	11.01
POTASSIUM, DISSOLVED	11	3.43	1.54	1.0	5.7	11	0.0042	1.1085	0.631	1.26
BICARBONATE, ION	11	192.5	54.3	67	251	11	0.166	101.772	0.699	40.9
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	114.55	63.22	15.0	280.0	11	0.2621	-28.7727	0.947	21.34
CHLORIDE, DISSOLVED	11	19.35	12.96	1.9	54.0	11	0.0523	-9.2175	0.921	5.32
DISSOLVED SOLIDS, SUM OF CONST	11	365.1	143.9	93	702	11	0.600	37.021	0.953	46.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	374.2	140.9	104	697	11	0.579	57.688	0.939	51.2
HARDNESS, TOTAL	11	172.5	58.7	58	280	11	0.217	53.939	0.844	33.2
HARDNESS, NONCARBONATE	11	15.8	26.3	0	87	11	0.085	-30.829	0.743	16.5
TURBIDITY (JTU)	11	153.1	159.1	4	420	11	-0.131	224.936	-0.189*	164.7
FLUORIDE, DISSOLVED	11	0.31	0.05	0.2	0.4	11	-0.0001	0.3862	-0.598*	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%
	1170	1110	1040	640	611	547	479	215	184	166

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
164	9.29	10.42	2.80	89	1.94

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

09260000 -- LITTLE SNAKE RIVER NEAR LILY, CO.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	13	4	1	4
CADMIUM (CD), UG/L	3	1	<10	4	0	1
CHROMIUM (CR), UG/L	3	10	20	4	0	<10
COBALT (CO), UG/L	3	3	50	4	0	2
COPPER (CU), UG/L	3	10	30	4	2	9
IRON (FE), UG/L	3	230	20000	4	0	740
LEAD (PB), UG/L	3	25	<100	4	0	4
MANGANESE (MN), UG/L	3	10	460	4	0	50
MERCURY (HG), UG/L	3	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	3	0	150	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.38				
BIOMASS, ASH WT., G/SQ M	1	0.92				
CHLOROPHYLL A, MG/SQ M	1	0.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	4.200	12.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 09315000   NAME: GREEN RV AT GREEN RV UT

LAT 38D59M10S LONG 110D09M02S
DRAINAGE AREA: 40600 SQ MI (105154 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	19	12.58	8.90	0.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	788.2	169.2	450	1030					
STREAMFLOW (CUBIC FT/SEC)	19	5747.4	3671.4	2960	16000	11	-18.172	20138.824	-0.816	2299.5
PH (STANDARD UNITS)	11	8.43	0.18	8.1	8.7	11	0.0009	7.7167	0.850	0.10
PHOSPHORUS, TOTAL	11	0.257	0.267	0.03	0.86	11	-0.00056	0.70161	-0.357*	0.263
NITRITE + NITRATE, TOTAL	11	0.428	0.157	0.17	0.64	11	0.00026	0.22381	0.279*	0.159
NITROGEN, KJELDAHL, TOTAL	11	0.911	0.524	0.39	2.10	11	-0.00056	1.35027	-0.180*	0.543
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	5745.5	6168.5	200	19000	11	-11.719	14982.074	-0.321*	6157.1
SEDIMENT SUSPENDED	17	562.9	586.9	64	1960					
SEDIMENT, CLAY-SILT (PERCENT)	8	87.8	13.6	64	100					
COLIFORM, FECAL (COL/100 ML)	11	28.6	61.2	<1	200					
STREPTOCOCCI, FECAL (COL/100 ML)	11	282.5	434.8	10	1400					
SILICA, DISSOLVED	11	6.67	1.37	4.0	8.7	11	-0.0042	10.0077	-0.521*	1.24
CALCIUM, DISSOLVED	11	65.91	12.42	41.0	82.0	11	0.0649	14.7344	0.884	6.11
MAGNESIUM, DISSOLVED	11	27.45	6.02	15.0	35.0	11	0.0347	0.0703	0.976	1.38
SODIUM, DISSOLVED	11	68.55	20.94	30.0	110.0	11	0.1170	-23.7100	0.946	7.18
POTASSIUM, DISSOLVED	11	2.75	0.48	1.8	3.3	11	0.0019	1.2628	0.668	0.37
BICARBONATE, ION	11	215.7	40.9	150	270	11	0.196	60.868	0.812	25.2
CARBONATE, ION	11	3.9	3.0	0	8	11	0.011	-4.953	0.631	2.5
SULFATE, DISSOLVED	11	224.55	54.66	110.0	300.0	11	0.3076	-17.9030	0.952	17.61
CHLORIDE, DISSOLVED	11	22.97	6.81	9.7	35.0	11	0.0371	-6.2906	0.922	2.78
DISSOLVED SOLIDS, SUM OF CONST	11	529.4	116.8	290	703	11	0.667	3.298	0.966	31.7
DISSOLVED SOLIDS, ROE 180 DEG C	11	533.3	123.2	276	704	11	0.719	-33.674	0.988	20.0
HARDNESS, TOTAL	11	277.3	53.9	160	340	11	0.302	39.491	0.947	18.2
HARDNESS, NONCARBONATE	11	95.7	31.6	41	140	11	0.126	-3.395	0.673	24.7
TURBIDITY (JTU)	10	184.1	279.3	20	720	10	-0.302	432.130	-0.144*	293.2
FLUORIDE, DISSOLVED	11	0.31	0.08	0.2	0.5	11	0.0002	0.1902	0.307*	0.08

*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%
	1060	1040	1020	970	920	850	780	510	482	470

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
297	12.25	12.06	2.85	94	2.15

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	15	4	0	3
CADMIUM (CD), UG/L	4	0	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	96	4	0	10
COBALT (CO), UG/L	4	<50	50	4	0	0
COPPER (CU), UG/L	4	<10	110	4	1	6
IRON (FE), UG/L	4	590	32000	4	0	60
LEAD (PB), UG/L	4	<100	200	4	0	5
MANGANESE (MN), UG/L	4	30	1000	4	0	20
MERCURY (HG), UG/L	3	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	3	4	1	2
ZINC (ZN), UG/L	4	0	150	4	0	80
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	14.70				
BIOMASS, ASH WT., G/SQ M	1	14.20				
CHLOROPHYLL A, MG/SQ M	1	0.100				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	5.500	13.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	12.03	6.37	3.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	42	660.8	239.9	358	1390					
STREAMFLOW (CUBIC FT/SEC)	16	1446.1	954.2	397	4050	12	-1.474	2639.859	-0.437*	969.1
PH (STANDARD UNITS)	37	B.10	0.36	7.4	9.0	37	-0.0001	6.1763	-0.077*	0.36
PHOSPHORUS, TOTAL	12	0.314	0.400	0.07	1.20	12	0.00088	-0.30853	0.670	0.311
NITRITE + NITRATE, TOTAL	12	0.582	0.390	0.19	1.40	12	0.00122	-0.27669	0.949	0.129
NITROGEN, KJELDAHL, TOTAL	12	1.033	1.419	0.21	5.40	12	0.00369	-1.57351	0.790	0.912
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4234.2	5970.1	590	21000	12	15.230	-6532.051	0.776	3950.1
SEDIMENT SUSPENDED	15	7679.2	11916.4	96	36000					
SEDIMENT, CLAY-SILT (PERCENT)	7	78.1	34.0	20	99					
COLIFORM, FECAL (COL/100 ML)	12	1555.2	2681.2	34	9700					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1582.1	3946.1	5	14000					
SILICA, DISSOLVED	42	7.02	3.00	0.2	11.0	42	-0.0010	7.6971	-0.082*	3.03
CALCIUM, DISSOLVED	42	64.B1	22.20	24.0	120.0	42	0.0839	9.3374	0.907	9.46
MAGNESIUM, DISSOLVED	42	13.29	4.96	7.2	36.0	42	0.0146	3.6450	0.706	3.56
SODIUM, DISSOLVED	42	53.86	32.25	19.0	180.0	42	0.1246	-28.4627	0.926	12.29
POTASSIUM, DISSOLVED	42	2.93	1.08	1.6	6.8	42	0.0038	0.4116	0.649	0.58
BICARBONATE, ION	42	130.0	40.0	48	220	42	0.103	61.699	0.621	31.7
CARBONATE, ION	37	0.5	1.5	0	7	37	-0.001	1.068	-0.147*	1.5
SULFATE, DISSOLVED	42	203.52	102.10	88.0	550.0	42	0.4123	-68.9474	0.969	25.66
CHLORIDE, DISSOLVED	42	15.12	7.05	6.3	44.0	42	0.0259	-2.0007	0.882	3.36
DISSOLVED SOLIDS, SUM OF CONST	42	427.5	173.8	220	993	42	0.719	-47.971	0.993	20.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	461.7	209.8	232	965	12	0.682	-20.426	0.989	33.2
HARDNESS, TOTAL	42	216.4	70.0	110	400	42	0.269	38.369	0.923	27.2
HARDNESS, NONCARBONATE	42	109.4	53.5	22	320	42	0.185	-12.595	0.827	30.4
TURBIDITY (JTU)	12	1174.2	3726.8	14	13000	12	8.813	-5055.684	0.719	2715.7
FLUORIDE, DISSOLVED	42	0.37	0.11	0.2	0.7	42	0.0004	0.1288	0.821	0.06

*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%
	1330	101D	839	718	631	508	468	385	372	332

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	12.37	9.62	2.58	95	1.58

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	4	0	3
CADMIUM (CD), UG/L	4	4	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	25	4	0	10
COBALT (CO), UG/L	4	7	<50	4	0	0
COPPER (CU), UG/L	4	10	69	4	1	5
IRON (FE), UG/L	4	3400	17000	39	0	80
LEAD (PB), UG/L	4	<100	180	4	0	1
MANGANESE (MN), UG/L	4	150	1000	4	10	20
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	6	4	0	6
ZINC (ZN), UG/L	4	10	490	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.38	92.00			
BIOMASS, ASH WT., G/SQ M	4	1.00	86.00			
CHLOROPHYLL A, MG/SQ M	4	D.D00	46.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.000			
ORGANIC CARBON, MG/L	1	9.400				

Table 12. Summary of measurements at each station--Continued.

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: 10/01/75 - 09/30/76

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, P	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	20	12.82	8.63	0.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	695.3	160.0	480	995					
STREAMFLOW (CUBIC FT/SEC)	20	1903.9	1161.1	564	5650	12	-2.741	3772.311	-0.650	537.9
PH (STANDARD UNITS)	12	8.31	0.18	7.9	8.5	12	-0.0006	8.7348	-0.536*	0.16
PHOSPHORUS, TOTAL	12	1.984	5.130	0.09	18.00	12	0.01556	-8.83573	0.485*	4.705
NITRITE + NITRATE, TOTAL	12	0.710	0.336	0.29	1.30	12	0.00202	-0.69474	0.961	0.098
NITROGEN, KJELDAHL, TOTAL	12	4.012	8.676	0.29	31.00	12	0.02696	-14.73670	0.497*	7.896
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3857.3	4418.1	460	15000	11	-1.189	4694.063	-0.044*	4652.4
SEDIMENT SUSPENDED	20	6705.9	13128.4	376	47300					
SEDIMENT, CLAY-SILT (PERCENT)	9	44.9	29.5	14	92					
COLIFORM, FECAL (COL/100 ML)	12	316.2	781.3	<1	2700					
STREPTOCOCCI, FECAL (COL/100 ML)	12	442.3	886.8	28	3100					
SILICA, DISSOLVED	12	9.12	1.08	7.8	11.0	12	0.0026	7.3125	0.386*	1.05
CALCIUM, DISSOLVED	12	71.42	15.55	53.0	100.0	12	0.0939	6.1280	0.966	4.24
MAGNESIUM, DISSOLVED	12	18.58	4.36	13.0	26.0	12	0.0128	9.7073	0.469*	4.04
SODIUM, DISSOLVED	12	53.50	20.54	28.0	91.0	12	0.1249	-33.3512	0.972	5.02
POTASSIUM, DISSOLVED	12	3.11	1.16	1.7	5.2	12	0.0067	-1.5768	0.933	0.44
BICARBONATE, ION	12	157.5	30.7	130	240	12	0.143	58.195	0.743	21.6
CARBONATE, ION	12	2.8	3.7	0	12	12	-0.003	5.092	-0.147*	3.8
SULFATE, DISSOLVED	12	222.50	73.25	140.0	340.0	12	0.4471	-88.3728	0.976	16.64
CHLORIDE, DISSOLVED	12	14.50	4.31	9.3	22.0	12	0.0251	-2.9298	0.930	1.67
DISSOLVED SOLIDS, SUM OF CONST	12	473.6	129.1	320	694	12	0.782	-69.841	0.968	33.7
DISSOLVED SOLIDS, RDE 180 DEG C	12	493.9	137.0	328	748	12	0.819	-75.891	0.957	41.6
HARDNESS, TOTAL	12	255.8	49.4	190	320	12	0.290	53.871	0.940	17.7
HARDNESS, NONCARBONATE	12	120.6	32.5	83	180	12	0.175	-1.231	0.862	17.3
TURBIDITY (JTU)	11	762.8	1672.2	25	5600	11	8.154	-5066.227	0.741	1183.9
FLUORIDE, DISSOLVED	12	0.40	0.15	0.2	0.7	12	0.0007	-0.0711	0.705	0.11

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 253

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	940	900	840	800	730	630	511	485	430

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
298	13.19	10.69	3.08	91	2.40

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	10	4	0	2
CADMIUM (CD), UG/L	4	0	10	4	0	0
CHROMIUM (CR), UG/L	4	0	250	4	0	0
COBALT (CO), UG/L	4	<50	330	4	0	0
COPPER (CU), UG/L	4	10	500	4	1	9
IRON (FE), UG/L	4	2800	280000	4	0	20
LEAD (PB), UG/L	4	<100	800	4	2	4
MANGANESE (MN), UG/L	4	140	14000	4	0	0
MERCURY (HG), UG/L	2	0.0	0.2	4	0.0	0.1
SELENIUM (SE), UG/L	3	2	3	4	2	5
ZINC (ZN), UG/L	4	20	1700	4	0	290
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	190.00				
BIOMASS, ASH WT., G/SQ M	1	180.00				
CHLOROPHYLL A, MG/SQ M	1	54.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	4.200	170.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 09380000 NAME: COLORADO R AT LEES FERRY, AZ.

LAT 36D51M53S LONG 111D35M15S
DRAINAGE AREA: 107900 SC MI (279461 SQ KM)
PERIOD OF RECDRD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	18	9.28	1.05	8.0	12.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	850.3	62.9	765	950					
STREAMFLOW (CUBIC FT/SEC)	43	12495.8	5030.0	2730	23200	14	45.889	-24713.211	0.403*	7006.3
PH (STANDARD UNITS)	15	7.91	0.12	7.7	8.2	13	-0.0010	8.7135	-0.491*	0.12
PHOSPHORUS, TOTAL	12	0.009	0.012	0.00	0.04	12	0.00007	-0.05012	0.365*	0.012
NITRITE + NITRATE, TOTAL	12	0.525	0.108	0.39	0.75	12	0.00121	-0.49901	0.726	0.078
NITROGEN, KJELDAHL, TOTAL	11	0.308	0.103	0.16	0.46	11	-0.00033	0.59088	-0.213*	0.106
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1534.5	3057.6	70	10000	11	-8.174	8504.484	-0.177*	3172.2
SEDIMENT SUSPENDED	42	17.5	27.8	1	139					
SEDIMENT, CLAY-SILT (PERCENT)	12	80.5	22.4	42	100					
COLIFORM, FECAL (COL/100 ML)	12	1.8	2.0	<1	8					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1.4	0.7	<1	3					
SILICA, DISSOLVED	12	7.15	0.54	6.3	8.1	12	0.0035	4.1532	0.428*	0.51
CALCIUM, DISSOLVED	12	69.50	3.80	63.0	74.0	12	0.0424	33.5620	0.723	2.76
MAGNESIUM, DISSOLVED	12	24.25	1.82	22.0	27.0	12	0.0214	6.0976	0.764	1.23
SODIUM, DISSOLVED	12	74.17	5.37	69.0	89.0	12	0.0596	23.5906	0.719	3.91
POTASSIUM, DISSOLVED	12	3.69	0.19	3.4	4.1	12	-0.0009	4.4279	-0.292*	0.19
BICARBONATE, ION	12	157.6	9.2	136	170	12	0.086	84.754	0.608	7.6
CARBONATE, ION	12	1.0	3.5	0	12	12	-0.015	13.835	-0.283*	3.5
SULFATE, DISSOLVED	12	219.17	16.21	190.0	240.0	12	0.1661	78.2749	0.664	12.71
CHLORIDE, DISSOLVED	12	51.25	4.65	44.0	58.0	12	0.0662	-4.9490	0.923	1.88
DISSOLVED SOLIDS, SUM OF CONST	12	530.3	30.7	489	586	12	0.387	202.041	0.816	18.6
DISSOLVED SOLIDS, ROE 180 DEG C	12	562.4	33.7	512	624	12	0.360	257.066	0.692	25.6
HARDNESS, TOTAL	12	275.0	15.1	250	300	12	0.193	110.907	0.832	8.8
HARDNESS, NONCARBONATE	12	143.3	13.7	120	160	12	0.149	16.523	0.707	10.2
TURBIDITY (JTU)	12	1.3	1.3	0	5	12	-0.003	4.000	-0.163*	1.3
FLUORIDE, DISSOLVED	12	0.31	0.03	0.3	0.4	12	0.0001	0.2594	0.130*	0.03

*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%
	970	960	940	920	880	830	810	790	780	750

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
354	9.21	0.90	2.17	58	0.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	2	2	4	2	4
CADMIUM (CD), UG/L	4	0	<10	4	0	3
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	0	<50	4	0	1
COPPER (CU), UG/L	4	5	10	4	2	6
IRON (FE), UG/L	4	20	210	4	0	20
LEAD (PB), UG/L	4	26	<100	4	0	5
MANGANESE (MN), UG/L	4	0	30	4	0	0
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	2	4	4	1	4
ZINC (ZN), UG/L	4	50	130	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.62	5.60			
BIOMASS, ASH WT., G/SQ M	3	0.10	3.80			
CHLOROPHYLL A, MG/SQ M	3	0.200	14.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	4	2.100	4.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	5	17.80	7.63	9.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	5	731.0	375.6	310	1120					
STREAMFLOW (CUBIC FT/SEC)	6	356.7	352.9	0	800					
PH (STANDARD UNITS)	5	8.10	0.48	7.6	8.9					
PHOSPHORUS, TOTAL	4	10.925	16.722	2.00	36.00					
NITRITE + NITRATE, TOTAL	4	1.262	2.292	0.11	4.70					
NITROGEN, KJELDAHL, TOTAL	4	222.675	438.217	2.80	880.00					
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	46.0	102.9	0	230					
SEDIMENT SUSPENDED	5	27452.0	26296.3	9960	73600					
SEDIMENT, CLAY-SILT (PERCENT)	5	72.6	16.0	58	91					
COLIFORM, FECAL (COL/100 ML)	5	1700.0	2533.8	200	6200					
STREPTOCOCCI, FECAL (COL/100 ML)	5	11620.0	23700.7	400	54000					
SILICA, DISSOLVED	6	7.75	3.04	4.9	12.0					
CALCIUM, DISSOLVED	6	37.50	34.30	12.0	99.0					
MAGNESIUM, DISSOLVED	6	7.90	6.35	2.6	20.0					
SODIUM, DISSOLVED	6	94.50	59.14	36.0	180.0					
POTASSIUM, DISSOLVED	6	3.95	2.39	1.7	7.8					
BICARBONATE, ION	6	149.8	56.1	86	224					
CARBONATE, ION	6	0.0	0.0	0	0					
SULFATE, DISSOLVED	6	145.17	142.83	17.0	360.0					
CHLORIDE, DISSOLVED	6	44.83	28.83	19.0	100.0					
DISSOLVED SOLIDS, SUM OF CONST	6	424.3	274.3	143	723					
DISSOLVED SOLIDS, ROE 180 DEG C	6	425.2	275.1	151	746					
HARDNESS, TOTAL	6	127.0	110.7	42	330					
HARDNESS, NONCARBONATE	6	30.0	73.5	0	180					
TURBIDITY (JTU)	6	21583.3	25032.3	1700	59000					
FLUORIDE, DISSOLVED	6	0.55	0.29	0.2	0.9					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	47	750	3	2	6
CADMIUM (CD), UG/L	3	<10	40	3	1	2
CHROMIUM (CR), UG/L	3	40	450	3	0	50
COBALT (CO), UG/L	3	100	600	3	0	2
COPPER (CU), UG/L	3	80	770	3	5	10
IRON (FE), UG/L	2	42000	490000	3	20	80
LEAD (PB), UG/L	3	100	1100	3	2	6
MANGANESE (MN), UG/L	3	2800	28000	3	0	0
MERCURY (HG), UG/L	3	0.3	3.6	3	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	310	3000	3	20	670
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	36.000	765.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 09421500 NAME: COLORADO RIVER BLW HOOVER DAM,ARIZ-NEV

LAT 36D00M55S LONG 114D44M16S
DRAINAGE AREA: 167800 SQ MI (434602 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	24	12.46	0.76	11.5	15.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1086.7	20.6	1060	1140					
STREAMFLOW (CUBIC FT/SEC)	24	15154.2	5525.0	5990	23820	12	-84.690	107722.563	-0.316*	5486.1
PH (STANDARD UNITS)	12	7.73	0.36	6.9	8.1	12	0.0073	-0.2420	0.423*	0.34
PHOSPHORUS, TOTAL	12	0.012	0.015	0.00	0.04	12	0.00028	-0.29023	0.386*	0.014
NITRITE + NITRATE, TOTAL	12	0.413	0.049	0.35	0.54	12	-0.00061	1.08143	-0.258*	0.050
NITROGEN, KJELDAHL, TOTAL	11	0.413	0.216	0.11	0.76	11	0.00484	-4.84039	0.482*	0.200
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	627.1	500.5	68	1900	11	-5.005	6073.074	-0.209*	515.9
SEDIMENT SUSPENDED	11	0.8	0.9	0	3					
SEDIMENT, CLAY-SILT (PERCENT)	7	94.6	9.3	79	100					
COLIFORM, FECAL (COL/100 ML)	12	1.8	2.6	1	10					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3.8	3.8	1	10					
SILICA, DISSOLVED	12	8.27	0.34	7.7	8.8	12	-0.0014	9.7802	-0.083*	0.36
CALCIUM, DISSOLVED	12	85.75	4.43	81.0	96.0	12	0.1050	-28.3499	0.488*	4.06
MAGNESIUM, DISSOLVED	12	28.33	1.15	27.0	31.0	12	0.0179	8.9266	0.319*	1.15
SODIUM, DISSOLVED	12	98.67	1.44	96.0	100.0	12	0.0164	80.8143	0.236*	1.46
POTASSIUM, DISSOLVED	12	4.87	0.20	4.6	5.4	12	0.0032	1.4405	0.330*	0.20
BICARBONATE, ION	12	163.6	1.9	160	166	12	-0.025	190.905	-0.275*	1.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	282.50	8.66	270.0	300.0	12	0.2571	3.0715	0.612	7.19
CHLORIDE, DISSOLVED	12	84.75	2.45	81.0	90.0	12	-0.0107	96.3929	-0.090*	2.56
DISSOLVED SOLIDS, SUM OF CONST	12	676.2	13.2	659	704	12	0.372	271.927	0.582	11.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	704.8	11.5	680	722	12	0.054	645.843	0.097*	12.0
HARDNESS, TOTAL	12	331.7	12.7	320	360	12	0.400	-103.000	0.656	10.1
HARDNESS, NONCARBONATE	12	197.5	12.2	180	230	12	0.429	-268.214	0.726	6.8
TURBIDITY (JTU)	12	0.7	0.7	0	2	12	0.006	-5.543	0.181*	0.7
FLUORIDE, DISSOLVED	12	0.37	0.05	0.3	0.4	12	0.0006	-0.2538	0.239*	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 203

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	1090	1080	1080	1080	1070	1070	1060	1060	1050

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
210	11.67	1.06	5.86	20	1.19

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	4	2	4
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	5	0	<10	4	0	2
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	0	120	11	0	30
LEAD (PB), UG/L	4	<100	<100	4	0	6
MANGANESE (MN), UG/L	4	0	30	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	3	4
ZINC (ZN), UG/L	4	20	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.20	9.70			
BIOMASS, ASH WT., G/SQ M	4	0.10	7.80			
CHLOROPHYLL A, MG/SQ M	4	0.200	8.600			
CHLOROPHYLL B, MG/SQ M	4	0.000	1.400			
ORGANIC CARBON, MG/L	4	1.900	4.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	204	19.51	5.42	10.0	27.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	204	1092.0	24.2	910	1150					
STREAMFLOW (CUBIC FT/SEC)	203	1136.7	285.0	680	1560	203	-2.787	4179.918	-0.237	277.6
PH (STANDARD UNITS)	12	8.43	0.31	7.7	9.1	12	0.0021	6.0918	0.514*	0.27
PHOSPHORUS, TOTAL	12	0.005	0.005	0.00	0.01	12	-0.00000	0.00778	-0.036*	0.005
NITRITE + NITRATE, TOTAL	12	0.164	0.036	0.11	0.23	12	0.00015	0.00558	0.297*	0.036
NITROGEN, KJELDAHL, TOTAL	12	0.404	0.116	0.21	0.56	12	-0.00023	0.65698	-0.146*	0.120
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2033.6	1309.6	250	4200	11	-5.962	8515.504	-0.344*	1295.9
SEDIMENT SUSPENDED	11	4.6	3.5	1	12					
SEDIMENT, CLAY-SILT (PERCENT)	9	46.4	14.9	20	74					
COLIFORM, FECAL (COL/100 ML)	11	0.4	0.5	0	1					
STREPTOCOCCI, FECAL (COL/100 ML)	11	5.0	4.3	0	12					
SILICA, DISSOLVED	12	7.52	1.05	5.2	8.7	12	-0.0064	14.5327	-0.446*	0.99
CALCIUM, DISSOLVED	12	82.50	2.20	78.0	86.0	12	0.0052	76.8506	0.173*	2.27
MAGNESIUM, DISSOLVED	12	29.25	1.36	26.0	31.0	12	0.0015	27.6293	0.080*	1.42
SODIUM, DISSOLVED	12	107.50	4.52	100.0	110.0	12	0.0106	95.9172	0.172*	4.67
POTASSIUM, DISSOLVED	12	5.16	0.29	4.7	5.7	12	0.0005	4.6321	0.120*	0.31
BICARBONATE, ION	11	152.3	7.7	133	159	11	-0.003	155.534	-0.030*	8.1
CARBONATE, ION	11	1.4	3.1	0	9	11	0.006	-5.114	0.145*	3.2
SULFATE, DISSOLVED	12	295.83	7.93	280.0	310.0	12	-0.0247	322.8267	-0.228*	8.10
CHLORIDE, DISSOLVED	12	90.08	1.44	87.0	92.0	12	0.0032	86.5795	0.163*	1.49
DISSOLVED SOLIDS, SUM OF CONST	11	693.8	12.7	668	715	11	-0.012	706.477	-0.070*	13.3
DISSOLVED SOLIDS, ROE 180 DEG C	11	719.7	11.3	701	730	11	0.098	613.645	0.654	9.0
HARDNESS, TOTAL	12	326.7	10.7	310	340	12	0.028	296.413	0.189*	11.1
HARDNESS, NONCARBONATE	11	197.3	9.0	180	210	11	0.007	189.340	0.061*	9.5
TURBIDITY (JTU)	12	2.2	4.1	0	15	12	0.002	-0.210	0.039*	4.3
FLUORIDE, DISSOLVED	12	0.34	0.08	0.2	0.5	12	0.0003	0.0160	0.275*	0.08

*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%
	1138	1116	1110	1107	1102	1095	1088	1067	1059	1046

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
204	19.25	7.56	2.66	96	1.11

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	1	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	<50	<50	4	0	1
COPPER (CU), UG/L	4	0	20	4	3	14
IRON (FE), UG/L	4	30	450	4	0	40
LEAD (PB), UG/L	4	100	100	4	2	6
MANGANESE (MN), UG/L	4	10	60	4	0	0
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	1	3	4	1	3
ZINC (ZN), UG/L	4	0	80	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	7.80	15.80			
BIOMASS, ASH WT., G/SQ M	3	6.20	12.20			
CHLOROPHYLL A, MG/SQ M	3	3.500	5.900			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	4	3.200	5.700			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, b	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	22.30	6.29	13.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	777.2	215.2	448	970					
STREAMFLOW (CUBIC FT/SEC)	11	18.3	27.5	0	86	9	-0.115	111.560	-0.852	16.2
PH (STANDARD UNITS)	9	8.10	0.11	7.9	8.3	9	0.0001	7.9957	0.258*	0.12
PHOSPHORUS, TOTAL	9	0.909	1.737	0.01	5.30	9	-0.00646	5.92720	-0.800	1.115
NITRITE + NITRATE, TOTAL	9	1.063	0.250	0.69	1.50	9	0.00041	0.74165	0.357*	0.249
NITROGEN, KJELDAHL, TOTAL	9	1.333	1.784	0.14	4.50	9	-0.00807	7.60359	-0.973	0.442
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	3257.8	3060.1	400	8900	8	-16.299	16378.289	-0.961	957.4
SEDIMENT SUSPENDED	9	1175.4	2345.2	7	7070					
SEDIMENT, CLAY-SILT (PERCENT)	9	79.9	20.0	42	99					
COLIFORM, FECAL (COL/100 ML)	10	6712.7	18769.6	87	60000					
STREPTOCOCCI, FECAL (COL/100 ML)	10	10911.0	31319.6	160	100000					
SILICA, DISSOLVED	9	27.00	8.06	11.0	35.0	9	0.0352	-0.3279	0.936	2.98
CALCIUM, DISSOLVED	9	47.78	12.64	30.0	63.0	9	0.0557	4.5240	0.948	4.32
MAGNESIUM, DISSOLVED	9	15.73	4.48	9.7	20.0	9	0.0204	-0.1560	0.983	0.88
SODIUM, DISSOLVED	9	92.00	29.89	45.0	120.0	9	0.1387	-15.7923	0.998	1.77
POTASSIUM, DISSOLVED	9	6.74	0.86	5.7	7.9	9	0.0037	3.8328	0.942	0.31
BICARBONATE, ION	9	226.9	50.7	157	286	9	0.230	48.115	0.977	11.6
CARBONATE, ION	9	0.0	0.0	0	0	9	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	76.67	22.63	40.0	98.0	9	0.1041	-4.2692	0.990	3.41
CHLORIDE, DISSOLVED	9	82.11	30.43	40.0	110.0	9	0.1350	-22.8037	0.955	9.70
DISSOLVED SOLIDS, SUM OF CONST	9	466.1	131.9	264	594	9	0.610	-8.314	0.996	13.1
DISSOLVED SOLIDS, RDE 180 DEG C	9	464.4	122.0	282	580	9	0.565	25.262	0.996	10.9
HARDNESS, TOTAL	9	185.6	49.0	120	240	9	0.222	13.381	0.972	12.2
HARDNESS, NONCARBONATE	9	4.2	7.3	0	18	9	0.014	-6.326	0.399*	7.2
TURBIDITY (JTU)	9	376.6	988.4	2	3000	9	-2.869	2606.094	-0.624*	825.3
FLUORIDE, DISSOLVED	9	1.19	0.38	0.5	1.5	9	0.0017	-0.1642	0.988	0.06

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 265

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%
	998	963	951	939	925	891	726	520	505	461

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
194	20.00	9.69	2.92	61	3.94

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	190	3	4	9
CADMIUM (CD), UG/L	3	10	10	3	0	1
CHROMIUM (CR), UG/L	3	0	10	3	0	0
COBALT (CD), UG/L	3	50	150	3	0	4
COPPER (CU), UG/L	3	10	440	3	0	8
IRON (FE), UG/L	3	990	120000	9	0	70
LEAD (PB), UG/L	3	100	300	3	0	6
MANGANESE (MN), UG/L	3	40	6900	3	0	20
MERCURY (HG), UG/L	3	0.0	0.5	3	0.0	0.0
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	10	650	3	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	27.60	53.50			
BIOMASS, ASH WT., G/SQ M	2	22.30	46.50			
CHLOROPHYLL A, MG/SQ M	2	13.300	109.000			
CHLOROPHYLL B, MG/SQ M	2	1.600	28.100			
ORGANIC CARBON, MG/L	3	2.400	81.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	23	20.30	6.28	10.0	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	64	1308.4	85.1	1070	1580					
STREAMFLOW (CUBIC FT/SEC)	23	8323.5	2626.3	4490	13300	13	-21.826	37053.168	-0.765	1715.4
PH (STANDARD UNITS)	64	8.19	0.12	7.6	8.3	64	-0.0001	8.3401	-0.087*	0.12
PHOSPHORUS, TOTAL	23	0.046	0.080	0.00	0.36	13	-0.00024	0.36066	-0.412*	0.050
NITRITE + NITRATE, TOTAL	23	0.205	0.184	0.06	1.00	13	-0.00028	0.55179	-0.405*	0.059
NITROGEN, KJELDAHL, TOTAL	23	0.430	0.224	0.03	1.20	13	0.00067	-0.50362	0.361*	0.161
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	3521.0	4387.9	710	15000	10	25.176	-30292.449	0.574*	3809.5
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	34.1	20.2	4	70					
STREPTOCOCCI, FECAL (COL/100 ML)	10	48.4	32.4	10	120					
SILICA, DISSOLVED	57	8.59	1.20	5.5	11.0	57	0.0059	0.8715	0.398	1.11
CALCIUM, DISSOLVED	57	93.47	6.01	79.0	111.0	57	0.0569	19.1533	0.763	3.92
MAGNESIUM, DISSOLVED	57	32.00	2.10	21.0	35.0	57	0.0055	24.7493	0.213*	2.07
SODIUM, DISSOLVED	57	139.33	12.68	112.0	180.0	57	0.1534	-61.0898	0.975	2.83
POTASSIUM, DISSOLVED	58	5.43	0.33	4.8	6.7	58	-0.0010	6.7635	-0.247*	0.32
BICARBONATE, ION	57	179.0	7.1	164	204	57	0.072	84.657	0.818	4.1
CARBONATE, ION	52	0.0	0.0	0	0	52	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	57	342.37	18.33	255.0	390.0	57	0.2096	68.5923	0.922	7.16
CHLORIDE, DISSOLVED	57	121.09	13.57	102.0	170.0	57	0.1607	-88.8150	0.955	4.07
DISSOLVED SOLIDS, SUM OF CONST	57	832.1	51.1	678	1000	57	0.623	17.870	0.984	9.2
DISSOLVED SOLIDS, ROE 180 DEG C	52	834.5	56.7	676	1010	52	0.679	-49.424	0.993	7.0
HARDNESS, TOTAL	57	364.4	16.0	298	420	57	0.164	149.757	0.827	9.1
HARDNESS, NONCARBONATE	57	217.6	12.2	164	252	57	0.104	81.095	0.691	8.9
TURBIDITY (JTU)	0									
FLUORIDE, DISSOLVED	57	0.47	0.06	0.3	0.6	57	0.0002	0.2658	0.205*	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%
	1630	1480	1420	1370	1340	1290	1250	1230	1220	1210

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
165	21.66	8.89	2.87	86	1.75

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	4	2	3
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	10	4	0	9
IRON (FE), UG/L	23	180	6200	8	0	10
LEAD (PB), UG/L	4	<100	200	4	0	8
MANGANESE (MN), UG/L	4	40	80	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	2	3	4	2	4
ZINC (ZN), UG/L	4	10	80	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	2.20	11.00			
BIOMASS, ASH WT., G/SQ M	4	0.92	8.20			
CHLOROPHYLL A, MG/SQ M	4	2.100	21.000			
CHLOROPHYLL B, MG/SQ M	4	0.000	6.800			
ORGANIC CARBON, MG/L	22	2.200	38.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	18.67	8.00	6.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	5270.8	2019.5	1700	7500					
STREAMFLOW (CUBIC FT/SEC)	12	95.2	125.1	2	450	12	-0.050	360.065	-0.811	76.7
PH (STANDARD UNITS)	9	8.04	0.21	7.7	8.4	9	0.0001	7.7651	0.511*	0.19
PHOSPHORUS, TOTAL	11	0.158	0.175	0.05	0.66	11	-0.00006	0.44208	-0.636	0.142
NITRITE + NITRATE, TOTAL	11	0.623	0.403	0.00	1.20	11	-0.00002	0.71898	-0.094*	0.423
NITROGEN, KJELDAHL, TOTAL	11	0.568	0.281	0.30	1.30	11	-0.00010	1.07518	-0.706	0.209
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	12806.4	16597.2	270	54000	10	4.002	-8574.211	0.420*	16717.1
SEDIMENT SUSPENDED	8	152.3	115.9	37	302					
SEDIMENT, CLAY-SILT (PERCENT)	8	63.5	26.6	25	96					
COLIFORM, FECAL (COL/100 ML)	12	102.3	130.5	3	440					
STREPTOCOCCI, FECAL (COL/100 ML)	12	150.1	124.7	9	450					
SILICA, DISSOLVED	11	34.73	2.61	31.0	39.0	11	-0.0001	35.4616	-0.110*	2.74
CALCIUM, DISSOLVED	11	217.27	69.87	90.0	300.0	11	0.0349	40.3796	0.992	9.27
MAGNESIUM, DISSOLVED	11	63.55	25.65	22.0	92.0	11	0.0127	-1.0708	0.987	4.29
SODIUM, DISSOLVED	11	796.36	346.62	220.0	1200.0	11	0.1735	-62.9990	0.994	39.63
POTASSIUM, DISSOLVED	11	14.52	4.61	6.0	20.0	11	0.0022	3.2268	0.961	1.35
BICARBONATE, ION	11	295.0	38.0	238	359	11	0.001	287.590	0.076*	40.0
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	507.27	223.66	150.0	780.0	11	0.1114	-57.3975	0.989	34.39
CHLORIDE, DISSOLVED	11	1273.64	561.41	330.0	1900.0	11	0.2806	-148.4751	0.993	71.96
DISSOLVED SOLIDS, SUM OF CONST	11	3059.4	1230.4	973	4440	11	0.616	-62.599	0.994	139.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	3120.3	1251.9	983	4480	11	0.626	-50.148	0.992	162.6
HARDNESS, TOTAL	11	808.2	280.7	320	1100	11	0.140	97.603	0.992	37.8
HARDNESS, NONCARBONATE	11	561.8	277.1	120	910	11	0.138	-138.846	0.991	39.7
TURBIDITY (JTU)	11	30.5	41.0	1	130	11	-0.010	82.816	-0.500*	37.4
FLUORIDE, DISSOLVED	11	1.62	0.14	1.4	1.8	11	0.0000	1.5703	0.134*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	18.74	10.38	3.03	86	3.31

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	2	10	4	4	5
CADMIUM (CD), UG/L	9	<10	10	8	0	11
CHROMIUM (CR), UG/L	9	0	20	4	0	2
COBALT (CO), UG/L	4	<50	100	4	0	1
COPPER (CU), UG/L	9	5	70	4	2	5
IRON (FE), UG/L	9	120	14000	9	0	50
LEAD (PB), UG/L	9	<100	100	4	2	45
MANGANESE (MN), UG/L	9	100	760	9	10	390
MERCURY (HG), UG/L	7	0.0	0.2	4	0.0	0.3
SELENIUM (SE), UG/L	9	0	1	4	0	1
ZINC (ZN), UG/L	9	10	90	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	7.81	100.00			
BIOMASS, ASH WT., G/SQ M	3	7.31	95.00			
CHLOROPHYLL A, MG/SQ M	3	0.800	42.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	2.100			
ORGANIC CARBON, MG/L	8	4.000	12.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	8	25.94	8.35	13.5	37.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	1166.0	471.4	463	1600					
STREAMFLOW (CUBIC FT/SEC)	18	110.2	395.6	0	1690	6	-1.070	1531.363	-0.732*	524.6
PH (STANDARD UNITS)	6	8.33	0.18	8.1	8.6	6	-0.0001	8.4767	-0.331*	0.18
PHOSPHORUS, TOTAL	6	4.217	5.207	0.02	13.00	6	-0.01045	16.40576	-0.946	1.882
NITRITE + NITRATE, TOTAL	6	0.843	0.548	0.23	1.70	6	-0.00104	2.06159	-0.899	0.269
NITROGEN, KJELDAHL, TOTAL	6	5.885	7.957	0.38	21.00	6	-0.01551	23.96603	-0.919	3.514
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	1350.0	1130.9	0	2400	6	1.817	-768.833	0.757*	825.5
SEDIMENT SUSPENDED	8	90137.5	35408.8	37800	149000					
SEDIMENT, CLAY-SILT (PERCENT)	3	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	6	26715.0	42964.8	70	110000					
STREPTOCOCCI, FECAL (COL/100 ML)	6	33561.7	37566.9	340	82000					
SILICA, DISSOLVED	6	27.50	9.42	14.0	36.0	6	0.0198	4.4269	0.990	1.45
CALCIUM, DISSOLVED	6	102.00	34.34	44.0	130.0	6	0.0717	18.3864	0.984	6.76
MAGNESIUM, DISSOLVED	6	20.08	9.07	7.5	30.0	6	0.0191	-2.1991	0.993	1.17
SODIUM, DISSOLVED	6	114.50	65.74	30.0	180.0	6	0.1379	-46.2742	0.989	11.00
POTASSIUM, DISSOLVED	6	7.00	1.84	4.1	9.5	6	0.0028	3.7002	0.727*	1.41
BICARBONATE, ION	6	218.5	59.1	125	283	6	0.106	95.317	0.842	35.7
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	6	317.83	139.57	97.0	440.0	6	0.2951	-26.2268	0.997	12.84
CHLORIDE, DISSOLVED	6	63.93	47.07	5.6	120.0	6	0.0977	-49.9330	0.978	10.96
DISSOLVED SOLIDS, SUM OF CONST	6	765.7	327.0	292	1060	6	0.693	-42.038	0.999	18.9
DISSOLVED SOLIDS, ROE 180 DEG C	6	779.0	354.4	261	1100	6	0.752	-97.269	0.999	12.8
HARDNESS, TOTAL	6	338.3	123.4	140	450	6	0.260	35.505	0.992	16.9
HARDNESS, NONCARBONATE	6	160.2	90.2	1	260	6	0.173	-42.017	0.906	42.6
TURBIDITY (JTU)	6	5074.3	7502.1	14	19000	6	-15.066	22641.738	-0.947	2701.9
FLUORIDE, DISSOLVED	6	1.72	0.80	0.7	2.4	6	0.0016	-0.1843	0.962	0.24

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 200

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%
	1780	1670	1560	1470	1430	1310	1050	547	501	456

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
200	23.98	5.90	3.13	50	4.32

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

09473500 -- SAN PEDRD 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	5	6	500	3	4	7
CADMIUM (CD), UG/L	5	<10	150	4	0	1
CHROMIUM (CR), UG/L	5	0	1200	3	0	0
COBALT (CO), UG/L	3	<50	1600	3	0	3
COPPER (CU), UG/L	5	10	4300	3	4	11
IRON (FE), UG/L	5	300	660000	5	10	10
LEAD (PB), UG/L	5	<100	2900	3	0	8
MANGANESE (MN), UG/L	5	60	57000	5	0	30
MERCURY (HG), UG/L	4	0.0	1.8	2	0.0	0.1
SELENIUM (SE), UG/L	5	0	2	3	0	1
ZINC (ZN), UG/L	5	20	6500	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	30.00				
BIOMASS, ASH WT., G/SQ M	1	28.00				
CHLOROPHYLL A, MG/SQ M	1	10.000				
CHLOROPHYLL B, MG/SQ M	1	2.300				
ORGANIC CARBON, MG/L	4	1.800	213.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	16	21.16	6.76	8.5	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1755.8	312.0	1100	2180					
STREAMFLOW (CUBIC FT/SEC)	18	439.0	313.3	24	1070	12	-0.569	1453.591	-0.634	235.0
PH (STANDARD UNITS)	12	8.08	0.32	7.3	8.4	12	-0.0001	8.3099	-0.128*	0.33
PHOSPHORUS, TOTAL	12	2.119	4.314	0.02	13.00	12	-0.00390	8.97170	-0.282*	4.341
NITRITE + NITRATE, TOTAL	12	0.348	0.436	0.00	1.40	12	-0.00028	0.84585	-0.203*	0.448
NITROGEN, KJELDAHL, TOTAL	12	2.823	4.057	0.15	11.00	12	-0.00448	10.68436	-0.344*	3.995
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4985.0	8921.9	0	32000	12	7.688	-8513.527	0.269*	9012.8
SEDIMENT SUSPENDED	7	54077.1	29888.5	1740	95800					
SEDIMENT, CLAY-SILT (PERCENT)	1	99.0	0.0	99						
COLIFORM, FECAL (COL/100 ML)	12	11227.7	23516.6	8	70000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	20259.6	33808.4	7	96000					
SILICA, DISSOLVED	12	24.42	3.06	16.0	28.0	12	0.0065	13.0508	0.660	2.41
CALCIUM, DISSOLVED	12	101.83	33.05	69.0	170.0	12	0.0563	2.9127	0.532*	29.35
MAGNESIUM, DISSOLVED	12	28.58	9.11	18.0	51.0	12	0.0219	-9.8708	0.750	6.32
SODIUM, DISSOLVED	12	214.58	51.76	95.0	310.0	12	0.1461	-41.9443	0.881	25.73
POTASSIUM, DISSOLVED	12	7.52	1.51	4.8	11.0	12	0.0038	0.7719	0.792	0.97
BICARBONATE, ION	12	233.4	35.8	179	316	12	0.098	61.193	0.854	19.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	222.50	114.27	140.0	490.0	12	0.2170	-158.4890	0.592	96.55
CHLORIDE, DISSOLVED	12	310.00	78.86	150.0	470.0	12	0.1931	-29.1301	0.764	53.35
DISSOLVED SOLIDS, SUM OF CONST	12	1028.2	224.8	646	1420	12	0.693	-188.480	0.962	64.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	1055.8	220.4	673	1450	12	0.678	-134.103	0.959	65.1
HARDNESS, TOTAL	12	370.8	116.1	260	630	12	0.230	-32.487	0.617	95.8
HARDNESS, NONCARBONATE	12	180.8	93.2	110	380	12	0.153	-88.507	0.514*	83.8
TURBIDITY (JTU)	12	2325.8	4751.5	1	15000	12	-7.466	15434.305	-0.490*	4343.6
FLUORIDE, DISSOLVED	12	1.06	0.24	0.5	1.3	12	0.0003	0.4829	0.426*	0.23

*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%
	2770	2400	2090	1960	1880	1690	1590	1320	1150	738

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	19.22	9.38	2.76	96	1.42

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	9	4	600	5	4	6
CADMIUM (CD), UG/L	10	<10	80	8	0	1
CHROMIUM (CR), UG/L	10	0	750	5	0	10
COBALT (CO), UG/L	5	<50	400	5	0	1
COPPER (CU), UG/L	10	10	3800	5	4	14
IRON (FE), UG/L	10	10	400000	10	0	100
LEAD (PB), UG/L	10	<100	1800	5	0	8
MANGANESE (MN), UG/L	10	150	36000	10	0	1400
MERCURY (HG), UG/L	9	0.0	2.3	5	0.0	0.0
SELENIUM (SE), UG/L	10	0	2	5	0	1
ZINC (ZN), UG/L	10	0	4000	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	20.00				
BIOMASS, ASH WT., G/SQ M	1	18.00				
CHLOROPHYLL A, MG/SQ M	1	6.500				
CHLOROPHYLL B, MG/SQ M	1	0.400				
ORGANIC CARBON, MG/L	9	4.700	95.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	1	22.00	0.00	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	1	350.0	0.0	350					
STREAMFLOW (CUBIC FT/SEC)	6	0.0	0.0	0	0				
PH (STANDARD UNITS)	1	7.70	0.00	7.7					
PHOSPHORUS, TOTAL	1	3.500	0.000	3.50					
NITRITE + NITRATE, TOTAL	1	0.550	0.000	0.55					
NITROGEN, KJELDAHL, TOTAL	1	1.400	0.000	1.40					
PHYTOPLANKTON, TOTAL (CELLS/ML)	1	27000.0	0.0	27000					
SEDIMENT SUSPENDED	1	1360.0	0.0	1360					
SEDIMENT, CLAY-SILT (PERCENT)	1	94.0	0.0	94					
COLIFORM, FECAL (COL/100 ML)	1	6900.0	0.0	6900					
STREPTOCOCCI, FECAL (COL/100 ML)	1	18000.0	0.0	18000					
SILICA, DISSOLVED	1	8.80	0.00	8.8					
CALCIUM, DISSOLVED	1	9.90	0.00	9.9					
MAGNESIUM, DISSOLVED	1	1.40	0.00	1.4					
SODIUM, DISSOLVED	1	61.00	0.00	61.0					
POTASSIUM, DISSOLVED	1	4.50	0.00	4.5					
BICARBONATE, ION	1	163.0	0.0	163					
CARBONATE, ION	1	0.0	0.0	0					
SULFATE, DISSOLVED	1	16.00	0.00	16.0					
CHLORIDE, DISSOLVED	1	19.00	0.00	19.0					
DISSOLVED SOLIDS, SUM OF CONST	1	203.0	0.0	203					
DISSOLVED SOLIDS, ROE 180 DEG C	1	206.0	0.0	206					
HARDNESS, TOTAL	1	30.0	0.0	30					
HARDNESS, NONCARBONATE	1	0.0	0.0	0					
TURBIDITY (JTU)	1	700.0	0.0	700					
FLUORIDE, DISSOLVED	1	0.40	0.00	0.4					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	20		1	9	
CADMIUM (CD), UG/L	1	10		1	1	
CHROMIUM (CR), UG/L	1	20		1	0	
COBALT (CO), UG/L	1	50		1	0	
COPPER (CU), UG/L	1	100		1	15	
IRON (FE), UG/L	1	36000		1	100	
LEAD (PB), UG/L	1	100		1	10	
MANGANESE (MN), UG/L	1	830		1	0	
MERCURY (HG), UG/L	1	0.1		1	0.2	
SELENIUM (SE), UG/L	1	1		1	1	
ZINC (ZN), UG/L	1	190		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	13.000				

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	10	17.70	4.37	11.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	1193.3	106.7	960	1360					
STREAMFLOW (CUBIC FT/SEC)	12	795.2	629.6	0	1770	9	3.148	-2816.491	0.565*	524.3
PH (STANDARD UNITS)	9	7.60	0.20	7.3	8.0	9	0.0001	7.4690	0.059*	0.21
PHOSPHORUS, TOTAL	9	0.022	0.012	0.01	0.04	9	0.00002	0.00211	0.150*	0.013
NITRITE + NITRATE, TOTAL	9	0.076	0.102	0.01	0.34	9	-0.00005	0.13283	-0.050*	0.109
NITROGEN, KJELDAHL, TOTAL	9	0.353	0.207	0.16	0.60	9	-0.00166	2.32954	-0.853	0.116
PHYTOPLANKTON, TOTAL (CELLS/ML)	7	1147.1	939.7	190	2900	6	2.767	-2263.640	0.205*	1123.6
SEDIMENT SUSPENDED	1	6.0	0.0	6						
SEDIMENT, CLAY-SILT (PERCENT)	1	70.0	0.0	70						
COLIFORM, FECAL (COL/100 ML)	9	3.2	2.6	<1	8					
STREPTOCOCCI, FECAL (COL/100 ML)	9	34.8	70.7	1	220					
SILICA, DISSOLVED	9	13.28	4.16	6.4	17.0	9	0.0047	7.6695	0.120*	4.42
CALCIUM, DISSOLVED	9	53.11	2.47	51.0	59.0	9	-0.0026	56.1709	-0.111*	2.63
MAGNESIUM, DISSOLVED	9	14.67	0.71	14.0	16.0	9	0.0005	14.0110	0.083*	0.75
SODIUM, DISSOLVED	9	154.44	7.26	140.0	160.0	9	0.0337	114.2292	0.495*	6.75
POTASSIUM, DISSOLVED	9	4.90	0.31	4.4	5.3	9	0.0004	4.4539	0.126*	0.33
BICARBONATE, ION	9	157.4	5.7	150	166	9	-0.001	158.668	-0.019*	6.0
CARBONATE, ION	9	0.6	1.7	0	5	9	-0.013	15.855	-0.820	1.0
SULFATE, DISSOLVED	9	60.11	7.51	44.0	72.0	9	0.0047	54.5159	0.067*	8.01
CHLORIDE, DISSOLVED	9	242.22	17.87	220.0	280.0	9	-0.0139	258.8445	-0.065*	19.04
DISSOLVED SOLIDS, SUM OF CONST	9	621.7	18.1	583	646	9	0.014	605.534	0.080*	19.3
DISSOLVED SOLIDS, ROE 180 DEG C	9	640.3	12.9	623	658	9	0.077	548.015	0.641*	10.6
HARDNESS, TOTAL	9	193.3	7.1	190	210	9	-0.008	202.519	-0.116*	7.5
HARDNESS, NONCARBONATE	9	62.9	9.5	50	77	9	0.019	40.027	0.216*	9.9
TURBIDITY (JTU)	9	2.7	1.2	1	5	9	-0.003	6.601	-0.287*	1.3
FLUORIDE, DISSOLVED	9	0.31	0.09	0.2	0.5	9	0.0002	0.1056	0.196*	0.10

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 189

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%
	1290	1280	1230	1210	1200	1180	1120	1110	1100	1070

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
187	16.29	4.15	2.33	94	0.70

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	5	3	3	4
CADMIUM (CD), UG/L	3	<10	10	3	0	0
CHROMIUM (CR), UG/L	3	0	10	3	0	10
COBALT (CO), UG/L	4	0	<50	4	0	<50
COPPER (CU), UG/L	3	0	<10	3	2	6
IRON (FE), UG/L	3	120	240	3	0	20
LEAD (PB), UG/L	3	<100	<100	3	0	2
MANGANESE (MN), UG/L	3	30	150	3	10	90
MERCURY (HG), UG/L	3	0.0	0.0	3	0.0	0.0
SELENIUM (SE), UG/L	2	0	0	3	0	0
ZINC (ZN), UG/L	3	10	100	3	10	120
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	2.200	6.900			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 09510000   NAME: VERDE R BL BARTLETT D ARIZ

LAT 33D49M05S LONG 111D37M53S
DRAINAGE AREA: 6188 SO MI (16027 SO KM)
PERIOD OF RECORO: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	16.42	5.47	9.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	473.6	135.7	245	700					
STREAMFLOW (CUBIC FT/SEC)	12	415.9	368.0	48	960	11	-1.159	997.904	-0.429*	349.1
PH (STANDARD UNITS)	11	7.90	0.29	7.3	8.2	11	0.0016	7.1631	0.720	0.21
PHOSPHORUS, TOTAL	11	0.065	0.071	0.00	0.23	11	-0.00039	0.25122	-0.756	0.049
NITRITE + NITRATE, TOTAL	11	0.146	0.120	0.01	0.41	11	-0.00065	0.45385	-0.734	0.086
NITROGEN, KJELDAHL, TOTAL	11	0.397	0.180	0.21	0.86	11	-0.00047	0.61998	-0.354*	0.177
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1875.5	1822.1	6	5300	10	5.247	-559.503	0.392*	1859.6
SEDIMENT SUSPENDED	8	38.9	37.3	5	123					
SEDIMENT, CLAY-SILT (PERCENT)	8	70.8	8.0	59	79					
COLIFORM, FECAL (COL/100 ML)	11	18.5	49.9	<1	168					
STREPTOCOCCI, FECAL (CDL/100 ML)	11	56.8	143.0	<1	480					
SILICA, DISSOLVED	11	14.43	4.27	7.9	20.0	11	0.0049	12.0884	0.157*	4.44
CALCIUM, OISSOLVED	11	38.82	6.55	25.0	50.0	11	0.0427	18.6096	0.883	3.24
MAGNESIUM, DISSOLVED	11	22.45	7.26	11.0	32.0	11	0.0520	-2.1637	0.972	1.80
SODIUM, DISSOLVED	11	25.07	10.57	9.8	38.0	11	0.0732	-9.5900	0.940	3.81
POTASSIUM, DISSOLVEO	11	2.82	0.58	2.0	3.5	11	0.0034	1.1856	0.810	0.36
BICARBONATE, ION	11	214.2	50.5	125	303	11	0.358	44.657	0.962	14.5
CARBONATE, ION	11	0.5	1.6	0	6	11	0.004	-1.250	0.284*	1.8
SULFATE, DISSOLVED	11	47.09	19.11	21.0	69.0	11	0.1313	-15.0767	0.932	7.30
CHLORIDE, DISSOLVED	11	16.59	7.05	5.7	26.0	11	0.0466	-5.4580	0.896	3.29
DISSOLVED SDLIDS, SUM OF CONST	11	274.3	73.6	150	381	11	0.531	22.818	0.979	15.8
DISSOLVED SDLIDS, ROE 180 DEG C	11	280.3	68.9	155	367	11	0.490	48.273	0.964	19.3
HARONESS, TOTAL	11	190.0	44.9	110	260	11	0.327	35.297	0.986	7.8
HARDNESS, NONCARBONATE	11	12.9	5.9	5	22	11	0.021	3.011	0.482*	5.4
TURBIOITY (JTU)	11	13.5	19.3	3	70	11	-0.089	55.923	-0.628	15.8
FLUORIDE, DISSOLVED	11	0.26	0.05	0.2	0.3	11	0.0002	0.1660	0.554*	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%
	685	650	630	585	560	391	353	273	268	258

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
322	14.90	6.98	2.27	92	1.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS DF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	11	18	4	9	16
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	2
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	5	10	4	2	7
IRON (FE), UG/L	4	220	2700	4	10	30
LEAD (PB), UG/L	4	<100	100	4	0	4
MANGANESE (MN), UG/L	4	30	230	4	0	170
MERCURV (HG), UG/L	4	0.0	0.6	4	0.0	0.2
SELENIUM (SE), UG/L	3	0	1	4	0	2
ZINC (ZN), UG/L	4	10	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	23.80				
BIOMASS, ASH WT., G/SQ M	1	11.50				
CHLOROPHYLL A, MG/SQ M	1	89.000				
CHLOROPHYLL B, MG/SQ M	1	1.800				
ORGANIC CARBON, MG/L	3	2.700	5.800			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	20.86	6.84	10.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	5788.2	2113.4	320	7800					
STREAMFLOW (CUBIC FT/SEC)	11	71.5	88.4	28	334	11	-0.038	291.564	-0.909	38.8
PH (STANDARD UNITS)	11	7.97	0.29	7.4	8.3	11	0.0001	7.3279	0.821	0.17
PHOSPHORUS, TOTAL	11	1.188	0.794	0.28	2.70	11	-0.00012	1.91079	-0.333*	0.789
NITRITE + NITRATE, TOTAL	11	10.878	3.961	0.86	17.00	11	0.00132	3.26335	0.702	2.974
NITROGEN, KJELDAHL, TOTAL	11	2.891	2.857	1.10	10.00	11	-0.00025	4.33428	-0.164*	2.960
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	18690.0	16103.6	1500	46000	10	2.420	4974.672	0.329*	16131.4
SEDIMENT SUSPENDED	11	204.4	146.9	72	600					
SEDIMENT, CLAY-SILT (PERCENT)	11	78.5	20.7	39	97					
COLIFORM, FECAL (COL/100 ML)	10	2120.0	2191.3	430	7100					
STREPTOCOCCI, FECAL (COL/100 ML)	10	2125.0	4277.0	260	14200					
SILICA, DISSOLVED	11	18.50	5.79	9.5	28.0	11	0.0018	8.0364	0.660	4.59
CALCIUM, DISSOLVED	11	250.64	84.16	27.0	320.0	11	0.0372	35.1789	0.935	31.51
MAGNESIUM, DISSOLVED	11	104.93	36.86	3.2	130.0	11	0.0156	14.8432	0.892	17.53
SODIUM, DISSOLVED	11	832.00	289.96	32.0	1100.0	11	0.1274	94.6675	0.928	113.50
POTASSIUM, DISSOLVED	11	10.79	1.31	8.4	13.0	11	0.0002	9.5610	0.343*	1.30
BICARBONATE, ION	11	315.3	63.0	138	369	11	0.024	176.997	0.802	39.7
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	820.18	300.73	22.0	1100.0	11	0.1314	59.8772	0.923	121.89
CHLORIDE, DISSOLVED	11	1220.00	436.81	20.0	1600.0	11	0.1892	125.1042	0.915	185.52
DISSOLVED SOLIDS, SUM OF CONST	11	3460.5	1189.4	195	4470	11	0.521	443.273	0.926	472.6
DISSOLVED SOLIDS, ROE 180 DEG C	11	3590.2	1230.3	202	4700	11	0.535	492.654	0.919	510.3
HARDNESS, TOTAL	11	1064.6	362.3	81	1300	11	0.159	144.942	0.927	143.2
HARDNESS, NONCARBONATE	11	798.2	301.9	0	1000	11	0.132	33.902	0.924	121.5
TURBIDITY (JTU)	11	39.0	21.1	10	80	11	0.005	11.311	0.479*	19.5
FLUORIDE, DISSOLVED	11	1.89	0.61	0.5	2.6	11	0.0002	0.4932	0.833	0.36

*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%
	7800	7300	7200	6900	6700	6250	5800	5100	4700	3500

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
301	19.08	8.36	2.87	90	1.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	12	19	4	6	12
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	20	20	4	0	20
COBALT (CO), UG/L	4	<50	100	4	0	2
COPPER (CU), UG/L	4	20	30	4	2	9
IRON (FE), UG/L	4	2100	24000	4	10	60
LEAD (PB), UG/L	4	<100	200	4	0	5
MANGANESE (MN), UG/L	4	180	650	4	10	160
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	1	19	4	1	14
ZINC (ZN), UG/L	4	40	100	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	38.80				
BIOMASS, ASH WT., G/SQ M	1	31.80				
CHLOROPHYLL A, MG/SQ M	1	81.200				
CHLOROPHYLL B, MG/SQ M	1	7.500				
ORGANIC CARBON, MG/L	4	8.200	12.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	59	23.52	2.09	18.5	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	64	3218.9	252.8	2760	3800					
STREAMFLOW (CUBIC FT/SEC)	64	89.7	35.4	40	274	64	0.052	-78.566	0.373	33.1
PH (STANDARD UNITS)	23	7.94	0.13	7.6	8.2	23	0.0000	7.9229	0.011*	0.13
PHOSPHORUS, TOTAL	12	0.054	0.016	0.03	0.08	12	-0.00001	0.08006	-0.142*	0.017
NITRITE + NITRATE, TOTAL	12	1.007	0.190	0.68	1.30	12	0.00006	0.80409	0.095*	0.199
NITROGEN, KJELDAHL, TOTAL	12	0.512	0.327	0.21	1.40	12	-0.00020	1.16470	-0.177*	0.337
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3158.2	7601.1	290	26000	11	12.975	-39034.203	0.512*	6880.9
SEDIMENT SUSPENDED	12	13.3	9.3	2	30					
SEDIMENT, CLAY-SILT (PERCENT)	12	47.1	21.2	15	91					
COLIFORM, FECAL (COL/100 ML)	10	132.3	135.5	15	420					
STREPTOCOCCI, FECAL (COL/100 ML)	10	514.5	714.7	40	2000					
SILICA, DISSOLVED	23	23.30	1.26	21.0	25.0	23	0.0022	16.1989	0.480	1.13
CALCIUM, DISSOLVED	23	148.70	12.17	130.0	180.0	23	0.0334	40.1474	0.758	8.12
MAGNESIUM, DISSOLVED	23	56.68	11.63	9.7	70.0	23	0.0266	-29.5796	0.631	9.24
SODIUM, DISSOLVED	23	477.39	47.98	390.0	570.0	23	0.1595	-40.3218	0.918	19.50
POTASSIUM, DISSOLVED	23	7.38	0.67	6.4	9.1	23	0.0020	1.0117	0.806	0.41
BICARBONATE, ION	23	299.1	15.3	256	332	23	0.018	240.046	0.328*	14.8
CARBONATE, ION	23	0.0	0.0	0	0	23	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	23	510.43	60.64	420.0	650.0	23	0.0583	321.3074	0.265*	59.84
CHLORIDE, DISSOLVED	23	627.83	98.39	410.0	810.0	23	0.3285	-438.3708	0.922	39.08
DISSOLVED SOLIDS, SUM OF CONST	23	2004.8	190.0	1630	2350	23	0.619	-4.917	0.900	84.9
DISSOLVED SOLIDS, ROE 180 DEG C	23	2022.2	175.4	1780	2380	23	0.617	19.370	0.971	42.9
HARDNESS, TOTAL	23	604.3	71.2	360	720	23	0.191	-17.076	0.742	48.8
HARDNESS, NONCARBONATE	23	359.6	66.1	130	470	23	0.176	-211.587	0.735	45.9
TURBIDITY (JTU)	12	2.3	1.3	1	5	12	0.000	2.250	0.000*	1.4
FLUORIDE, DISSOLVED	23	0.90	0.06	0.8	1.0	23	-0.0001	1.0800	-0.254*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
59	23.61	2.41	2.90	65	1.26

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	13	15	4	8	16
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	20	4	1	6
IRON (FE), UG/L	4	170	350	23	0	220
LEAD (PB), UG/L	4	<100	200	4	0	5
MANGANESE (MN), UG/L	4	680	940	4	640	960
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	6	16	4	6	14
ZINC (ZN), UG/L	4	10	70	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	4.60	31.00			
BIOMASS, ASH WT., G/SQ M	3	2.70	22.00			
CHLOROPHYLL A, MG/SQ M	3	16.900	110.000			
CHLOROPHYLL B, MG/SQ M	3	4.400	27.000			
ORGANIC CARBON, MG/L	3	1.800	10.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	51	19.95	5.56	9.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	64	1548.3	122.3	1020	1770					
STREAMFLOW (CUBIC FT/SEC)	74	2026.0	1082.6	780	8700	64	-7.784	14049.230	-0.844	609.0
PH (STANDARD UNITS)	64	8.08	0.12	7.7	8.4	64	0.0001	7.9593	0.082*	0.12
PHOSPHORUS, TOTAL	23	0.069	0.044	0.03	0.25	13	0.00011	-0.10790	0.463*	0.021
NITRITE + NITRATE, TOTAL	23	0.276	0.103	0.13	0.66	13	0.00005	0.18621	0.089*	0.059
NITROGEN, KJELDAHL, TOTAL	23	0.633	0.555	0.22	2.90	13	0.00125	-1.45511	0.441*	0.256
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4227.5	4810.5	560	15000	12	13.798	-17550.219	0.288*	4631.4
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	149.3	164.7	38	600					
STREPTOCOCCI, FECAL (COL/100 ML)	10	163.7	117.1	34	400					
SILICA, DISSOLVED	52	11.01	1.57	7.8	14.0	52	0.0083	-1.6339	0.671	1.18
CALCIUM, DISSOLVED	52	105.31	6.27	80.0	120.0	52	0.0457	34.8155	0.924	2.43
MAGNESIUM, DISSOLVED	52	34.06	2.63	20.0	38.0	52	0.0154	10.2607	0.743	1.78
SODIUM, DISSOLVED	52	177.65	20.46	108.0	215.0	52	0.1600	-68.8880	0.990	2.91
POTASSIUM, DISSOLVED	52	5.69	0.35	5.0	6.7	52	-0.0005	6.4642	-0.182*	0.35
BICARBONATE, ION	52	201.7	13.1	154	228	52	0.100	47.329	0.968	3.3
CARBONATE, ION	52	0.1	0.6	0	4	52	-0.000	0.841	-0.113*	0.6
SULFATE, DISSOLVED	52	369.13	25.37	240.0	410.0	52	0.1955	67.7356	0.976	5.60
CHLORIDE, DISSOLVED	52	172.50	21.71	102.0	212.0	52	0.1691	-88.1643	0.966	3.63
DISSOLVED SOLIDS, SUM OF CONST	52	976.5	80.9	644	1120	52	0.638	-6.985	0.999	2.9
DISSOLVED SOLIDS, ROE 180 DEG C	52	983.3	84.0	640	1140	52	0.661	-34.751	0.996	7.6
HARDNESS, TOTAL	52	402.6	23.5	280	440	52	0.179	126.278	0.968	6.0
HARDNESS, NONCARBONATE	52	237.2	14.0	154	253	52	0.097	87.319	0.879	6.8
TURBIDITY (JTU)	0									
FLUORIDE, DISSOLVED	52	0.54	0.07	0.3	0.7	52	0.0003	0.0575	0.597	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 363

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1780	1730	1700	1640	1600	1540	1490	1430	1400	1310

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
51	20.37	7.30	2.81	93	1.55

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

09522000 -- COLORADO R AT NIB AB MORELOS DAM NR ANDRADE, CAL

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	3	5	4	1	3
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	110	4	0	2
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	<10	10	4	0	5
IRON (FE), UG/L	22	1	3900	4	0	40
LEAD (PB), UG/L	4	<100	<100	4	0	4
MANGANESE (MN), UG/L	4	80	210	4	10	30
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	4	3	3	4	3	3
ZINC (ZN), UG/L	4	0	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	4.90	55.80			
BIOMASS, ASH WT., G/SQ M	4	2.80	45.70			
CHLOROPHYLL A, MG/SQ M	4	1.300	40.600			
CHLOROPHYLL B, MG/SQ M	4	0.400	5.800			
ORGANIC CARBON, MG/L	23	<1.300	13.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, A	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	9.82	8.33	0.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	636.4	54.1	510	690					
STREAMFLOW (CUBIC FT/SEC)	11	616.5	512.4	5	1330	11	5.717	-3021.471	0.603	430.7
PH (STANDARD UNITS)	11	8.32	0.38	7.8	8.9	11	0.0025	6.7145	0.357*	0.38
PHOSPHORUS, TOTAL	11	0.060	0.049	0.00	0.15	11	-0.00003	0.08176	-0.038*	0.051
NITRITE + NITRATE, TOTAL	11	0.056	0.070	0.00	0.19	11	-0.00014	0.14655	-0.109*	0.074
NITROGEN, KJELDAHL, TOTAL	11	0.583	0.342	0.15	1.20	11	-0.00203	1.87247	-0.320*	0.342
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	4870.0	5583.8	220	19000	11	17.348	-6169.402	0.168*	5802.0
SEDIMENT SUSPENDED	10	76.9	114.0	6	375					
SEDIMENT, CLAY-SILT (PERCENT)	9	87.6	12.9	61	99					
COLIFORM, FECAL (COL/100 ML)	11	46.8	102.3	<1	348					
STREPTOCOCCI, FECAL (COL/100 ML)	11	108.9	234.3	<1	770					
SILICA, DISSOLVED	11	7.92	1.10	5.5	9.1	11	0.0077	3.0076	0.380*	1.07
CALCIUM, DISSOLVED	11	45.73	11.35	30.0	62.0	11	-0.0110	52.7081	-0.052*	11.95
MAGNESIUM, DISSOLVED	11	39.27	9.75	25.0	54.0	11	0.1292	-42.9740	0.717	7.16
SODIUM, DISSOLVED	11	35.64	4.97	26.0	41.0	11	0.0788	-14.5146	0.858	2.68
POTASSIUM, DISSOLVED	11	4.19	0.83	3.0	5.9	11	0.0012	3.4372	0.077*	0.87
BICARBONATE, ION	11	305.6	36.4	230	350	11	0.458	14.255	0.680	28.2
CARBONATE, ION	11	4.7	6.4	0	18	11	0.036	-18.094	0.302*	6.5
SULFATE, DISSOLVED	11	65.36	9.94	50.0	81.0	11	0.1157	-8.2610	0.629	8.14
CHLORIDE, DISSOLVED	11	38.45	5.03	29.0	44.0	11	0.0782	-11.3207	0.842	2.86
DISSOLVED SOLIDS, SUM OF CONST	11	392.4	41.9	297	431	11	0.661	-27.987	0.854	23.0
DISSOLVED SOLIDS, ROE 180 DEG C	11	383.0	36.3	294	411	11	0.606	-2.482	0.904	16.4
HARDNESS, TOTAL	11	276.4	27.3	210	300	11	0.487	-33.718	0.965	7.5
HARDNESS, NONCARBONATE	11	20.3	18.3	0	44	11	0.044	-7.809	0.131*	19.1
TURBIDITY (JTU)	10	17.2	13.6	3	40	10	0.046	-12.451	0.192*	14.1
FLUORIDE, DISSOLVED	11	0.25	0.08	0.1	0.4	11	0.0005	-0.0551	0.311*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 245

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%
	750	730	725	700	670	610	550	510	480	415

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
276	8.98	10.52	2.70	95	1.78

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	1	3
CADMIUM (CD), UG/L	4	0	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	1	<50	4	0	1
COPPER (CU), UG/L	4	7	10	4	0	7
IRON (FE), UG/L	4	90	1200	4	0	190
LEAD (PB), UG/L	4	3	<100	4	1	5
MANGANESE (MN), UG/L	4	10	110	4	10	60
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	60	4	0	230
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	13.50	13.90			
BIOMASS, ASH WT., G/SQ M	2	5.54	11.50			
CHLOROPHYLL A, MG/SQ M	2	1.300	2.800			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.200			
ORGANIC CARBON, MG/L	4	7.900	24.000			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 10126000 NAME: BEAR R NR CORINNE UTAH

LAT 41D34M35S LONG 112D06M00S
DRAINAGE AREA: 7029 SQ MI (16205 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	11.07	6.75	0.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1660.0	1682.3	640	5850					
STREAMFLOW (CUBIC FT/SEC)	12	2519.8	1379.0	133	4940	12	-0.585	3491.364	-0.714	1012.5
PH (STANDARD UNITS)	12	8.22	0.28	7.9	8.7	12	0.0001	8.0437	0.664	0.22
PHOSPHORUS, TOTAL	12	0.160	0.089	0.05	0.30	12	0.00000	0.15404	0.068*	0.093
NITRITE + NITRATE, TOTAL	12	0.519	0.314	0.14	1.10	12	-0.00007	0.63740	-0.382*	0.304
NITROGEN, KJELDAHL, TOTAL	12	1.042	0.512	0.33	2.20	12	0.00023	0.66574	0.746	0.358
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	34510.8	62253.5	910	210000	12	35.545	-24493.180	0.961	18156.8
SEDIMENT SUSPENDED	10	168.5	104.0	46	350					
SEDIMENT, CLAY-SILT (PERCENT)	8	88.8	7.9	78	99					
COLIFORM, FECAL (COL/100 ML)	12	197.0	201.4	18	700					
STREPTOCOCCI, FECAL (COL/100 ML)	12	284.3	431.4	39	1600					
SILICA, DISSOLVED	12	13.32	4.96	8.8	28.0	12	-0.0004	13.9949	-0.139*	5.15
CALCIUM, DISSOLVED	12	61.17	6.41	50.0	73.0	12	0.0021	57.6297	0.559*	5.57
MAGNESIUM, DISSOLVED	12	37.92	9.29	22.0	53.0	12	0.0040	31.2980	0.722	6.74
SODIUM, DISSOLVED	12	246.08	307.22	53.0	890.0	12	0.1722	-39.6928	0.943	107.49
POTASSIUM, DISSOLVED	12	18.15	16.01	6.6	48.0	12	0.0086	3.9353	0.900	7.33
BICARBONATE, ION	12	345.1	45.8	260	428	12	0.020	311.853	0.736	32.5
CARBONATE, ION	12	3.5	6.4	0	20	12	0.003	-2.283	0.917	2.7
SULFATE, DISSOLVED	12	56.92	19.94	29.0	91.0	12	0.0100	40.3576	0.842	11.29
CHLORIDE, DISSOLVED	12	369.08	469.29	75.0	1400.0	12	0.2616	-65.1653	0.936	170.91
DISSOLVED SOLIDS, SUM OF CONST	12	975.8	841.9	380	2770	12	0.470	194.872	0.940	301.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	976.7	835.0	366	2710	12	0.465	205.405	0.936	308.0
HARDNESS, TOTAL	12	309.2	51.6	220	380	12	0.022	272.677	0.717	37.7
HARDNESS, NONCARBONATE	12	20.5	17.1	0	61	12	-0.001	21.549	-0.062*	17.9
TURBIDITY (JTU)	11	25.2	17.2	1	50	11	0.004	17.451	0.452*	16.2
FLUORIDE, DISSOLVED	11	0.31	0.14	0.2	0.6	11	0.0001	0.1824	0.927	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
361	11.33	11.94	2.80	96	1.76

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	3	12	3	3	11
CADMIUM (CD), UG/L	3	0	<10	3	0	0
CHROMIUM (CR), UG/L	3	0	20	3	0	10
COBALT (CO), UG/L	3	1	<50	3	0	0
COPPER (CU), UG/L	3	7	10	3	3	7
IRON (FE), UG/L	3	310	2900	3	20	840
LEAD (PB), UG/L	3	2	<100	3	0	3
MANGANESE (MN), UG/L	3	30	140	3	5	20
MERCURY (HG), UG/L	3	0.0	0.1	3	0.1	0.2
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	20	120	3	4	250
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	7.46				
BIOMASS, ASH WT., G/SQ M	1	5.85				
CHLOROPHYLL A, MG/SQ M	1	3.600				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	3.600	7.900			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	14	9.71	7.82	1.0	23.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	558.8	174.1	320	900					
STREAMFLOW (CUBIC FT/SEC)	13	542.5	481.6	110	1780	13	-2.081	1705.765	-0.753	331.2
PH (STANDARD UNITS)	13	7.80	0.20	7.5	8.1	13	0.0000	7.7954	0.007*	0.20
PHOSPHORUS, TOTAL	12	0.714	0.422	0.29	1.50	12	0.00147	-0.11428	0.631	0.343
NITRITE + NITRATE, TOTAL	12	0.813	0.497	0.21	2.10	12	0.00198	-0.30491	0.722	0.360
NITROGEN, KJELDAHL, TOTAL	12	1.152	0.425	0.67	2.30	12	-0.00045	1.40620	-0.191*	0.438
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	6164.5	6113.8	910	20000	11	19.954	-5182.227	0.617	5073.1
SEDIMENT SUSPENDED	13	214.2	482.9	13	1790					
SEDIMENT, CLAY-SILT (PERCENT)	12	67.3	24.7	7	92					
COLIFORM, FECAL (COL/100 ML)	10	59.5	50.0	0	172					
STREPTOCOCCI, FECAL (COL/100 ML)	11	135.6	232.0	12	800					
SILICA, DISSOLVED	12	8.68	1.59	5.8	11.0	12	0.0043	6.2411	0.494*	1.45
CALCIUM, DISSOLVED	12	57.33	9.72	38.0	71.0	12	0.0324	39.0507	0.604	8.12
MAGNESIUM, DISSOLVED	12	17.58	4.64	10.0	25.0	12	0.0237	4.2020	0.925	1.84
SODIUM, DISSOLVED	12	40.17	26.36	13.0	90.0	12	0.1420	-39.9098	0.975	6.14
POTASSIUM, DISSOLVED	12	5.32	2.75	1.3	10.0	12	0.0144	-2.8248	0.952	0.88
BICARBONATE, ION	12	246.3	41.0	159	310	12	0.186	141.630	0.820	24.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	28.00	7.19	16.0	38.0	12	0.0294	11.4235	0.740	5.07
CHLORIDE, DISSOLVED	12	59.67	42.86	17.0	140.0	12	0.2302	-70.1275	0.972	10.56
DISSOLVED SOLIDS, SUM OF CONST	12	338.4	104.5	182	500	12	0.569	17.803	0.985	19.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	342.7	96.4	200	500	12	0.527	45.301	0.990	13.9
HARDNESS, TOTAL	12	215.8	39.0	140	280	12	0.171	119.666	0.792	24.9
HARDNESS, NONCARBONATE	12	13.6	9.3	0	28	12	0.022	0.938	0.437*	8.8
TURBIDITY (JTU)	11	18.8	26.4	3	92	11	-0.071	57.270	-0.462*	24.7
FLUORIDE, DISSOLVED	12	0.24	0.08	0.1	0.4	12	0.0004	0.0419	0.809	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 216

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%
	878	813	800	753	697	639	500	442	426	400

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	10.32	10.45	2.65	95	1.83

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	5	4	1	5
CADMIUM (CD), UG/L	4	1	<10	4	0	2
CHROMIUM (CR), UG/L	4	10	30	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	1
COPPER (CU), UG/L	4	2	20	4	3	8
IRON (FE), UG/L	4	240	5700	4	10	40
LEAD (PB), UG/L	4	6	<100	4	0	16
MANGANESE (MN), UG/L	4	60	230	4	10	50
MERCURY (HG), UG/L	4	0.0	0.6	4	0.0	0.6
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	60	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.50	114.00			
BIOMASS, ASH WT., G/SQ M	3	0.40	77.00			
CHLOROPHYLL A, MG/SQ M	3	0.300	193.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	11.500			
ORGANIC CARBON, MG/L	4	5.400	22.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, A	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	11.45	6.64	2.0	20.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1407.9	183.0	1090	1625					
STREAMFLOW (CUBIC FT/SEC)	13	167.5	42.3	80	213	12	0.105	16.391	0.455*	39.3
PH (STANDARD UNITS)	10	7.70	0.25	7.3	8.1	10	-0.0002	7.9207	-0.119*	0.27
PHOSPHORUS, TOTAL	12	1.001	0.257	0.71	1.40	12	0.00071	-0.00016	0.507*	0.232
NITRITE + NITRATE, TOTAL	12	1.958	0.696	1.20	3.30	12	0.00112	0.38757	0.293*	0.698
NITROGEN, KJELDAHL, TOTAL	12	2.547	1.123	0.76	4.10	12	0.00152	0.41198	0.247*	1.141
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	10990.0	14707.0	1100	46000	10	54.658	-66159.125	0.697	11188.3
SEDIMENT SUSPENDED	11	108.7	57.1	36	205					
SEDIMENT, CLAY-SILT (PERCENT)	8	71.6	10.9	59	68					
COLIFORM, FECAL (COL/100 ML)	11	282.3	482.4	<1	1400					
STREPTOCOCCI, FECAL (COL/100 ML)	11	163.5	170.9	10	440					
SILICA, DISSOLVED	12	21.08	2.68	16.0	24.0	12	0.0119	4.3919	0.810	1.65
CALCIUM, DISSOLVED	12	93.92	16.33	78.0	120.0	12	0.0734	-9.4633	0.823	9.74
MAGNESIUM, DISSOLVED	12	51.42	5.95	41.0	58.0	12	0.0292	10.3658	0.897	2.75
SODIUM, DISSOLVED	12	141.67	23.29	100.0	170.0	12	0.1190	-25.9040	0.935	8.65
POTASSIUM, DISSOLVED	12	14.25	2.56	10.0	17.0	12	0.0114	-1.8267	0.815	1.56
BICARBONATE, ION	12	280.5	34.9	225	360	12	0.152	66.397	0.797	22.1
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	255.83	37.53	200.0	310.0	12	0.1893	-10.7397	0.923	15.12
CHLORIDE, DISSOLVED	12	199.17	30.88	150.0	240.0	12	0.1563	-20.9094	0.926	12.21
DISSOLVED SOLIDS, SUM OF CONST	12	915.9	129.0	720	1090	12	0.663	-17.046	0.940	46.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	954.6	134.0	753	1150	12	0.669	13.034	0.914	57.1
HARDNESS, TOTAL	12	445.0	62.4	370	540	12	0.308	11.289	0.903	28.2
HARDNESS, NONCARBONATE	12	215.8	39.2	170	280	12	0.175	-31.247	0.820	23.6
TURBIDITY (JTU)	12	29.2	12.8	15	55	12	-0.008	40.521	-0.116*	13.3
FLUORIDE, DISSOLVED	12	0.53	0.09	0.4	0.7	12	0.0000	0.4671	0.097*	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 279

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	1720	1700	1620	1570	1460	1300	1120	1050	917

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
26	11.04	8.77	2.74	94	1.20

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

10171000 -- JORDAN R @ 2100 SO SALT LAKE CITY UTAH

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	10	16	4	9	16
CADMIUM (CD), UG/L	4	0	10	4	0	3
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	1
COPPER (CU), UG/L	4	20	48	4	11	20
IRON (FE), UG/L	4	850	2300	4	10	50
LEAD (PB), UG/L	4	<100	170	4	2	33
MANGANESE (MN), UG/L	4	40	100	4	20	40
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	3	4	1	2
ZINC (ZN), UG/L	4	40	100	4	10	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.20	58.20			
BIOMASS, ASH WT., G/SQ M	3	0.10	48.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	65.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	3.200			
ORGANIC CARBON, MG/L	4	3.800	24.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	17	12.48	7.92	1.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	17	2340.6	749.7	1580	4330					
STREAMFLOW (CUBIC FT/SEC)	17	200.4	225.1	10	680	17	-0.081	391.023	-0.271*	223.7
PH (STANDARD UNITS)	17	8.24	0.42	7.5	8.7	17	0.0001	7.9549	0.213*	0.43
PHOSPHORUS, TOTAL	12	0.054	0.055	0.00	0.20	12	-0.00002	0.09779	-0.288*	0.055
NITRITE + NITRATE, TOTAL	12	0.511	0.257	0.14	0.87	12	0.00014	0.17344	0.478*	0.237
NITROGEN, KJELDAHL, TOTAL	12	0.626	0.209	0.31	0.97	12	0.00010	0.38898	0.414*	0.199
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3472.7	2861.0	740	8300	11	-0.977	5849.758	-0.311*	2866.4
SEDIMENT SUSPENDED	10	175.4	181.4	36	587					
SEDIMENT, CLAY-SILT (PERCENT)	10	82.8	17.3	39	99					
COLIFORM, FECAL (COL/100 ML)	12	59.8	80.1	<1	250					
STREPTOCOCCI, FECAL (COL/100 ML)	12	190.8	415.8	6	1500					
SILICA, DISSOLVED	17	16.18	2.38	13.0	22.0	17	0.0023	10.7788	0.727	1.69
CALCIUM, DISSOLVED	17	80.41	22.46	57.0	140.0	17	0.0270	17.2747	0.900	10.09
MAGNESIUM, DISSOLVED	17	87.65	23.07	66.0	150.0	17	0.0303	16.6526	0.986	4.00
SODIUM, DISSOLVED	17	312.35	133.44	160.0	700.0	17	0.1745	-96.1465	0.981	27.06
POTASSIUM, DISSOLVED	17	7.19	1.58	4.6	11.0	17	0.0018	2.9631	0.857	0.84
BICARBONATE, ION	17	341.4	67.5	175	490	17	0.064	191.304	0.712	49.0
CARBONATE, ION	17	4.5	4.6	0	13	17	0.002	-0.409	0.347*	4.4
SULFATE, DISSOLVED	17	376.47	149.83	220.0	790.0	17	0.1955	-81.0535	0.978	32.22
CHLORIDE, DISSOLVED	17	411.76	170.34	260.0	900.0	17	0.2243	-113.2878	0.987	27.95
DISSOLVED SOLIDS, SUM OF CONST	17	1467.3	523.2	964	2970	17	0.691	-150.053	0.990	75.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	1584.2	651.8	1000	3100	12	0.742	-196.463	0.995	66.0
HARDNESS, TOTAL	17	561.8	147.6	460	970	17	0.193	110.300	0.980	30.4
HARDNESS, NONCARBONATE	17	274.7	113.1	160	550	17	0.137	-46.828	0.910	48.4
TURBIDITY (JTU)	11	16.5	16.4	2	46	11	-0.003	24.672	-0.189*	17.0
FLUORIDE, DISSOLVED	17	0.39	0.10	0.2	0.6	17	0.0001	0.2232	0.533	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%
	5190	4800	4650	4200	2800	2250	2050	1800	1770	1700

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	8.29	6.04	3.80	33	6.08

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	34	4	4	9
CADMIUM (CD), UG/L	4	0	10	4	0	0
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	1
COPPER (CU), UG/L	4	7	10	4	1	4
IRON (FE), UG/L	4	150	1900	4	0	20
LEAD (PB), UG/L	4	8	<100	4	1	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	2	4	0	1
ZINC (ZN), UG/L	4	0	50	4	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	44.60				
BIOMASS, ASH WT., G/SQ M	1	42.40				
CHLOROPHYLL A, MG/SQ M	1	9.800				
CHLOROPHYLL B, MG/SQ M	1	0.400				
ORGANIC CARBON, MG/L	4	2.800	14.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	13.50	8.47	2.0	25.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	634.0	218.7	350	960					
STREAMFLOW (CUBIC FT/SEC)	12	16.3	17.4	0	40	12	-0.076	64.280	-0.948	5.8
PH (STANDARD UNITS)	12	8.43	0.33	8.0	8.9	12	0.0010	7.8266	0.637	0.27
PHOSPHORUS, TOTAL	12	0.137	0.077	0.05	0.31	12	-0.00026	0.30199	-0.736	0.055
NITRITE + NITRATE, TOTAL	12	0.212	0.211	0.00	0.57	12	-0.00088	0.76832	-0.909	0.092
NITROGEN, KJELDAHL, TOTAL	12	0.789	0.391	0.40	1.90	12	-0.00076	1.26982	-0.424*	0.371
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3872.7	3053.5	420	9800	11	0.153	3777.837	0.011*	3218.4
SEDIMENT SUSPENDED	11	74.2	79.9	3	278					
SEDIMENT, CLAY-SILT (PERCENT)	11	63.3	15.6	35	85					
COLIFORM, FECAL (COL/100 ML)	12	163.6	179.5	30	600					
STREPTOCOCCI, FECAL (COL/100 ML)	12	185.4	226.5	17	800					
SILICA, DISSOLVED	12	36.92	5.28	31.0	45.0	12	0.0126	28.9463	0.520*	4.73
CALCIUM, DISSOLVED	12	56.92	13.62	40.0	79.0	12	0.0472	27.0154	0.757	9.33
MAGNESIUM, DISSOLVED	12	17.58	5.60	10.0	24.0	12	0.0226	3.2451	0.883	2.76
SODIUM, DISSOLVED	12	61.00	35.15	21.0	110.0	12	0.1524	-35.5970	0.948	11.76
POTASSIUM, DISSOLVED	12	7.57	2.04	4.2	10.0	12	0.0082	2.3653	0.879	1.02
BICARBONATE, ION	12	296.2	100.6	190	521	12	0.348	75.537	0.757	69.0
CARBONATE, ION	12	10.3	12.5	0	30	12	0.042	-16.413	0.735	8.9
SULFATE, DISSOLVED	12	48.17	34.06	0.0	110.0	12	0.1014	-16.1409	0.651	27.12
CHLORIDE, DISSOLVED	12	43.67	24.74	16.0	86.0	12	0.1071	-24.2309	0.946	8.38
DISSOLVED SOLIDS, SUM OF CONST	12	431.1	156.5	241	638	12	0.676	2.662	0.944	54.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	423.1	149.5	238	615	12	0.661	3.787	0.967	39.7
HARDNESS, TOTAL	12	213.3	54.5	140	290	12	0.211	79.415	0.848	30.3
HARDNESS, NONCARBONATE	12	7.0	24.2	0	64	12	0.034	-14.873	0.311*	24.2
TURBIDITY (JTU)	12	8.4	8.5	1	30	12	-0.027	25.485	-0.692	6.4
FLUORIDE, DISSOLVED	12	1.02	0.40	0.6	1.8	12	0.0016	0.0125	0.867	0.21

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 214

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%
	1010	973	918	681	859	778	649	359	331	304

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	13.41	11.06	2.90	91	2.78

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	7	4	1	7
CADMIUM (CD), UG/L	4	0	10	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	2	10	4	1	3
IRON (FE), UG/L	4	310	1900	4	10	60
LEAD (PB), UG/L	4	6	<100	4	1	8
MANGANESE (MN), UG/L	4	60	790	4	30	770
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	10	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.80	15.50			
BIOMASS, ASH WT., G/SQ M	2	0.90	13.00			
CHLOROPHYLL A, MG/SQ M	2	0.100	1.500			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.100			
ORGANIC CARBON, MG/L	4	5.000	19.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	10	7.50	5.96	0.0	15.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	58.6	2.1	55	61					
STREAMFLOW (CUBIC FT/SEC)	10	6.4	1.2	5	9	9	-0.458	33.140	-0.773	0.8
PH (STANDARD UNITS)	9	7.84	0.18	7.5	8.1	8	-0.0055	8.1340	-0.071*	0.18
PHOSPHORUS, TOTAL	10	0.020	0.008	0.01	0.03	9	0.00000	0.02000	0.000*	0.009
NITRITE + NITRATE, TOTAL	9	0.071	0.053	0.00	0.14	8	0.00088	0.02338	0.035*	0.060
NITROGEN, KJELDAHL, TOTAL	9	0.209	0.091	0.04	0.30	8	-0.02117	1.45367	-0.492*	0.089
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	504.9	338.6	59	890	9	8.484	-32.438	0.053*	354.8
SEDIMENT SUSPENDED	10	29.1	15.9	13	68					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	7.5	10.1	0	30					
STREPTOCOCCI, FECAL (COL/100 ML)	9	49.3	61.3	1	193					
SILICA, DISSOLVED	10	15.90	0.99	15.0	17.0	9	0.2370	1.8994	0.504*	0.90
CALCIUM, DISSOLVED	8	7.31	0.50	6.7	8.1	7	0.1166	0.4468	0.536*	0.48
MAGNESIUM, DISSOLVED	9	0.73	0.25	0.4	1.2	8	-0.0191	1.8816	-0.168*	0.27
SODIUM, DISSOLVED	9	3.43	0.25	3.2	3.9	8	0.0397	1.0637	0.392*	0.22
POTASSIUM, DISSOLVED	9	0.89	0.14	0.7	1.1	8	0.0103	0.2863	0.155*	0.16
BICARBONATE, ION	9	31.9	1.8	29	34	8	0.082	27.318	0.102*	1.9
CARBONATE, ION	7	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	2.73	0.27	2.4	3.1	8	0.0255	1.2158	0.185*	0.29
CHLORIDE, DISSOLVED	10	0.84	0.25	0.5	1.2	9	-0.0344	2.8714	-0.273*	0.27
DISSOLVED SOLIDS, SUM OF CONST	5	47.8	1.3	46	49					
DISSOLVED SOLIDS, RDE 180 DEG C	8	48.3	3.0	44	53	7	-0.207	60.633	-0.144*	3.3
HARDNESS, TOTAL	7	21.1	1.6	19	24	6	0.298	3.691	0.433*	1.7
HARDNESS, NONCARBONATE	6	0.0	0.0	0	0					
TURBIDITY (JTU)	10	3.2	1.5	2	7	9	-0.471	30.789	-0.623*	1.3
FLUORIDE, DISSOLVED	10	0.27	0.05	0.2	0.3	9	0.0136	-0.5320	0.564*	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%
	69	63	62	62	61	60	59	56	56	55

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
351	5.42	6.05	2.79	91	1.32

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	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	0
COPPER (CU), UG/L	4	<10	10	4	0	1
IRON (FE), UG/L	4	420	1500	4	0	100
LEAD (PB), UG/L	4	<100	<100	4	0	4
MANGANESE (MN), UG/L	4	20	80	4	0	10
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	0	10	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.00	3.15			
BIOMASS, ASH WT., G/SQ M	3	0.00	2.54			
CHLOROPHYLL A, MG/SQ M	3	0.000	3.800			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.100			
ORGANIC CARBON, MG/L	3	2.700	3.400			

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: 10/01/75 - 09/30/76

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)	21	23.09	6.56	7.8	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	21	7452.6	1053.3	5200	9200					
STREAMFLOW (CUBIC FT/SEC)	21	139.9	38.9	91	249	21	-0.011	219.519	-0.289*	38.2
PH (STANDARD UNITS)	20	7.73	0.20	7.3	8.0	20	0.0001	7.0889	0.441*	0.19
PHOSPHORUS, TOTAL	13	1.579	0.527	0.62	2.20	13	-0.00011	2.38242	-0.236*	0.535
NITRITE + NITRATE, TOTAL	13	1.973	2.406	0.00	6.00	13	-0.00061	6.27359	-0.277*	2.415
NITROGEN, KJELDAHL, TOTAL	13	7.178	3.998	0.32	15.00	13	0.00054	3.35655	0.148*	4.129
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	46181.8	43370.0	12000	130000	11	20.795	-101493.313	0.574*	37421.7
SEDIMENT SUSPENDED	13	149.8	105.9	45	429					
SEDIMENT, CLAY-SILT (PERCENT)	4	46.8	23.2	21	75					
COLIFORM, FECAL (COL/100 ML)	18	1589678.0	2047298.0	1	6700000					
STREPTOCOCCI, FECAL (COL/100 ML)	17	530411.9	937090.1	2	3600000					
SILICA, DISSOLVED	20	20.00	5.10	12.0	28.0	20	0.0015	9.1478	0.297*	5.00
CALCIUM, DISSOLVED	20	263.40	20.92	220.0	310.0	20	0.0114	178.6959	0.563	17.75
MAGNESIUM, DISSOLVED	20	139.20	15.22	110.0	163.0	20	0.0093	70.1721	0.632	12.12
SODIUM, DISSOLVED	20	1190.50	153.40	930.0	1500.0	20	0.0854	560.0798	0.573	129.15
POTASSIUM, DISSOLVED	20	68.85	28.14	33.0	120.0	20	0.0074	14.5395	0.269*	27.84
BICARBONATE, ION	20	300.5	39.8	232	381	20	-0.001	305.047	-0.016*	40.9
CARBONATE, ION	20	0.0	0.0	0	0	20	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	20	837.50	59.39	730.0	940.0	20	0.0286	626.4041	0.496	53.00
CHLORIDE, DISSOLVED	20	1997.50	256.98	1600.0	2600.0	20	0.1539	861.4443	0.616	207.88
DISSOLVED SOLIDS, SUM OF CONST	20	4677.5	465.3	3910	5730	20	0.293	2510.878	0.649	363.5
DISSOLVED SOLIDS, ROE 180 DEG C	20	4851.0	519.4	3790	5850	20	0.311	2551.484	0.617	419.8
HARDNESS, TOTAL	20	1236.0	115.7	1000	1420	20	0.072	707.906	0.637	91.7
HARDNESS, NONCARBONATE	20	975.0	99.1	780	1150	20	0.061	522.660	0.637	78.5
TURBIDITY (JTU)	13	14.6	7.9	3	30	13	0.001	7.809	0.134*	8.2
FLUORIDE, DISSOLVED	20	0.71	0.23	0.0	1.0	20	0.0001	0.0868	0.377*	0.22

*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%
	8890	8370	7930	7330	6950	6280	5460	4250	3780	2390

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
276	24.52	7.24	2.44	64	3.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	9	22	4	7	23
CADMIUM (CD), UG/L	4	2	30	4	0	95
CHROMIUM (CR), UG/L	4	10	60	4	0	20
COBALT (CO), UG/L	4	0	330	4	0	2
COPPER (CU), UG/L	4	20	78	4	3	16
IRON (FE), UG/L	4	590	3700	13	50	250
LEAD (PB), UG/L	4	51	200	4	2	58
MANGANESE (MN), UG/L	4	170	300	4	150	190
MERCURY (HG), UG/L	4	0.0	0.4	4	0.0	0.4
SELENIUM (SE), UG/L	4	0	3	4	0	3
ZINC (ZN), UG/L	4	100	250	4	30	340
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	32.000	35.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	16	20.02	5.68	12.8	28.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	534.3	47.5	460	610					
STREAMFLOW (CUBIC FT/SEC)	3	27.0	B.0	19	35					
PH (STANDARD UNITS)	16	7.96	0.21	7.6	8.3	16	0.0012	7.3286	0.266*	0.21
PHOSPHORUS, TOTAL	12	0.347	0.091	0.20	0.55	12	0.00070	-0.02870	0.330*	0.090
NITRITE + NITRATE, TOTAL	12	1.535	0.331	0.92	2.30	12	0.00000	1.53322	0.000*	0.347
NITROGEN, KJELDAHL, TOTAL	12	0.932	0.753	0.17	2.40	12	0.00931	-4.09420	0.535*	0.667
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1794.1	1729.6	0	5300	11	18.222	-8070.863	0.475*	1604.6
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	179.6	573.5	0	>2000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	153.5	212.2	10	700					
SILICA, DISSOLVED	12	23.75	1.60	22.0	26.0	12	-0.0241	36.7788	-0.652	1.27
CALCIUM, DISSOLVED	16	46.94	2.95	41.0	51.0	16	0.0302	30.8279	0.485*	2.67
MAGNESIUM, DISSOLVED	16	9.79	0.83	8.4	11.0	16	0.0127	2.9880	0.727	0.59
SODIUM, DISSOLVED	16	50.00	3.44	45.0	58.0	16	0.0359	30.8153	0.495*	3.10
POTASSIUM, DISSOLVED	16	6.24	0.89	5.2	8.4	16	0.0123	-0.3603	0.660	0.69
BICARBONATE, ION	14	203.9	8.4	190	217	14	0.135	131.417	0.820	5.0
CARBONATE, ION	14	0.0	0.0	0	0	14	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	16	56.88	16.95	49.0	120.0	16	-0.0209	68.0463	-0.059*	17.52
CHLORIDE, DISSOLVED	16	32.13	2.42	28.0	38.0	16	0.0335	14.2272	0.658	1.89
DISSOLVED SOLIDS, SUM OF CONST	10	323.0	14.4	303	349	10	0.210	208.697	0.687	11.1
DISSOLVED SOLIDS, RDE 180 DEG C	15	322.5	31.4	246	389	15	0.438	88.074	0.683	23.8
HARDNESS, TOTAL	16	157.1	10.0	140	170	16	0.134	85.660	0.637	7.9
HARDNESS, NONCARBONATE	14	0.0	0.0	0	0	14	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	15	9.3	10.4	1	44	15	-0.039	30.448	-0.186*	10.6
FLUORIDE, DISSOLVED	15	0.52	0.09	0.3	0.7	15	-0.0009	1.0122	-0.480*	0.09

*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%
	1580	1400	887	587	564	533	514	437	280	177

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
345	18.55	4.40	2.37	21	6.10

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	2	6	4	3	5
CADMIUM (CD), UG/L	4	<10	<10	4	1	2
CHROMIUM (CR), UG/L	4	0	80	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	<10	20	4	2	4
IRON (FE), UG/L	4	410	1500	4	20	90
LEAD (PB), UG/L	4	<100	<100	4	1	6
MANGANESE (MN), UG/L	4	60	280	4	20	50
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	7	50	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	19.00	32.00			
BIOMASS, ASH WT., G/SQ M	2	15.00	27.00			
CHLOROPHYLL A, MG/SQ M	2	3.900	13.000			
CHLOROPHYLL B, MG/SQ M	2	0.400	0.600			
ORGANIC CARBON, MG/L	4	2.100	13.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	199	12.76	6.56	1.0	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	199	295.0	23.2	229	350					
STREAMFLOW (CUBIC FT/SEC)	195	532.6	127.0	5	805	195	0.840	285.207	0.153	125.8
PH (STANDARD UNITS)	12	8.37	0.35	7.7	8.9	12	-0.0065	10.3819	-0.385*	0.34
PHOSPHORUS. TOTAL	11	0.073	0.032	0.04	0.15	11	0.00097	-0.22891	0.624	0.027
NITRITE + NITRATE, TOTAL	12	0.075	0.063	0.01	0.20	12	0.00094	-0.21306	0.304*	0.063
NITROGEN, KJELDAHL, TOTAL	11	0.613	0.497	0.18	2.00	11	-0.00981	3.65089	-0.408*	0.478
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5902.5	6132.9	630	22000	12	17.379	551.156	0.058*	6421.3
SEDIMENT SUSPENDED	13	30.1	15.8	6	53					
SEDIMENT, CLAY-SILT (PERCENT)	11	78.2	11.2	47	91					
COLIFORM, FECAL (COL/100 ML)	12	10.4	19.8	0	70					
STREPTOCOCCI, FECAL (COL/100 ML)	11	27.2	44.0	0	143					
SILICA. DISSOLVED	12	19.67	3.14	14.0	24.0	12	0.0966	-10.0843	0.630	2.56
CALCIUM, DISSOLVED	12	22.83	1.64	21.0	27.0	12	0.0456	8.7904	0.569*	1.42
MAGNESIUM, DISSOLVED	12	4.45	0.41	3.8	5.4	12	0.0074	2.1694	0.370*	0.40
SODIUM, DISSOLVED	12	31.83	2.98	28.0	37.0	12	0.1029	0.1397	0.708	2.21
POTASSIUM, DISSOLVED	12	3.98	0.34	3.4	4.5	12	0.0109	0.6145	0.669	0.26
BICARBONATE, ION	11	128.2	15.4	95	145	11	0.375	13.433	0.506*	14.0
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	22.42	4.78	16.0	33.0	12	0.0228	15.3952	0.098*	4.99
CHLORIDE, DISSOLVED	12	13.50	1.68	11.0	16.0	12	0.0416	0.6782	0.509*	1.52
DISSOLVED SOLIDS, SUM OF CONST	11	182.5	15.4	149	206	11	0.552	13.194	0.746	10.8
DISSOLVED SOLIDS, ROE 180 DEG C	11	184.2	12.5	162	201	11	0.435	50.928	0.724	9.1
HARDNESS, TOTAL	12	75.3	5.0	68	87	12	0.141	31.817	0.576*	4.3
HARDNESS, NONCARBONATE	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	8.8	2.2	3	12	12	-0.013	12.774	-0.119*	2.3
FLUORIDE, DISSOLVED	12	0.58	0.12	0.4	0.8	12	0.0033	-0.4213	0.560*	0.10

*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%
	323	308	305	301	299	295	273	262	255	251

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	12.81	8.46	2.88	94	1.54

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	24	35	4	5	31
CADMIUM (CD), UG/L	4	0	<10	4	1	1
CHROMIUM (CR), UG/L	4	0	18	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	10	20	4	4	14
IRON (FE), UG/L	4	490	1500	4	10	70
LEAD (PB), UG/L	4	<100	<100	4	1	7
MANGANESE (MN), UG/L	4	30	70	4	0	30
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	40	50	4	10	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	3.31				
BIOMASS, ASH WT., G/SQ M	1	2.54				
CHLOROPHYLL A, MG/SQ M	1	0.000				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	2.400	14.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	13.32	7.97	4.0	28.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	577.6	102.8	381	779					
STREAMFLOW (CUBIC FT/SEC)	12	65.8	31.7	24	114	12	-0.021	77.658	-0.067*	33.2
PH (STANDARD UNITS)	9	8.43	0.12	8.2	8.6	9	0.0005	8.1224	0.522*	0.11
PHOSPHORUS, TOTAL	12	0.207	0.135	0.10	0.57	12	-0.00068	0.60281	-0.523*	0.120
NITRITE + NITRATE, TOTAL	12	0.244	0.197	0.05	0.57	12	0.00055	-0.07263	0.286*	0.198
NITROGEN, KJELDAHL, TOTAL	12	0.639	0.271	0.15	1.20	12	-0.00129	1.38251	-0.487*	0.249
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	6860.8	11190.7	930	41000	12	-72.176	48548.695	-0.663	8788.2
SEDIMENT SUSPENDED	11	121.0	128.0	34	467					
SEDIMENT, CLAY-SILT (PERCENT)	1	94.0	0.0	94						
COLIFORM, FECAL (COL/100 ML)	11	121.1	248.3	1	860					
STREPTOCOCCI, FECAL (COL/100 ML)	11	184.9	218.5	16	613					
SILICA, DISSOLVED	4	26.00	1.83	24.0	28.0					
CALCIUM, DISSOLVED	4	50.50	5.80	46.0	59.0					
MAGNESIUM, DISSOLVED	4	12.00	1.41	11.0	14.0					
SODIUM, DISSOLVED	4	73.75	8.30	67.0	85.0					
POTASSIUM, DISSOLVED	4	6.15	0.66	5.6	7.1					
BICARBONATE, ION	4	246.8	13.9	234	262					
CARBONATE, ION	3	2.7	4.6	0	8					
SULFATE, DISSOLVED	4	91.75	19.29	78.0	120.0					
CHLORIDE, DISSOLVED	4	28.25	7.41	22.0	39.0					
DISSOLVED SOLIDS, SUM OF CONST	4	413.0	48.3	382	485					
DISSOLVED SOLIDS, ROE 180 DEG C	4	408.0	66.1	362	503					
HARDNESS, TOTAL	4	177.5	22.2	160	210					
HARDNESS, NONCARBONATE	4	0.0	0.0	0	0					
TURBIDITY (JTU)	12	27.5	36.3	2	120	12	-0.148	113.199	-0.420*	34.6
FLUORIDE, DISSOLVED	4	0.90	0.00	0.9	0.9					

*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%
	748	693	671	635	621	599	535	449	414	379

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	15.03	11.47	2.97	90	2.67

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	20	28	4	20	28
CADMIUM (CD), UG/L	3	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	0	<50	4	0	2
COPPER (CU), UG/L	4	<10	20	4	1	3
IRON (FE), UG/L	4	780	6400	4	0	20
LEAD (PB), UG/L	4	<100	<100	4	0	1
MANGANESE (MN), UG/L	4	80	240	4	20	130
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.2
SELENIUM (SE), UG/L	4	0	1	4	0	0
ZINC (ZN), UG/L	4	20	40	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	11.50				
BIOMASS, ASH WT., G/SQ M	1	6.23				
CHLOROPHYLL A, MG/SQ M	1	1.900				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	4	3.900	6.900			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.67	7.84	0.0	22.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	470.5	144.3	275	675					
STREAMFLOW (CUBIC FT/SEC)	13	97.2	99.0	0	274	12	-0.645	406.736	-0.923	40.8
PH (STANDARD UNITS)	9	8.38	0.21	8.1	8.6	9	-0.0004	8.5875	-0.279*	0.22
PHOSPHORUS, TOTAL	12	0.228	0.079	0.10	0.37	12	-0.00037	0.40139	-0.669	0.062
NITRITE + NITRATE, TOTAL	12	0.252	0.328	0.00	0.93	12	-0.00144	0.93060	-0.635	0.266
NITROGEN, KJELDAHL, TOTAL	12	0.689	0.423	0.29	1.70	12	-0.00026	0.80939	-0.087*	0.441
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5314.2	5115.4	870	18000	12	1.035	4827.113	0.029*	5362.7
SEDIMENT SUSPENDED	12	21.7	15.7	6	59					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	15.6	31.9	0	110					
STREPTOCOCCI, FECAL (COL/100 ML)	11	41.5	73.9	6	260					
SILICA, DISSOLVED	5	26.00	2.92	23.0	30.0					
CALCIUM, DISSOLVED	5	49.40	11.46	33.0	63.0					
MAGNESIUM, DISSOLVED	5	11.42	3.18	7.1	15.0					
SODIUM, DISSOLVED	5	48.80	13.10	29.0	63.0					
POTASSIUM, DISSOLVED	5	5.36	1.05	3.6	6.3					
BICARBONATE, ION	5	173.6	30.1	121	195					
CARBONATE, ION	5	0.0	0.0	0	0					
SULFATE, DISSOLVED	5	118.00	43.24	60.0	170.0					
CHLORIDE, DISSOLVED	5	13.16	2.55	9.8	15.0					
DISSOLVED SOLIDS, SUM OF CONST	5	358.4	89.5	226	455					
DISSOLVED SOLIDS, ROE 180 DEG C	5	361.0	86.0	228	439					
HARDNESS, TOTAL	5	170.0	42.4	110	220					
HARDNESS, NONCARBONATE	5	28.0	22.4	12	62					
TURBIDITY (JTU)	12	5.2	2.7	1	10	12	-0.007	8.542	-0.390*	2.6
FLUORIDE, DISSOLVED	5	0.52	0.08	0.4	0.6					

*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%
	686	675	667	649	606	398	332	300	274	247

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	10.12	9.24	2.90	92	2.05

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	4	13	5	2	13
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	0	<50	5	0	0
COPPER (CU), UG/L	5	0	20	5	1	4
IRON (FE), UG/L	5	320	1600	5	20	70
LEAD (PB), UG/L	5	<100	<100	5	0	5
MANGANESE (MN), UG/L	5	40	240	4	10	70
MERCURY (HG), UG/L	5	0.2	1.7	5	0.0	0.2
SELENIUM (SE), UG/L	5	0	1	5	0	0
ZINC (ZN), UG/L	5	10	20	5	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	100.00				
BIOMASS, ASH WT., G/SQ M	1	97.00				
CHLOROPHYLL A, MG/SQ M	1	4.700				
CHLOROPHYLL B, MG/SQ M	1	0.200				
ORGANIC CARBON, MG/L	5	1.800	7.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	10.58	6.62	2.5	19.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	884.2	132.3	787	1170					
STREAMFLOW (CUBIC FT/SEC)	12	203.1	184.8	12	546	12	-0.146	333.098	-0.107*	192.7
PH (STANDARD UNITS)	11	8.70	0.27	8.2	9.3	11	-0.0006	9.2045	-0.284*	0.27
PHOSPHORUS, TOTAL	11	0.078	0.033	0.05	0.17	11	-0.00001	0.08808	-0.047*	0.034
NITRITE + NITRATE, TOTAL	11	0.025	0.012	0.01	0.04	11	-0.00003	0.05206	-0.357*	0.012
NITROGEN, KJELDAHL, TOTAL	11	0.683	0.357	0.08	1.20	11	-0.00209	2.55454	-0.824	0.213
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1057.3	1908.8	8	7000	12	-1.575	2461.490	-0.112*	1989.4
SEDIMENT SUSPENDED	12	42.4	22.0	19	88					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	1.0	2.4	0	7					
STREPTOCOCCI, FECAL (COL/100 ML)	12	17.0	16.8	2	47					
SILICA, DISSOLVED	4	29.50	2.38	28.0	33.0					
CALCIUM, DISSOLVED	4	42.75	1.26	41.0	44.0					
MAGNESIUM, DISSOLVED	4	16.00	1.41	15.0	18.0					
SODIUM, DISSOLVED	4	120.00	20.00	110.0	150.0					
POTASSIUM, DISSOLVED	4	16.00	1.41	14.0	17.0					
BICARBONATE, ION	4	311.3	8.5	303	323					
CARBONATE, ION	3	8.3	2.1	6	10					
SULFATE, DISSOLVED	4	64.25	10.69	51.0	77.0					
CHLORIDE, DISSOLVED	4	81.75	32.27	62.0	130.0					
DISSOLVED SOLIDS, SUM OF CONST	4	530.5	62.7	494	624					
DISSOLVED SOLIDS, ROE 180 DEG C	4	536.0	57.6	490	620					
HARDNESS, TOTAL	4	172.5	9.6	160	180					
HARDNESS, NONCARBONATE	4	0.0	0.0	0	0					
TURBIDITY (JTU)	12	13.1	3.3	10	20	12	0.007	6.462	0.301*	3.3
FLUORIDE, DISSOLVED	3	0.77	0.06	0.7	0.8					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 365

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1220	1210	1130	1000	842	828	817	792	760	730

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	11.05	7.89	2.49	97	0.93

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	31	45	4	30	40
CADMIUM (CD), UG/L	4	<10	10	4	0	0
CHROMIUM (CR), UG/L	4	0	30	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	10	20	4	1	4
IRON (FE), UG/L	4	660	870	4	10	20
LEAD (PB), UG/L	4	<100	100	4	0	1
MANGANESE (MN), UG/L	4	20	30	4	0	10
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	1	1	4	1	1
ZINC (ZN), UG/L	4	10	60	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	18.00	38.00			
BIOMASS, ASH WT., G/SQ M	3	16.00	25.80			
CHLOROPHYLL A, MG/SQ M	3	5.100	51.000			
CHLOROPHYLL B, MG/SQ M	3	0.500	4.300			
ORGANIC CARBON, MG/L	3	4.600	8.700			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	22	9.34	5.66	1.5	18.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	22	94.3	11.2	73	112					
STREAMFLOW (CUBIC FT/SEC)	22	654.4	201.8	373	1070	22	-15.455	2111.313	-0.854	107.5
PH (STANDARD UNITS)	15	8.27	0.15	8.0	8.6	15	-0.0022	8.4729	-0.142*	0.16
PHOSPHORUS, TOTAL	22	0.015	0.016	0.00	0.07	22	-0.00035	0.04839	-0.244*	0.016
NITRITE + NITRATE, TOTAL	21	0.044	0.035	0.00	0.11	21	0.00191	-0.13646	0.631	0.028
NITROGEN, KJELDAHL, TOTAL	20	0.195	0.117	0.00	0.40	20	0.00030	0.16686	0.029*	0.120
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	836.4	242.3	350	1200	11	5.286	327.917	0.270*	245.9
SEDIMENT SUSPENDED	12	6.8	4.8	2	20					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	22	1.7	4.0	0	18					
STREPTOCOCCI, FECAL (COL/100 ML)	20	3.9	4.5	0	12					
SILICA, DISSOLVED	4	14.25	1.89	13.0	17.0					
CALCIUM, DISSOLVED	4	9.12	1.17	7.4	10.0					
MAGNESIUM, DISSOLVED	5	2.88	0.54	2.0	3.4					
SODIUM, DISSOLVED	4	5.55	1.69	3.3	7.4					
POTASSIUM, DISSOLVED	4	1.57	0.34	1.1	1.9					
BICARBONATE, ION	4	48.5	11.4	32	57					
CARBONATE, ION	3	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	3.55	1.64	1.4	5.4					
CHLORIDE, DISSOLVED	4	2.95	1.50	1.2	4.7					
DISSOLVED SOLIDS, SUM OF CONST	4	63.8	12.7	45	73					
DISSOLVED SOLIDS, RDE 180 DEG C	4	66.5	12.7	50	81					
HARDNESS, TOTAL	4	34.5	5.2	27	39					
HARDNESS, NONCARBONATE	4	0.0	0.0	0	0					
TURBIDITY (JTU)	11	2.4	1.5	1	6	11	-0.019	4.228	-0.160*	1.6
FLUORIDE, DISSOLVED	4	0.10	0.08	0.0	0.2					

*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%
	108	106	105	104	100	96	90	81	77	74

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
357	8.50	6.81	2.63	90	1.61

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	2
CADMIUM (CD), UG/L	4	0	<10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	0
COBALT (CO), UG/L	4	0	<50	4	0	2
COPPER (CU), UG/L	4	<10	10	4	0	2
IRON (FE), UG/L	22	100	700	3	20	30
LEAD (PB), UG/L	4	<100	<100	4	0	2
MANGANESE (MN), UG/L	4	20	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	0		
ZINC (ZN), UG/L	4	10	100	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	2.70	16.60			
BIOMASS, ASH WT., G/SQ M	2	0.90	13.60			
CHLOROPHYLL A, MG/SQ M	2	7.400	22.400			
CHLOROPHYLL B, MG/SQ M	2	0.500	1.800			
ORGANIC CARBON, MG/L	21	0.800	7.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.29	7.19	0.0	21.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	278.8	45.2	226	392					
STREAMFLOW (CUBIC FT/SEC)	12	381.4	149.4	194	594	12	-0.361	481.946	-0.109*	155.7
PH (STANDARD UNITS)	11	8.41	0.22	8.1	8.7	11	-0.0014	8.8076	-0.310*	0.22
PHOSPHORUS, TOTAL	12	0.301	0.063	0.20	0.40	12	0.00043	0.18170	0.308*	0.063
NITRITE + NITRATE, TOTAL	11	0.528	0.174	0.24	0.74	11	0.00124	0.18675	0.331*	0.173
NITROGEN, KJELDAHL, TOTAL	11	0.721	0.315	0.23	1.20	11	-0.00202	1.28006	-0.299*	0.317
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8316.7	7842.1	2200	31000	12	-25.076	15308.563	-0.145*	8138.2
SEDIMENT SUSPENDED	12	24.2	13.6	9	54					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	12.5	10.2	0	30					
STREPTOCOCCI, FECAL (COL/100 ML)	10	34.7	39.7	9	140					
SILICA, DISSOLVED	9	17.22	1.92	13.0	19.0	9	0.0105	14.3943	0.262*	1.98
CALCIUM, DISSOLVED	9	17.67	1.12	17.0	20.0	9	0.0189	12.5890	0.810	0.70
MAGNESIUM, DISSOLVED	9	6.84	0.63	6.1	7.9	9	0.0091	4.4047	0.690	0.49
SODIUM, DISSOLVED	9	23.44	7.13	18.0	42.0	9	0.1477	-16.2444	0.993	0.87
POTASSIUM, DISSOLVED	9	3.53	0.53	3.1	4.8	9	0.0101	0.8206	0.914	0.23
BICARBONATE, ION	9	92.1	12.7	80	123	9	0.253	24.100	0.956	4.0
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	21.78	3.60	18.0	29.0	9	0.0574	6.3613	0.764	2.48
CHLORIDE, DISSOLVED	9	20.89	7.03	16.0	39.0	9	0.1434	-17.6580	0.979	1.55
DISSOLVED SOLIDS, SUM OF CONST	9	157.1	25.3	137	223	9	0.524	16.152	0.993	3.1
DISSOLVED SOLIDS, ROE 180 DEG C	9	164.1	26.1	145	232	9	0.541	18.679	0.994	3.0
HARDNESS, TOTAL	9	72.1	4.9	68	82	9	0.081	50.209	0.800	3.1
HARDNESS, NONCARBONATE	9	0.9	1.7	0	5	9	-0.010	3.640	-0.290*	1.7
TURBIDITY (JTU)	12	6.8	4.2	1	15	12	0.013	3.178	0.139*	4.3
FLUORIDE, DISSOLVED	9	0.16	0.07	0.1	0.3	9	0.0003	0.0618	0.230*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.06	9.50	2.84	89	2.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	15	4	7	14
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	3	0	0	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	2
COPPER (CU), UG/L	4	10	30	4	1	2
IRON (FE), UG/L	4	290	1500	4	30	60
LEAD (PB), UG/L	4	0	<100	4	0	3
MANGANESE (MN), UG/L	4	40	130	4	30	40
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	110	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	20.70	280.00			
BIOMASS, ASH WT., G/SQ M	3	19.10	260.00			
CHLOROPHYLL A, MG/SQ M	3	32.100	100.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	2.500			
ORGANIC CARBON, MG/L	5	2.800	7.600			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.29	10.27	0.0	30.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	299.3	64.1	186	400					
STREAMFLOW (CUBIC FT/SEC)	12	20.3	19.1	2	62	12	-0.203	81.062	-0.681	14.7
PH (STANDARD UNITS)	11	8.66	0.30	8.2	9.1	11	0.0006	8.4827	0.133*	0.32
PHOSPHORUS, TOTAL	12	0.237	0.404	0.05	1.50	12	0.00249	-0.50956	0.395*	0.390
NITRITE + NITRATE, TOTAL	11	0.098	0.112	0.00	0.34	11	0.00015	0.05282	0.090*	0.118
NITROGEN, KJELDAHL, TOTAL	11	1.019	1.281	0.28	3.70	11	-0.00252	1.77341	-0.132*	1.339
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2323.3	1420.1	370	5200	12	-0.554	2489.062	-0.025*	1469.0
SEDIMENT SUSPENDED	12	146.6	414.8	4	1460					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	10	1620.6	5052.5	0	16000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	1726.0	5399.9	1	18000					
SILICA, DISSOLVED	11	30.00	4.98	23.0	38.0	11	0.0439	16.9352	0.590*	4.24
CALCIUM, DISSOLVED	12	23.58	6.11	14.0	35.0	12	0.0791	-0.0822	0.829	3.58
MAGNESIUM, DISSOLVED	12	7.62	1.60	4.9	11.0	12	0.0204	1.5178	0.726	1.30
SODIUM, DISSOLVED	12	25.92	7.57	15.0	40.0	12	0.1123	-7.6890	0.950	2.48
POTASSIUM, DISSOLVED	12	3.61	1.13	2.2	5.6	12	0.0147	-0.7910	0.835	0.65
BICARBONATE, ION	10	129.4	29.2	81	186	10	0.452	-0.297	0.974	7.0
CARBONATE, ION	9	0.1	0.3	0	1	9	-0.001	0.492	-0.266*	0.3
SULFATE, DISSOLVED	12	21.67	6.04	12.0	33.0	12	0.0813	-2.6533	0.863	3.20
CHLORIDE, DISSOLVED	12	11.24	2.90	5.7	16.0	12	0.0328	1.4336	0.724	2.10
DISSOLVED SOLIDS, SUM OF CONST	9	181.4	39.7	120	260	9	0.594	12.678	0.986	7.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	193.2	39.5	127	260	12	0.577	20.478	0.935	14.7
HARDNESS, TOTAL	12	89.5	21.3	55	130	12	0.268	9.387	0.804	13.3
HARDNESS, NONCARBONATE	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	11	64.3	177.9	1	600	11	0.902	-205.987	0.341*	176.4
FLUORIDE, DISSOLVED	12	0.90	0.24	0.6	1.5	12	0.0027	0.0789	0.718	0.18

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 338

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%
	424	408	394	360	324	287	260	233	203	182

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
338	13.25	12.56	2.89	91	2.78

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

10352500 — MC DERMITT C NR MC DERMITT, NV

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	9	16	4	9	12
CADMIUM (CD), UG/L	4	0	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	0	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	0	20	4	0	2
IRON (FE), UG/L	4	120	3200	3	20	60
LEAD (PB), UG/L	4	<100	<100	4	0	9
MANGANESE (MN), UG/L	4	10	90	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	0	20	4	0	2
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	1.10	3.60			
BIOMASS, ASH WT., G/SQ M	3	0.80	3.00			
CHLOROPHYLL A, MG/SQ M	3	1.400	2.900			
CHLOROPHYLL B, MG/SQ M	3	0.100	0.200			
ORGANIC CARBON, MG/L	4	2.300	5.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	11	8.46	7.93	0.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	77.3	11.7	54	90					
STREAMFLOW (CUBIC FT/SEC)	11	115.5	99.4	44	359	11	-5.897	571.226	-0.693	75.5
PH (STANDARD UNITS)	10	7.95	0.60	7.1	8.8	10	-0.0078	8.5434	-0.152*	0.63
PHOSPHORUS, TOTAL	11	0.070	0.050	0.02	0.15	11	-0.00252	0.26486	-0.594*	0.042
NITRITE + NITRATE, TOTAL	11	0.186	0.108	0.03	0.33	11	0.00448	-0.15979	0.484*	0.100
NITROGEN, KJELDAHL, TOTAL	11	0.306	0.210	0.14	0.68	11	-0.00490	0.68525	-0.273*	0.212
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	1936.3	2861.6	310	8900	8	88.523	-4924.273	0.394*	2841.2
SEDIMENT SUSPENDED	11	25.5	27.9	5	80					
SEDIMENT, CLAY-SILT (PERCENT)	7	73.6	9.0	67	93					
COLIFORM, FECAL (COL/100 ML)	10	34.5	65.9	<1	200					
STREPTOCOCCI, FECAL (COL/100 ML)	10	60.7	80.3	1	208					
SILICA, DISSOLVED	11	23.18	2.93	16.0	26.0	11	0.2334	5.1433	0.932	1.12
CALCIUM, DISSOLVED	11	8.01	0.98	5.8	9.0	11	0.0596	3.4000	0.714	0.72
MAGNESIUM, DISSOLVED	11	3.06	0.64	2.1	4.5	11	0.0403	-0.0468	0.739	0.45
SODIUM, DISSOLVED	11	4.56	0.86	3.2	5.9	11	0.0625	-0.2688	0.850	0.48
POTASSIUM, DISSOLVED	11	1.29	0.33	0.8	1.9	11	0.0004	1.2611	0.014*	0.35
BICARBONATE, ION	11	46.8	7.3	33	55	11	0.597	0.679	0.955	2.3
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	2.95	1.65	1.6	5.7	11	0.0203	1.3834	0.144*	1.72
CHLORIDE, DISSOLVED	11	0.86	0.60	0.0	1.8	11	-0.0021	1.0274	-0.041*	0.63
DISSOLVED SOLIDS, SUM OF CONST	11	67.2	8.9	49	79	11	0.719	11.645	0.943	3.1
DISSOLVED SOLIDS, ROE 180 DEG C	11	69.1	7.4	57	76	11	0.340	42.824	0.540*	6.5
HARDNESS, TOTAL	11	32.6	4.0	25	41	11	0.303	9.237	0.883	2.0
HARDNESS, NONCARBONATE	11	0.1	0.3	0	1	11	-0.005	0.446	-0.178*	0.3
TURBIDITY (JTU)	11	8.6	8.9	1	29	11	-0.570	52.700	-0.752	6.2
FLUORIDE, DISSOLVED	11	0.13	0.09	0.1	0.4	11	0.0028	-0.0890	0.361*	0.09

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 189

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	168	102	100	87	84	80	74	61	55	51

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	1	4	0	0
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	2
COPPER (CU), UG/L	4	<10	30	4	2	3
IRON (FE), UG/L	4	250	3800	4	20	130
LEAD (PB), UG/L	4	<100	<100	4	0	2
MANGANESE (MN), UG/L	4	10	90	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	10	50	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	5.31	78.00			
BIOMASS, ASH WT., G/SQ M	4	4.42	60.00			
CHLOROPHYLL A, MG/SQ M	4	10.200	32.000			
CHLOROPHYLL B, MG/SQ M	4	0.600	3.400			
ORGANIC CARBON, MG/L	4	1.800	4.100			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	46	15.70	4.53	8.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	46	611.5	242.8	500	1320					
STREAMFLOW (CUBIC FT/SEC)	40	183.6	96.5	38	347	38	-0.310	437.106	-0.775	63.3
PH (STANDARD UNITS)	24	7.79	0.14	7.5	8.1	24	0.0001	7.6876	0.233*	0.14
PHOSPHORUS, TOTAL	13	2.336	1.731	0.78	5.10	13	0.00587	-2.59463	0.899	0.793
NITRITE + NITRATE, TOTAL	14	5.171	3.561	1.50	11.00	14	0.00975	-3.20661	0.723	2.561
NITROGEN, KJELDAHL, TOTAL	14	4.314	2.873	1.30	13.00	14	0.00797	-2.53239	0.732	2.036
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	63872.2	182317.1	750	550000	9	191.752	-91894.188	0.311*	185215.3
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	458.8	431.0	20	1350					
STREPTOCOCCI, FECAL (COL/100 ML)	11	438.0	280.6	0	1010					
SILICA, DISSOLVED	14	19.26	6.88	8.6	28.0	14	0.0224	0.0423	0.858	3.68
CALCIUM, DISSOLVED	24	66.88	24.09	40.0	120.0	24	0.0914	-8.9377	0.971	5.84
MAGNESIUM, DISSOLVED	24	17.79	4.85	13.0	29.0	24	0.0182	2.6862	0.962	1.35
SODIUM, DISSOLVED	24	79.71	25.81	52.0	120.0	24	0.0987	-2.1735	0.979	5.34
POTASSIUM, DISSOLVED	24	7.01	2.56	3.9	13.0	24	0.0078	0.5392	0.782	1.63
BICARBONATE, ION	23	212.1	64.5	140	353	23	0.241	9.639	0.956	19.4
CARBONATE, ION	23	0.0	0.0	0	0	23	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	24	94.63	32.84	54.0	160.0	24	0.1241	-8.3649	0.968	8.41
CHLORIDE, DISSOLVED	24	92.04	28.91	60.0	150.0	24	0.1103	0.5303	0.977	6.28
DISSOLVED SOLIDS, SUM OF CONST	13	540.8	175.9	336	838	13	0.661	-41.030	0.983	33.3
DISSOLVED SOLIDS, ROE 180 DEG C	45	499.3	154.2	320	836	45	0.624	-10.469	0.984	28.1
HARDNESS, TOTAL	24	240.3	79.5	150	420	24	0.302	-10.645	0.974	18.5
HARDNESS, NONCARBONATE	23	70.3	30.4	37	130	23	0.103	-16.624	0.872	15.2
TURBIDITY (JTU)	24	71.7	137.8	15	700	24	0.239	-126.936	0.445	126.2
FLUORIDE, DISSOLVED	24	0.57	0.28	0.2	1.2	24	0.0009	-0.1571	0.809	0.17

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 361

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	1230	1160	1130	1100	1080	783	621	569	559	534

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
329	16.40	6.07	2.83	88	1.64

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	2	12	4	2	4
CADMIUM (CD), UG/L	6	0	<10	4	1	30
CHROMIUM (CR), UG/L	6	4	20	4	0	10
COBALT (CO), UG/L	6	<50	<50	4	1	2
COPPER (CU), UG/L	6	10	30	4	5	8
IRON (FE), UG/L	4	2400	6100	14	10	1700
LEAD (PB), UG/L	6	0	100	4	3	10
MANGANESE (MN), UG/L	6	140	450	4	60	180
MERCURY (HG), UG/L	6	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	6	50	160	4	30	70
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	9.62				
BIOMASS, ASH WT., G/SQ M	1	7.46				
CHLOROPHYLL A, MG/SQ M	1	5.200				
CHLOROPHYLL B, MG/SQ M	1	0.700				
ORGANIC CARBON, MG/L	11	5.800	69.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.57	4.66	12.9	27.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	1184.2	168.2	960	1550					
STREAMFLOW (CUBIC FT/SEC)	12	25.4	12.3	14	60	12	-0.029	60.228	-0.403*	11.8
PH (STANDARD UNITS)	12	8.96	0.39	8.0	9.3	12	0.0006	8.2859	0.242*	0.40
PHOSPHORUS, TOTAL	12	1.533	0.845	0.41	3.40	12	0.00165	-0.41790	0.328*	0.837
NITRITE + NITRATE, TOTAL	12	1.330	1.165	0.02	3.50	12	0.00013	1.17145	0.019*	1.222
NITROGEN, KJELDAHL, TOTAL	12	3.217	1.786	1.40	7.40	12	0.00171	1.18832	0.161*	1.848
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	54585.5	56870.8	440	190000	11	-5.727	61374.082	-0.018*	59936.9
SEDIMENT SUSPENDED	12	34.3	26.5	5	94					
SEDIMENT, CLAY-SILT (PERCENT)	9	64.9	17.5	29	91					
COLIFORM, FECAL (COL/100 ML)	12	1210.8	1401.5	50	4700					
STREPTOCOCCI, FECAL (COL/100 ML)	11	525.5	564.0	15	2000					
SILICA, DISSOLVED	12	17.37	6.53	7.2	25.0	12	-0.0047	22.9814	-0.122*	6.79
CALCIUM, DISSOLVED	12	89.92	7.90	78.0	100.0	12	0.0277	57.1468	0.589	6.70
MAGNESIUM, DISSOLVED	12	33.00	4.35	26.0	41.0	12	0.0010	31.7827	0.040*	4.56
SODIUM, DISSOLVED	12	118.25	17.64	89.0	150.0	12	0.0838	19.0470	0.799	11.13
POTASSIUM, DISSOLVED	12	9.06	1.12	7.3	11.0	12	0.0008	8.1685	0.112*	1.17
BICARBONATE, ION	11	245.9	29.4	191	299	11	0.015	227.923	0.091*	30.8
CARBONATE, ION	11	5.2	8.7	0	25	11	0.022	-20.557	0.442*	8.2
SULFATE, DISSOLVED	12	226.67	23.48	190.0	270.0	12	0.0603	155.2748	0.432*	22.22
CHLORIDE, DISSOLVED	12	127.25	22.68	87.0	170.0	12	0.1006	8.1486	0.746	15.84
DISSOLVED SOLIDS, SUM OF CONST	11	746.7	73.4	587	865	11	0.296	397.194	0.710	54.5
DISSOLVED SOLIDS, ROE 180 DEG C	11	777.9	69.4	633	885	11	0.300	423.754	0.760	47.5
HARDNESS, TOTAL	12	361.7	28.6	310	420	12	0.082	264.594	0.483*	26.2
HARDNESS, NONCARBONATE	11	150.4	35.3	64	200	11	0.022	124.851	0.108*	37.0
TURBIDITY (JTU)	12	9.8	9.4	2	35	12	0.013	-5.301	0.228*	9.6
FLUORIDE, DISSOLVED	12	1.71	3.87	0.4	14.0	12	-0.0005	2.2690	-0.021*	4.06

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	20.34	5.84	2.97	89	1.68

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	12	4	4	12
CADMIUM (CD), UG/L	3	<10	60	4	1	22
CHROMIUM (CR), UG/L	3	10	50	4	6	30
COBALT (CO), UG/L	4	50	50	4	0	2
COPPER (CU), UG/L	4	20	90	4	5	33
IRON (FE), UG/L	4	240	620	4	40	80
LEAD (PB), UG/L	3	<100	100	4	3	10
MANGANESE (MN), UG/L	3	30	60	4	10	40
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	1	2	4	0	2
ZINC (ZN), UG/L	3	40	70	4	20	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	18.000	51.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	16.39	4.33	8.5	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	1110.6	264.0	670	1370					
STREAMFLOW (CUBIC FT/SEC)	14	8.6	12.2	1	45	11	-0.041	53.588	-0.792	8.7
PH (STANDARD UNITS)	12	7.37	0.50	6.4	7.9	11	-0.0004	7.9394	-0.272*	0.42
PHOSPHORUS, TOTAL	12	6.557	4.175	0.49	12.00	11	0.00800	-2.82126	0.529*	3.571
NITRITE + NITRATE, TOTAL	12	6.239	4.575	0.97	16.00	11	0.00572	0.06817	0.318*	4.746
NITROGEN, KJELDAHL, TOTAL	11	8.236	5.635	1.50	20.00	10	0.01427	-7.27539	0.645	4.813
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5810.8	5670.7	430	18000	11	1.134	4961.273	0.052*	6061.0
SEDIMENT SUSPENDED	2	37.5	17.7	25	50					
SEDIMENT, CLAY-SILT (PERCENT)	2	95.5	6.4	91	100					
COLIFORM, FECAL (COL/100 ML)	11	426.7	694.2	10	2300					
STREPTOCOCCI, FECAL (COL/100 ML)	10	451.9	791.1	12	2000					
SILICA, DISSOLVED	12	30.25	12.24	14.0	45.0	11	0.0245	1.6473	0.546*	10.49
CALCIUM, DISSOLVED	12	69.08	16.05	51.0	100.0	11	0.0347	31.6862	0.560*	14.29
MAGNESIUM, DISSOLVED	12	30.50	4.42	21.0	37.0	11	0.0140	14.9009	0.798	2.94
SODIUM, DISSOLVED	12	101.58	29.96	50.0	140.0	11	0.0979	-10.6245	0.699	13.26
POTASSIUM, DISSOLVED	12	15.02	8.14	4.6	28.0	11	0.0242	-11.6256	0.754	5.87
BICARBONATE, ION	12	304.0	102.4	163	522	11	0.243	33.609	0.598*	90.7
CARBONATE, ION	12	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	105.25	36.15	55.0	160.0	11	-0.0365	142.6557	-0.267*	36.71
CHLORIDE, DISSOLVED	12	114.33	38.12	43.0	150.0	11	0.1426	-45.4171	0.949	13.12
DISSOLVED SOLIDS, SUM OF CONST	12	616.7	111.3	417	746	11	0.423	138.762	0.989	17.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	661.3	124.6	425	761	11	0.484	119.691	0.984	24.4
HARDNESS, TOTAL	12	296.7	53.3	210	400	11	0.143	140.786	0.682	42.6
HARDNESS, NONCARBONATE	12	50.8	32.3	0	100	11	-0.046	104.589	-0.376*	31.5
TURBIDITY (JTU)	12	9.4	4.1	2	15	11	0.005	3.654	0.331*	4.2
FLUORIDE, DISSOLVED	12	0.67	0.98	0.2	3.7	11	0.0012	-0.6949	0.322*	1.02

*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	1370	1330	1280	1160	1070	999	659	633	339

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE

FORM OF EQUATION: T'(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
14	16.96	5.43	2.62	81	2.07

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

11152500 — SALINAS RIVER NR SPRECKELS CALIF

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	2	6	9	3	3	6
CADMIUM (CD), UG/L	3	0	<10	3	0	0
CHROMIUM (CR), UG/L	3	0	50	3	0	10
COBALT (CO), UG/L	3	0	<50	3	0	1
COPPER (CU), UG/L	3	30	58	3	12	26
IRON (FE), UG/L	3	190	410	3	20	50
LEAD (PB), UG/L	3	10	<100	3	0	3
MANGANESE (MN), UG/L	3	130	1100	3	150	740
MERCURY (HG), UG/L	2	0.1	0.2	3	0.0	0.1
SELENIUM (SE), UG/L	2	0	0	3	0	4
ZINC (ZN), UG/L	2	50	60	3	20	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.90	1.10			
BIOMASS, ASH WT., G/SQ M	2	0.50	0.60			
CHLOROPHYLL A, MG/SQ M	2	0.800	1.200			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.300			
ORGANIC CARBON, MG/L	2	20.000	29.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	10	16.05	5.20	9.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	10	37.5	5.6	26	46					
STREAMFLOW (CUBIC FT/SEC)	10	1008.7	402.5	350	1751	10	24.096	105.101	0.338*	401.9
PH (STANDARD UNITS)	10	6.73	0.43	6.0	7.4	10	0.0089	6.3961	0.117*	0.45
PHOSPHORUS, TOTAL	10	0.007	0.005	0.00	0.01	10	-0.00023	0.01551	-0.265*	0.005
NITRITE + NITRATE, TOTAL	10	0.035	0.041	0.00	0.10	10	0.00068	0.00948	0.093*	0.043
NITROGEN, KJELDAHL, TOTAL	10	0.297	0.341	0.00	1.20	10	-0.01000	0.67200	-0.166*	0.357
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	420.2	247.7	75	760	9	-24.147	1332.459	-0.576*	216.4
SEDIMENT SUSPENDED	9	1.6	0.5	1	2					
SEDIMENT, CLAY-SILT (PERCENT)	9	65.6	19.0	26	86					
COLIFORM, FECAL (COL/100 ML)	8	2.3	2.8	<1	9					
STREPTOCOCCI, FECAL (COL/100 ML)	8	1.5	1.1	<1	4					
SILICA, DISSOLVED	4	7.87	0.76	7.0	8.8					
CALCIUM, DISSOLVED	4	3.07	0.44	2.6	3.5					
MAGNESIUM, DISSOLVED	4	0.47	0.17	0.3	0.7					
SODIUM, DISSOLVED	4	2.92	0.88	2.0	4.1					
POTASSIUM, DISSOLVED	4	0.65	0.06	0.6	0.7					
BICARBONATE, ION	4	16.0	3.3	12	20					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	3.20	1.70	1.5	5.4					
CHLORIDE, DISSOLVED	4	2.30	0.83	1.3	3.3					
DISSOLVED SOLIDS, SUM OF CONST	4	28.5	3.7	24	32					
DISSOLVED SOLIDS, RDE 180 DEG C	4	29.3	5.7	24	36					
HARDNESS, TOTAL	4	9.8	2.1	8	12					
HARDNESS, NONCARBONATE	4	0.0	0.0	0	0					
TURBIDITY (JTU)	4	1.3	0.5	1	2					
FLUORIDE, DISSOLVED	4	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 (1976 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	16	4	0	2
CADMIUM (CD), UG/L	4	0	<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	30	4	2	12
IRON (FE), UG/L	4	40	120	4	0	30
LEAD (PB), UG/L	4	<100	<100	4	0	1
MANGANESE (MN), UG/L	4	10	30	4	0	10
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	10	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	1.100	11.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT, K	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	364	15.71	5.49	5.0	26.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	0									
STREAMFLOW (CUBIC FT/SEC)	364	2109.9	1442.9	573	5750					
PH (STANDARD UNITS)	0									
PHOSPHORUS, TOTAL	0									
NITRITE + NITRATE, TOTAL	0									
NITROGEN, KJELDAHL, TOTAL	0									
PHYTOPLANKTON, TOTAL (CELLS/ML)	0									
SEDIMENT SUSPENDED	364	113.6	69.0	25	304					
SEDIMENT, CLAY-SILT (PERCENT)	24	86.9	17.0	48	100					
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)	364	33.6	30.1	4	120					
FLUORIDE, DISSOLVED	0									

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 257

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	1110	1060	1020	879	782	446	291	250

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
364	15.69	7.40	2.93	92	1.59

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	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 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	24	16.23	4.76	8.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	24	42.5	3.7	37	50					
STREAMFLOW (CUBIC FT/SEC)	24	175.6	299.4	7	1090	24	-16.953	896.785	-0.209*	299.4
PH (STANDARD UNITS)	24	7.07	0.60	5.6	8.2	24	0.0029	6.9507	0.018*	0.62
PHOSPHORUS, TOTAL	12	0.020	0.026	0.00	0.10	12	-0.00075	0.05094	-0.090*	0.027
NITRITE + NITRATE, TOTAL	12	0.027	0.036	0.00	0.12	12	-0.00208	0.11176	-0.181*	0.037
NITROGEN, KJELDAHL, TOTAL	12	0.142	0.120	0.00	0.36	12	0.02594	-0.92119	0.673	0.093
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1432.5	1836.8	170	6600	12	167.254	-5550.344	0.369*	1790.8
SEDIMENT SUSPENDED	12	4.5	1.2	3	7					
SEDIMENT, CLAY-SILT (PERCENT)	12	76.0	11.2	53	90					
COLIFORM, FECAL (COL/100 ML)	12	21.8	11.2	2	40					
STREPTOCOCCI, FECAL (COL/100 ML)	12	30.1	19.6	11	69					
SILICA, DISSOLVED	4	8.50	1.12	7.5	10.0					
CALCIUM, DISSOLVED	6	4.18	0.46	3.6	4.8	6	0.0910	0.3751	0.727*	0.35
MAGNESIUM, DISSOLVED	4	1.25	0.51	0.8	1.9					
SODIUM, DISSOLVED	6	2.20	0.23	1.9	2.5	6	-0.0150	2.8261	-0.240*	0.25
POTASSIUM, DISSOLVED	4	0.85	0.17	0.7	1.1					
BICARBONATE, ION	6	19.8	1.5	18	22	6	0.147	13.678	0.365*	1.5
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	3.15	0.77	2.3	3.8					
CHLORIDE, DISSOLVED	6	1.73	0.61	1.1	2.5	6	0.0933	-2.1681	0.563*	0.56
DISSOLVED SOLIDS, SUM OF CONST	4	31.0	0.8	30	32					
DISSOLVED SOLIDS, ROE 180 DEG C	6	31.8	6.7	22	42	6	-1.140	79.509	-0.619*	5.9
HARDNESS, TOTAL	6	16.3	2.2	13	19	6	0.185	8.613	0.312*	2.3
HARDNESS, NONCARBONATE	6	0.5	1.2	0	3	6	0.007	0.187	0.022*	1.4
TURBIDITY (JTU)	6	2.7	3.6	1	10	6	-0.259	13.516	-0.262*	3.9
FLUORIDE, DISSOLVED	4	0.10	0.00	0.1	0.1					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 353

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%
	50	46	45	44	44	43	41	40	39	39

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
24	15.93	6.72	2.88	86	1.89

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	10	4	0	1
CHROMIUM (CR), UG/L	4	0	20	4	0	0
COBALT (CO), UG/L	4	0	60	4	0	2
COPPER (CU), UG/L	4	10	14	4	1	4
IRON (FE), UG/L	4	100	580	4	0	60
LEAD (PB), UG/L	4	15	<100	4	0	4
MANGANESE (MN), UG/L	4	10	20	4	10	20
MERCURY (HG), UG/L	4	0.0	2.6	4	0.0	4.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	80	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.90	10.80			
BIOMASS, ASH WT., G/SQ M	4	0.50	8.20			
CHLOROPHYLL A, MG/SQ M	4	1.800	7.600			
CHLOROPHYLL B, MG/SQ M	4	0.100	1.300			
ORGANIC CARBON, MG/L	4	0.200	1.600			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	15.69	5.29	8.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	147.5	35.9	102	227					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	13	7.43	0.40	6.5	8.0	13	0.0024	7.0824	0.212*	0.41
PHOSPHORUS, TOTAL	12	0.120	0.047	0.08	0.23	12	0.00002	0.11676	0.018*	0.049
NITRITE + NITRATE, TOTAL	12	0.117	0.042	0.05	0.20	12	0.00036	0.06448	0.322*	0.042
NITROGEN, KJELDAHL, TOTAL	12	3.444	10.883	0.04	38.00	12	0.19435	-25.12561	0.669	8.482
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	3247.5	2490.6	170	8500	12	-0.594	3334.159	-0.009*	2612.0
SEDIMENT SUSPENDED	12	31.3	15.6	13	56					
SEDIMENT, CLAY-SILT (PERCENT)	12	87.2	7.5	71	96					
COLIFORM, FECAL (COL/100 ML)	12	51.8	37.8	6	130					
STREPTOCOCCI, FECAL (COL/100 ML)	12	67.8	88.8	4	320					
SILICA, DISSOLVED	4	18.75	2.22	16.0	21.0					
CALCIUM, DISSOLVED	4	12.25	2.06	10.0	14.0					
MAGNESIUM, DISSOLVED	4	6.80	1.29	5.2	7.9					
SODIUM, DISSOLVED	4	10.92	3.29	6.7	14.0					
POTASSIUM, DISSOLVED	5	1.38	0.22	1.1	1.6					
BICARBONATE, ION	4	76.5	10.9	63	89					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	4	9.30	2.57	7.0	12.0					
CHLORIDE, DISSOLVED	4	7.22	1.83	4.5	8.3					
DISSOLVED SOLIDS, SUM OF CONST	4	104.5	18.1	82	122					
DISSOLVED SOLIDS, ROE 180 DEG C	4	101.3	22.4	72	122					
HARDNESS, TOTAL	4	58.5	10.8	46	68					
HARDNESS, NONCARBONATE	4	0.3	0.5	0	1					
TURBIDITY (JTU)	4	9.5	2.5	6	12					
FLUORIDE, DISSOLVED	4	0.12	0.05	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	15.46	7.11	2.84	94	1.39

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	3	5	1	3
CADMIUM (CD), UG/L	5	2	<10	5	0	2
CHROMIUM (CR), UG/L	5	0	10	5	0	10
COBALT (CO), UG/L	5	0	<50	5	0	3
COPPER (CU), UG/L	5	10	20	5	3	10
IRON (FE), UG/L	5	60	1500	5	20	60
LEAD (PB), UG/L	5	22	<100	5	0	6
MANGANESE (MN), UG/L	5	20	50	5	0	10
MERCURY (HG), UG/L	4	0.0	0.4	5	0.0	0.6
SELENIUM (SE), UG/L	4	0	0	5	0	0
ZINC (ZN), UG/L	5	0	20	5	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	2.38	184.00			
BIOMASS, ASH WT., G/SQ M	3	1.62	166.00			
CHLOROPHYLL A, MG/SQ M	3	12.000	77.800			
CHLOROPHYLL B, MG/SQ M	3	0.000	11.900			
ORGANIC CARBON, MG/L	4	1.600	7.100			

Table 12. Summary of measurements 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)
PERIDD DF RECORD: 10/01/75 - 09/30/76

STATISTICAL SUMMARY DF SELECTED DISSOLVED CHEMICAL CDNSTITUENTS AND
REGRESSION RELATIDNSHIPS OF CONSTITUENT CDNCENTRATIONS TO SPECIFIC CDNDUCTANCE (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)	30	15.38	5.57	7.5	25.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	23	267.4	41.4	207	354					
STREAMFLDW (CUBIC FT/SEC)	32	925.8	1186.8	133	3980	23	-11.561	3667.260	-0.473	911.9
PH (STANDARD UNITS)	23	7.72	0.30	7.2	8.5	23	-0.0010	7.9806	-0.134*	0.31
PHDSPHORUS, TOTAL	12	0.299	0.259	0.00	0.82	12	0.00512	-1.05674	0.728	0.186
NITRITE + NITRATE, TDTAL	12	0.277	0.254	0.00	0.78	12	0.00563	-1.21620	0.816	0.154
NITROGEN, KJELDAHL, TOTAL	12	0.841	0.815	0.04	2.70	12	0.01178	-2.28061	0.532*	0.724
PHYTOPLANKTON, TDTAL (CELLS/ML)	10	4260.0	2656.3	1700	9400	10	15.505	112.457	0.220*	2748.3
SEDIMENT SUSPENDED	151	33.2	61.1	3	508					
SEDIMENT, CLAY-SILT (PERCENT)	13	94.6	4.0	84	99					
CDLIFORM, FECAL (COL/100 ML)	12	87.8	158.7	3	580					
STREPTOCOCCI, FECAL (CDL/100 ML)	12	83.0	159.4	4	560					
SILICA, DISSOLVED	4	12.30	2.12	9.2	14.0					
CALCIUM, DISSOLVED	8	24.13	4.09	16.0	30.0	8	0.0757	3.6105	0.914	1.79
MAGNESIUM, DISSDLVED	4	14.50	2.38	13.0	18.0					
SODIUM, DISSOLVED	8	12.29	3.72	8.5	18.0	8	0.0718	-7.1643	0.952	1.23
POTASSIUM, DISSOLVED	4	1.85	0.53	1.2	2.5					
BICARBONATE, ION	8	142.6	21.7	103	170	8	0.395	35.616	0.896	10.4
CARBONATE, ION	8	0.0	0.0	0	0	8	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	4	15.00	3.74	11.0	20.0					
CHLORIDE, DISSOLVED	8	10.12	5.13	4.5	18.0	8	0.0958	-15.8167	0.920	2.17
DISSOLVED SOLIDS, SUM OF CONST	4	166.3	26.7	136	200					
DISSDLVED SDLIDS, ROE 180 DEG C	8	167.9	30.1	128	212	8	0.539	21.999	0.884	15.2
HARDNESS, TOTAL	8	119.4	18.1	87	146	8	0.331	29.639	0.901	8.5
HARDNESS, NONCARBONATE	8	2.9	2.2	0	7	8	0.011	-0.224	0.253*	2.3
TURBIDITY (JTU)	155	11.5	26.5	1	200	19	-0.104	38.839	-0.374*	11.9
FLUORIDE, DISSOLVED	4	0.15	0.06	0.1	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 348

DAILY SPECIFIC CONDUCTANCE IN MICRDMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE DF TIME	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
	385	365	355	315	300	280	265	250	240	200

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
35	16.12	7.24	2.78	91	1.78

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	10	4	0	0
CHROMIUM (CR), UG/L	4	0	10	4	0	2
COBALT (CO), UG/L	4	0	50	4	0	2
COPPER (CU), UG/L	4	1	10	4	1	2
IRON (FE), UG/L	4	200	630	4	10	100
LEAD (PB), UG/L	4	5	<100	4	0	3
MANGANESE (MN), UG/L	4	30	90	4	10	70
MERCURY (HG), UG/L	4	0.0	1.5	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	79.10				
BIOMASS, ASH WT., G/SQ M	1	16.20				
CHLOROPHYLL A, MG/SQ M	1	11.700				
CHLOROPHYLL B, MG/SQ M	1	1.000				
ORGANIC CARBON, MG/L	4	1.900	3.900			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	11	12.91	6.39	6.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	140.6	18.9	124	188					
STREAMFLOW (CUBIC FT/SEC)	9	13413.3	9934.3	2430	36400	7	-484.801	81457.563	-0.375*	9414.3
PH (STANDARD UNITS)	9	7.63	0.42	7.2	8.3	9	0.0101	6.2207	0.453*	0.40
PHOSPHORUS, TOTAL	8	0.069	0.043	0.02	0.14	8	-0.00001	0.07067	-0.006*	0.047
NITRITE + NITRATE, TOTAL	8	0.117	0.095	0.00	0.26	8	0.00057	0.03730	0.121*	0.102
NITROGEN, KJELDAHL, TOTAL	8	0.326	0.132	0.19	0.59	8	0.00010	0.31224	0.015*	0.143
PHYTOPLANKTON, TOTAL (CELLS/ML)	8	915.0	519.0	330	1800	8	2.264	610.269	0.029*	560.3
SEDIMENT SUSPENDED	10	70.4	76.2	6	221					
SEDIMENT, CLAY-SILT (PERCENT)	10	49.6	11.6	34	64					
COLIFORM, FECAL (COL/100 ML)	0	8.2	8.89	3.0	8.0					
STREPTOCOCCI, FECAL (COL/100 ML)	0	12.25	21.94	<1	100					
SILICA, DISSOLVED	2	16.00	2.83	14.0	18.0					
CALCIUM, DISSOLVED	2	14.00	0.00	14.0	14.0					
MAGNESIUM, DISSOLVED	2	6.45	0.49	6.1	6.8					
SODIUM, DISSOLVED	2	5.75	0.78	5.2	6.3					
POTASSIUM, DISSOLVED	2	0.90	0.00	0.9	0.9					
BICARBONATE, ION	2	76.5	3.5	74	79					
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	2	8.10	0.99	7.4	8.8					
CHLORIDE, DISSOLVED	2	1.95	0.21	1.8	2.1					
DISSOLVED SOLIDS, SUM OF CONST	2	91.5	2.1	90	93					
DISSOLVED SOLIDS, RDE 180 DEG C	2	80.5	9.2	74	87					
HARDNESS, TOTAL	2	61.5	2.1	60	63					
HARDNESS, NONCARBONATE	2	0.0	0.0	0	0					
TURBIDITY (JTU)	2	7.0	4.2	4	10					
FLUORIDE, DISSOLVED	2	0.10	0.00	0.1	0.1					

*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%
	182	159	153	146	143	134	123	114	112	100

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	1	2	2	0	2
CADMIUM (CD), UG/L	2	<10	10	2	1	1
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	1	2
IRON (FE), UG/L	2	990	1100	2	70	100
LEAD (PB), UG/L	2	<100	<100	2	3	4
MANGANESE (MN), UG/L	2	30	30	2	0	10
MERCURY (HG), UG/L	1	0.0		2	0.0	0.1
SELENIUM (SE), UG/L	2	0	0	2	0	0
ZINC (ZN), UG/L	2	10	10	2	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.40	12.00			
BIOMASS, ASH WT., G/SQ M	2	0.30	5.80			
CHLOROPHYLL A, MG/SQ M	2	0.000	16.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	2.000			
ORGANIC CARBON, MG/L	1	1.500				

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.56	5.48	4.6	21.6					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	73.8	17.1	54	100					
STREAMFLOW (CUBIC FT/SEC)	12	5330.0	5715.5	510	16100	12	-269.418	25199.609	-0.808	3533.5
PH (STANDARD UNITS)	12	6.99	0.36	6.2	7.5	12	0.0001	6.9879	0.002*	0.38
PHOSPHORUS, TOTAL	12	0.067	0.047	0.03	0.18	12	-0.00121	0.15571	-0.441*	0.044
NITRITE + NITRATE, TOTAL	12	0.338	0.198	0.05	0.61	12	-0.00715	0.86585	-0.619	0.163
NITROGEN, KJELDAHL, TOTAL	12	0.288	0.116	0.18	0.55	12	-0.00258	0.47840	-0.381*	0.112
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2898.8	6707.8	56	24000	12	146.000	-7868.680	0.373*	6527.4
SEDIMENT SUSPENDED	12	35.9	50.6	4	144					
SEDIMENT, CLAY-SILT (PERCENT)	12	86.3	9.9	72	100					
COLIFORM, FECAL (COL/100 ML)	12	65.4	66.6	12	230					
STREPTOCOCCI, FECAL (COL/100 ML)	11	60.6	45.1	4	126					
SILICA, DISSOLVED	12	14.08	1.56	11.0	16.0	12	0.0592	9.7169	0.649	1.25
CALCIUM, DISSOLVED	12	6.48	1.75	3.9	9.0	12	0.0953	-0.5428	0.931	0.67
MAGNESIUM, DISSOLVED	12	2.26	0.47	1.5	2.9	12	0.0235	0.5260	0.860	0.25
SODIUM, DISSOLVED	12	5.15	1.19	3.4	7.2	12	0.0599	0.7334	0.865	0.62
POTASSIUM, DISSOLVED	12	0.64	0.13	0.5	0.9	12	0.0064	0.1662	0.842	0.07
BICARBONATE, ION	12	30.6	8.9	18	42	12	0.445	-2.265	0.860	4.8
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	4.65	0.98	3.0	6.0	12	0.0399	1.7105	0.697	0.74
CHLORIDE, DISSOLVED	12	4.77	1.48	3.2	7.2	12	0.0831	-1.3511	0.960	0.43
DISSOLVED SOLIDS, SUM OF CONST	12	53.2	11.0	36	69	12	0.597	9.114	0.933	4.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	57.8	11.4	40	75	12	0.586	14.603	0.878	5.7
HARDNESS, TOTAL	12	25.5	5.9	16	33	12	0.325	1.562	0.940	2.1
HARDNESS, NONCARBONATE	12	1.2	2.0	0	6	12	0.000	1.132	0.004*	2.1
TURBIDITY (JTU)	12	10.3	14.0	1	43	12	-0.529	49.329	-0.650	11.1
FLUORIDE, DISSOLVED	12	0.08	0.04	0.0	0.1	12	0.0011	0.0000	0.497*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.44	7.08	2.62	92	1.68

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	40	4	0	0
COBALT (CO), UG/L	4	<50	50	4	0	1
COPPER (CU), UG/L	4	10	20	4	1	8
IRON (FE), UG/L	4	230	1200	4	120	190
LEAD (PB), UG/L	4	<100	100	4	0	3
MANGANESE (MN), UG/L	4	20	70	4	0	20
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	40	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.90	30.50			
BIOMASS, ASH WT., G/SQ M	3	0.90	28.00			
CHLOROPHYLL A, MG/SQ M	3	0.000	55.700			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.600			
ORGANIC CARBON, MG/L	4	3.600	5.500			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 12045500 NAME: ELWHA RIVER AT MCDONALD BR., NR PORT ANGELES,WA

LAT 48D03M18S LONG 123034M55S
DRAINAGE AREA: 269 SQ MI (697 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	7.03	2.86	4.0	11.6					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	77.0	13.3	62	100					
STREAMFLOW (CUBIC FT/SEC)	12	1634.8	579.5	807	2590	12	-11.545	2523.680	-0.264*	586.1
PH (STANDARD UNITS)	12	7.18	0.19	7.0	7.7	12	-0.0027	7.3942	-0.196*	0.19
PHOSPHORUS, TOTAL	12	0.017	0.013	0.01	0.05	12	0.00001	0.01671	0.011*	0.014
NITRITE + NITRATE, TOTAL	12	0.012	0.014	0.00	0.04	12	0.00035	-0.01412	0.338*	0.013
NITROGEN, KJELDAHL, TOTAL	12	0.077	0.044	0.02	0.13	12	0.00168	-0.05202	0.506*	0.040
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	90.7	87.9	0	300	12	-0.475	127.260	-0.072*	91.9
SEDIMENT SUSPENDED	12	8.8	10.8	1	35					
SEDIMENT, CLAY-SILT (PERCENT)	12	87.7	11.3	64	100					
COLIFORM, FECAL (COL/100 ML)	12	1.4	0.8	<1	3					
STREPTOCOCCI, FECAL (COL/100 ML)	12	4.8	8.1	<1	27					
SILICA, DISSOLVED	12	5.28	0.85	4.3	6.6	12	0.0566	0.9290	0.887	0.41
CALCIUM, DISSOLVED	12	13.08	1.78	10.0	16.0	12	0.1042	5.0575	0.777	1.18
MAGNESIUM, DISSOLVED	12	1.40	0.66	0.7	3.0	12	0.0419	-1.8262	0.840	0.38
SODIUM, DISSOLVED	12	1.95	0.52	1.3	3.0	12	0.0329	-0.5810	0.842	0.29
POTASSIUM, DISSOLVED	12	0.22	0.13	0.1	0.5	12	0.0065	-0.2840	0.645	0.11
BICARBONATE, ION	12	40.8	7.5	31	56	12	0.482	3.724	0.858	4.0
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	7.57	1.63	5.2	11.0	12	0.0644	2.6129	0.524*	1.46
CHLORIDE, DISSOLVED	12	1.27	0.43	0.8	2.2	12	0.0007	1.2151	0.021*	0.45
DISSOLVED SOLIDS, SUM OF CONST	12	51.2	8.6	40	68	12	0.548	8.972	0.842	4.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	52.8	10.7	30	66	12	0.523	12.545	0.649	8.5
HARDNESS, TOTAL	12	38.5	6.7	29	52	12	0.422	5.999	0.842	3.8
HARDNESS, NONCARBONATE	12	5.0	1.4	2	7	12	0.027	2.934	0.252*	1.4
TURBIDITY (JTU)	12	5.0	7.1	1	25	12	0.045	1.543	0.084*	7.4
FLUORIDE, DISSOLVED	12	0.12	0.04	0.1	0.2	12	-0.0013	0.2200	-0.457*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	7.02	3.53	2.39	85	1.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	50	4	0	10
COBALT (CO), UG/L	4	<50	60	4	0	3
COPPER (CU), UG/L	4	0	20	4	2	2
IRON (FE), UG/L	4	60	1100	4	10	60
LEAD (PB), UG/L	4	<100	<100	4	1	10
MANGANESE (MN), UG/L	4	10	20	4	0	10
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	0	20	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.00	0.61			
BIOMASS, ASH WT., G/SQ M	3	0.00	0.46			
CHLOROPHYLL A, MG/SQ M	2	0.000	0.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	3	0.800	1.500			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	7.14	3.03	3.5	12.3					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	48.7	7.5	38	61					
STREAMFLOW (CUBIC FT/SEC)	12	18457.5	7249.2	9260	29600	12	-209.476	28651.992	-0.215*	7424.6
PH (STANDARD UNITS)	12	7.20	0.35	6.7	7.8	12	-0.0270	8.5149	-0.568*	0.31
PHOSPHORUS, TOTAL	12	0.028	0.016	0.01	0.07	12	-0.00075	0.06473	-0.351*	0.016
NITRITE + NITRATE, TOTAL	12	0.097	0.052	0.01	0.19	12	0.00375	-0.08500	0.533*	0.047
NITROGEN, KJELDAHL, TOTAL	12	0.136	0.035	0.08	0.20	12	-0.00073	0.17143	-0.156*	0.036
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	201.1	219.4	4	750	11	-11.714	782.556	-0.372*	214.6
SEDIMENT SUSPENDED	12	52.2	22.1	26	87					
SEDIMENT, CLAY-SILT (PERCENT)	12	28.3	10.4	13	48					
COLIFORM, FECAL (COL/100 ML)	11	76.6	73.3	<1	220					
STREPTOCOCCI, FECAL (COL/100 ML)	11	167.5	414.7	<1	1400					
SILICA, DISSOLVED	12	5.90	0.98	4.7	7.4	12	0.1130	0.4010	0.858	0.53
CALCIUM, DISSOLVED	12	6.87	1.24	4.8	9.0	12	0.1516	-0.5048	0.911	0.53
MAGNESIUM, DISSOLVED	12	1.39	0.49	0.8	2.2	12	0.0509	-1.0842	0.778	0.32
SODIUM, DISSOLVED	12	1.31	0.50	0.8	2.6	12	0.0487	-1.0612	0.720	0.37
POTASSIUM, DISSOLVED	12	0.50	0.10	0.4	0.7	12	0.0056	0.2291	0.435*	0.09
BICARBONATE, ION	12	25.7	6.0	16	36	12	0.723	-9.532	0.904	2.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	4.50	0.53	4.0	5.7	12	-0.0023	4.6114	-0.032*	0.55
CHLORIDE, DISSOLVED	12	0.97	0.40	0.5	1.7	12	-0.0060	1.2563	-0.111*	0.42
DISSOLVED SOLIDS, SUM OF CONST	12	34.1	6.0	26	46	12	0.715	-0.690	0.882	3.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	37.5	9.3	26	52	12	0.748	1.080	0.602	7.8
HARDNESS, TOTAL	12	23.0	5.1	16	32	12	0.591	-5.770	0.870	2.6
HARDNESS, NONCARBONATE	12	2.0	1.3	0	4	12	0.003	1.841	0.019*	1.3
TURBIDITY (JTU)	12	6.7	2.8	2	10	12	-0.005	6.932	-0.014*	2.9
FLUORIDE, DISSOLVED	12	0.09	0.07	0.0	0.2	12	-0.0025	0.2139	-0.280*	0.07

*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%
	70	66	65	56	53	48	43	36	35	33

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
306	8.05	4.49	2.50	90	1.00

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	60	4	0	0
COBALT (CO), UG/L	4	40	<50	4	0	0
COPPER (CU), UG/L	4	<10	10	4	1	3
IRON (FE), UG/L	4	300	1000	4	30	60
LEAD (PB), UG/L	4	<100	<100	4	2	4
MANGANESE (MN), UG/L	4	20	50	4	0	20
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	50	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	6.30	35.00			
BIOMASS, ASH WT., G/SQ M	4	4.50	33.00			
CHLOROPHYLL A, MG/SQ M	4	0.200	2.700			
CHLOROPHYLL B, MG/SQ M	4	0.000	0.100			
ORGANIC CARBON, MG/L	4	1.200	2.500			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFFICIENT, R	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	14	11.04	4.92	5.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	160.1	43.6	72	226					
STREAMFLOW (CUBIC FT/SEC)	14	17337.1	6291.0	8660	28200	14	15.197	14904.551	0.105*	6511.3
PH (STANDARD UNITS)	12	7.59	0.21	7.2	8.0	12	-0.0000	7.5969	-0.008*	0.22
PHOSPHORUS, TOTAL	12	0.032	0.020	0.00	0.06	12	-0.00024	0.06965	-0.565*	0.017
NITRITE + NITRATE, TOTAL	12	0.172	0.231	0.02	0.87	12	0.00014	0.15049	0.028*	0.242
NITROGEN, KJELDAHL, TOTAL	12	0.474	0.963	0.00	3.50	12	0.00533	-0.36842	0.259*	0.976
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	606.7	208.6	340	1000	9	-0.138	630.879	-0.024*	223.0
SEDIMENT SUSPENDED	12	12.4	11.0	5	42					
SEDIMENT, CLAY-SILT (PERCENT)	10	89.0	10.1	71	99					
COLIFORM, FECAL (COL/100 ML)	12	12.3	14.5	1	43					
STREPTOCOCCI, FECAL (COL/100 ML)	12	9.5	12.8	0	47					
SILICA, DISSOLVED	12	5.52	1.35	4.2	8.8	12	-0.0162	8.0843	-0.561*	1.18
CALCIUM, DISSOLVED	12	26.08	5.90	15.0	32.0	12	0.1018	9.9926	0.808	3.64
MAGNESIUM, DISSOLVED	12	7.15	1.77	3.3	9.6	12	0.0280	2.7229	0.742	1.24
SODIUM, DISSOLVED	12	1.96	0.55	1.0	3.0	12	0.0032	1.4501	0.274*	0.55
POTASSIUM, DISSOLVED	12	0.62	0.12	0.4	0.8	12	-0.0005	0.7049	-0.195*	0.13
BICARBONATE, ION	12	100.0	22.1	49	130	12	0.386	38.997	0.820	13.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	13.42	3.69	6.4	18.0	12	0.0499	5.5278	0.633	3.00
CHLORIDE, DISSOLVED	12	2.22	0.94	1.1	3.9	12	0.0046	1.5059	0.226*	0.96
DISSOLVED SOLIDS, SUM OF CONST	12	106.4	21.5	60	137	12	0.359	49.690	0.783	14.0
DISSOLVED SOLIDS, RDE 180 DEG C	12	108.5	22.2	62	141	12	0.371	49.933	0.781	14.6
HARDNESS, TOTAL	12	94.5	21.7	51	120	12	0.364	37.066	0.785	14.1
HARDNESS, NONCARBONATE	12	13.0	6.5	0	24	12	0.045	5.888	0.323*	6.5
TURBIDITY (JTU)	12	2.9	1.8	1	6	12	0.003	2.445	0.076*	1.9
FLUORIDE, DISSOLVED	12	0.22	0.10	0.1	0.4	12	0.0004	0.1621	0.193*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	7.92	4.47	2.47	82	1.47

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

12318500 -- KOOTENAI RIVER NR COPELAND, ID

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	3	0	1	3	0	1
CADMIUM (CD), UG/L	3	<10	<10	2	0	1
CHROMIUM (CR), UG/L	3	0	0	3	0	0
COBALT (CO), UG/L	3	<50	<50	3	0	2
COPPER (CU), UG/L	3	10	220	3	3	38
IRON (FE), UG/L	3	80	250	3	10	30
LEAD (PB), UG/L	3	<100	<100	3	3	47
MANGANESE (MN), UG/L	3	10	40	3	0	30
MERCURY (HG), UG/L	3	0.0	2.0	3	0.0	0.9
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	50	3	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	6.15	12.20			
BIOMASS, ASH WT., G/SQ M	3	2.40	11.20			
CHLOROPHYLL A, MG/SQ M	3	6.900	60.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	2.800			
ORGANIC CARBON, MG/L	4	1.400	2.200			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	4.81	3.71	0.0	11.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	201.9	39.9	130	255					
STREAMFLOW (CUBIC FT/SEC)	13	1611.6	2097.2	204	7040	12	-28.879	6990.348	-0.837	789.5
PH (STANDARD UNITS)	11	8.21	0.31	7.4	8.5	11	0.0059	6.9760	0.684	0.24
PHOSPHORUS, TOTAL	12	0.019	0.034	0.00	0.11	12	-0.00054	0.12845	-0.626	0.028
NITRITE + NITRATE, TOTAL	12	0.023	0.021	0.00	0.07	12	-0.00023	0.06901	-0.429*	0.020
NITROGEN, KJELDAHL, TOTAL	12	0.111	0.143	0.00	0.47	12	-0.00147	0.40849	-0.412*	0.137
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	227.3	293.4	52	1100	12	-1.108	451.009	-0.151*	304.2
SEDIMENT SUSPENDED	3	321.7	136.4	211	474					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	8.5	12.7	<1	44					
STREPTOCOCCI, FECAL (COL/100 ML)	12	10.3	12.3	<1	40					
SILICA, DISSOLVED	12	3.93	0.20	3.5	4.2	12	-0.0017	4.2774	-0.338*	0.20
CALCIUM, DISSOLVED	12	36.58	5.63	26.0	44.0	12	0.1299	10.3567	0.921	2.30
MAGNESIUM, DISSOLVED	12	7.67	1.32	5.3	9.0	12	0.0307	1.4652	0.928	0.51
SODIUM, DISSOLVED	12	0.67	0.26	0.3	1.0	12	0.0037	-0.0674	0.565*	0.22
POTASSIUM, DISSOLVED	12	0.31	0.07	0.2	0.4	12	0.0003	0.2472	0.181*	0.07
BICARBONATE, ION	12	145.5	25.3	100	173	12	0.597	24.931	0.942	8.9
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.19	1.02	2.8	6.7	12	0.0172	1.7143	0.676	0.79
CHLORIDE, DISSOLVED	12	0.57	0.48	0.0	1.6	12	0.0021	0.1584	0.173*	0.49
DISSOLVED SOLIDS, SUM OF CONST	12	126.7	20.2	89	148	12	0.477	30.381	0.943	7.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	124.3	19.5	88	143	12	0.443	34.938	0.907	8.6
HARDNESS, TOTAL	12	123.6	19.8	87	150	12	0.466	29.533	0.939	7.1
HARDNESS, NONCARBONATE	12	3.8	3.6	0	10	12	-0.040	11.790	-0.439*	3.4
TURBIDITY (JTU)	12	8.4	15.1	0	45	12	-0.207	50.292	-0.547*	13.3
FLUORIDE, DISSOLVED	12	0.11	0.03	0.1	0.2	12	0.0001	0.0933	0.103*	0.03

*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%
	266	258	256	250	246	230	212	176	170	163

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	4.76	5.71	2.64	88	1.46

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	0	0	4	0	0
CADMIUM (CD), UG/L	4	0	<10	4	0	0
CHROMIUM (CR), UG/L	3	0	10	4	0	<10
COBALT (CO), UG/L	3	0	<50	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	0
IRON (FE), UG/L	4	20	430	4	0	10
LEAD (PB), UG/L	4	1	<100	4	0	2
MANGANESE (MN), UG/L	4	10	30	4	0	10
MERCURY (HG), UG/L	3	0.0	<0.5	4	0.0	<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	7	0.80	7.08			
BIOMASS, ASH WT., G/SQ M	7	0.20	6.31			
CHLOROPHYLL A, MG/SQ M	7	0.900	8.000			
CHLOROPHYLL B, MG/SQ M	7	0.000	0.300			
ORGANIC CARBON, MG/L	3	4.300	23.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	9.23	6.99	1.6	20.9					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	152.8	15.6	127	173					
STREAMFLOW (CUBIC FT/SEC)	12	35716.7	22179.7	18600	99500	12	-721.928	145991.125	-0.507*	20046.2
PH (STANDARD UNITS)	12	7.60	0.46	7.1	8.4	12	-0.0065	8.6003	-0.224*	0.47
PHOSPHORUS, TOTAL	12	0.014	0.007	0.01	0.03	12	-0.00032	0.06376	-0.757	0.005
NITRITE + NITRATE, TOTAL	12	0.018	0.013	0.00	0.05	12	0.00013	-0.00081	0.146*	0.014
NITROGEN, KJELDAHL, TOTAL	12	0.196	0.050	0.14	0.28	12	-0.00092	0.33660	-0.267*	0.050
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	5460.8	10102.2	240	37000	12	241.726	-31462.871	0.373*	9830.7
SEDIMENT SUSPENDED	12	6.1	5.0	2	18					
SEDIMENT, CLAY-SILT (PERCENT)	12	94.8	6.1	77	100					
COLIFORM, FECAL (COL/100 ML)	12	4.3	11.3	<1	40					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1.9	1.6	<1	6					
SILICA, DISSOLVED	12	6.07	0.53	5.4	6.9	12	-0.0207	9.2347	-0.609	0.44
CALCIUM, DISSOLVED	12	22.42	1.93	19.0	25.0	12	0.0903	8.6264	0.730	1.38
MAGNESIUM, DISSOLVED	12	5.93	0.47	4.9	6.7	12	0.0181	3.1669	0.606	0.39
SODIUM, DISSOLVED	12	2.47	0.54	1.0	3.1	12	0.0196	-0.5161	0.564*	0.47
POTASSIUM, DISSOLVED	12	0.87	0.09	0.7	1.0	12	0.0022	0.5237	0.394*	0.09
BICARBONATE, ION	11	92.0	8.6	78	102	11	0.396	31.797	0.740	6.1
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.62	1.45	7.7	12.0	12	0.0556	1.1267	0.600	1.21
CHLORIDE, DISSOLVED	12	1.47	1.18	0.1	3.8	12	-0.0448	8.3032	-0.590	1.00
DISSOLVED SOLIDS, SUM OF CONST	11	94.2	6.9	81	102	11	0.309	47.260	0.720	5.1
DISSOLVED SOLIDS, ROE 180 DEG C	11	94.0	10.1	79	113	11	0.479	21.159	0.764	6.9
HARDNESS, TOTAL	12	80.5	6.1	68	88	12	0.300	34.685	0.765	4.1
HARDNESS, NONCARBONATE	11	4.6	2.7	0	9	11	-0.029	9.083	-0.175*	2.8
TURBIDITY (JTU)	11	3.5	4.5	1	15	11	-0.003	3.955	-0.010*	4.7
FLUORIDE, DISSOLVED	12	0.11	0.05	0.0	0.2	12	-0.0005	0.1869	-0.156*	0.05

*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%
	183	178	174	171	167	154	143	126	120	103

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
294	9.13	9.10	2.53	95	1.46

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

12398600 — PEND OREILLE RIVER AT INT BOUNDARY

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	0	18	4	0	1
CADMIUM (CD), UG/L	4	6	10	4	0	5
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	80	4	4	10
IRON (FE), UG/L	4	60	180	4	0	20
LEAD (PB), UG/L	4	88	100	4	3	19
MANGANESE (MN), UG/L	4	10	10	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	0	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	3.90	10.00			
BIOMASS, ASH WT., G/SQ M	2	0.70	8.10			
CHLOROPHYLL A, MG/SQ M	2	2.000	6.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	1.000			
ORGANIC CARBON, MG/L	4	1.600	16.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	8.39	4.90	2.5	15.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	136.8	25.0	99	173					
STREAMFLOW (CUBIC FT/SEC)	12	106200.0	36384.7	65500	171000	12	-501.619	174796.438	-0.344*	35825.0
PH (STANDARD UNITS)	12	7.36	0.27	7.0	7.8	12	0.0006	7.2754	0.055*	0.29
PHOSPHORUS, TOTAL	12	0.032	0.013	0.01	0.05	12	0.00033	-0.01324	0.647	0.010
NITRITE + NITRATE, TOTAL	12	0.083	0.031	0.02	0.13	12	0.00066	-0.00689	0.524*	0.028
NITROGEN, KJELDAHL, TOTAL	12	0.185	0.049	0.11	0.26	12	0.00022	0.15542	0.111*	0.051
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1716.7	1100.4	360	3900	12	-3.310	2169.350	-0.075*	1150.8
SEDIMENT SUSPENDED	12	4.9	3.2	1	12					
SEDIMENT, CLAY-SILT (PERCENT)	12	86.9	14.5	47	99					
COLIFORM, FECAL (COL/100 ML)	12	14.2	25.3	<1	68					
STREPTOCOCCI, FECAL (COL/100 ML)	12	2.9	2.5	<1	8					
SILICA, DISSOLVED	12	4.68	0.77	3.6	6.1	12	0.0162	2.4617	0.527*	0.69
CALCIUM, DISSOLVED	12	21.25	3.60	17.0	26.0	12	0.1245	4.2266	0.865	1.89
MAGNESIUM, DISSOLVED	12	4.54	0.91	2.9	5.7	12	0.0317	0.2115	0.872	0.47
SODIUM, DISSOLVED	12	1.77	0.36	1.1	2.2	12	0.0104	0.3386	0.730	0.26
POTASSIUM, DISSOLVED	12	0.77	0.13	0.6	1.0	12	0.0045	0.1591	0.874	0.07
BICARBONATE, ION	12	74.8	10.6	58	88	12	0.348	27.184	0.824	6.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	12.43	3.65	7.6	20.0	12	0.1064	-2.1114	0.727	2.63
CHLORIDE, DISSOLVED	12	1.07	0.42	0.6	2.0	12	0.0077	0.0269	0.451*	0.40
DISSOLVED SOLIDS, SUM OF CONST	12	83.7	13.5	63	105	12	0.478	18.242	0.883	6.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	84.2	13.1	63	98	12	0.425	26.041	0.814	8.0
HARDNESS, TOTAL	12	71.7	12.3	54	91	12	0.441	11.400	0.898	5.6
HARDNESS, NONCARBONATE	12	10.3	5.0	5	22	12	0.154	-10.758	0.768	3.4
TURBIDITY (JTU)	11	1.8	0.8	1	3	11	0.013	0.075	0.432*	0.7
FLUORIDE, DISSOLVED	12	0.21	0.14	0.1	0.6	12	0.0037	-0.2960	0.668	0.11

*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%
	238	219	167	154	149	135	116	103	100	99

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	8.72	6.64	2.40	96	0.99

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	4	0	0
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	0	<50	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	5
IRON (FE), UG/L	4	20	110	4	0	10
LEAD (PB), UG/L	4	0	<100	4	2	6
MANGANESE (MN), UG/L	4	10	10	4	0	10
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	60	4	10	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.15	11.00			
BIOMASS, ASH WT., G/SQ M	3	0.08	8.60			
CHLOROPHYLL A, MG/SQ M	3	0.200	41.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.300			
ORGANIC CARBON, MG/L	4	1.100	2.300			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 12433000 NAME: SPOKANE RIVER AT LONG LAKE, WASH

LAT 47D50M18S LONG 117051M05S
DRAINAGE AREA: 6020 SQ MI (15592 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	9.83	6.21	3.2	19.8					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	117.9	38.6	63	177					
STREAMFLOW (CUBIC FT/SEC)	12	8915.8	7175.5	3000	27900	12	-96.973	20350.590	-0.521*	6421.7
PH (STANDARD UNITS)	12	7.31	0.26	6.9	7.8	12	0.0005	7.2550	0.066*	0.28
PHOSPHORUS, TOTAL	12	0.068	0.030	0.03	0.12	12	0.00013	0.05308	0.168*	0.031
NITRITE + NITRATE, TOTAL	12	0.344	0.177	0.05	0.64	12	0.00242	0.05851	0.528*	0.158
NITROGEN, KJELDAHL, TOTAL	12	0.410	0.102	0.24	0.55	12	0.00142	0.24292	0.536*	0.090
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8900.0	5763.7	1200	18000	12	-58.994	15856.344	-0.395*	5553.6
SEDIMENT SUSPENDED	12	12.4	13.0	2	44					
SEDIMENT, CLAY-SILT (PERCENT)	12	94.3	8.2	76	100					
COLIFORM, FECAL (COL/100 ML)	11	91.4	123.8	<1	390					
STREPTOCOCCI, FECAL (COL/100 ML)	12	115.8	210.2	<1	720					
SILICA, DISSOLVED	12	8.33	0.92	6.8	10.0	12	-0.0089	9.3818	-0.373*	0.90
CALCIUM, DISSOLVED	12	13.42	4.34	8.3	20.0	12	0.0854	3.3500	0.759	2.97
MAGNESIUM, DISSOLVED	12	4.72	1.59	2.5	7.3	12	0.0352	0.5625	0.857	0.86
SODIUM, DISSOLVED	12	2.72	0.54	1.9	3.7	12	0.0106	1.4691	0.757	0.37
POTASSIUM, DISSOLVED	12	1.22	0.29	0.8	1.6	12	0.0035	0.8100	0.464*	0.27
BICARBONATE, ION	12	55.3	18.9	22	86	12	0.400	8.194	0.817	11.4
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	10.09	1.90	6.2	13.0	12	0.0190	7.8563	0.385*	1.84
CHLORIDE, DISSOLVED	12	2.84	2.67	0.1	9.8	12	0.0263	-0.2612	0.380*	2.59
DISSOLVED SOLIDS, SUM OF CONST	12	70.8	17.0	50	99	12	0.367	27.425	0.836	9.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	73.5	19.1	46	107	12	0.358	31.307	0.722	13.9
HARDNESS, TOTAL	12	52.9	16.9	31	80	12	0.355	11.024	0.811	10.4
HARDNESS, NONCARBONATE	12	7.5	3.7	3	14	12	0.033	3.586	0.348*	3.6
TURBIDITY (JTU)	12	8.4	9.7	1	30	12	-0.035	12.584	-0.141*	10.0
FLUORIDE, DISSOLVED	12	0.11	0.03	0.1	0.2	12	-0.0000	0.1140	-0.065*	0.03

*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%
	180	175	171	154	140	117	99	63	57	54

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
331	10.03	8.07	2.49	97	1.02

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	2
CADMIUM (CD), UG/L	4	0	<10	4	0	15
CHROMIUM (CR), UG/L	4	0	30	4	0	<10
COBALT (CO), UG/L	4	1	50	4	0	2
COPPER (CU), UG/L	4	0	10	4	2	21
IRON (FE), UG/L	4	30	2800	4	10	150
LEAD (PB), UG/L	4	15	<100	4	3	4
MANGANESE (MN), UG/L	4	10	110	4	0	90
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	30	150	4	20	130
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	1.50				
BIOMASS, ASH WT., G/SQ M	1	0.50				
CHLOROPHYLL A, MG/SQ M	1	4.800				
CHLOROPHYLL B, MG/SQ M	1	1.500				
ORGANIC CARBON, MG/L	4	1.300	3.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	10.88	6.44	2.5	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	198.3	78.0	104	327					
STREAMFLOW (CUBIC FT/SEC)	12	5312.5	3349.4	2000	12000	12	-34.855	12222.563	-0.812	2052.4
PH (STANDARD UNITS)	11	7.71	0.39	7.0	8.3	11	0.0011	7.4750	0.233*	0.40
PHOSPHORUS, TOTAL	12	0.105	0.023	0.07	0.14	12	0.00018	0.06851	0.620	0.019
NITRITE + NITRATE, TOTAL	12	0.637	0.266	0.33	1.20	12	0.00277	0.08742	0.812	0.163
NITROGEN, KJELDAHL, TOTAL	12	0.365	0.074	0.25	0.47	12	0.00045	0.27573	0.477*	0.068
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4315.8	2713.1	590	7800	12	24.867	-614.004	0.715	1990.0
SEDIMENT SUSPENDED	12	54.6	45.5	16	180					
SEDIMENT, CLAY-SILT (PERCENT)	11	77.5	10.8	61	94					
COLIFORM, FECAL (COL/100 ML)	12	1146.4	2822.7	37	10000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	11323.7	24793.7	28	74000					
SILICA, DISSOLVED	12	19.08	2.75	14.0	23.0	12	0.0290	13.3296	0.824	1.63
CALCIUM, DISSOLVED	12	19.00	5.92	12.0	28.0	12	0.0674	5.6301	0.888	2.86
MAGNESIUM, DISSOLVED	12	6.60	2.03	3.9	10.0	12	0.0228	2.0791	0.876	1.03
SODIUM, DISSOLVED	12	11.07	4.28	6.0	18.0	12	0.0497	1.2254	0.906	1.90
POTASSIUM, DISSOLVED	12	2.12	0.79	1.1	3.4	12	0.0088	0.3712	0.872	0.40
BICARBONATE, ION	12	100.4	31.1	60	147	12	0.357	29.713	0.894	14.7
CARBONATE, ION	10	0.0	0.0	0	0	10	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.86	4.35	4.6	16.0	12	0.0509	-0.2263	0.913	1.86
CHLORIDE, DISSOLVED	12	4.21	1.87	1.5	8.0	12	0.0191	0.4214	0.796	1.19
DISSOLVED SOLIDS, SUM OF CONST	12	121.5	36.8	75	177	12	0.423	37.614	0.897	17.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	123.1	39.1	72	182	12	0.466	30.784	0.928	15.3
HARDNESS, TOTAL	12	74.1	22.2	46	110	12	0.255	23.600	0.894	10.4
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	9.0	4.0	4	17	12	-0.031	15.163	-0.613	3.3
FLUORIDE, DISSOLVED	12	0.14	0.05	0.1	0.2	12	0.0006	0.0223	0.912	0.02

*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%
	340	324	315	290	267	185	148	120	115	111

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
360	10.58	8.33	2.70	94	1.51

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0
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	10	4	1	13
IRON (FE), UG/L	4	730	1800	4	20	50
LEAD (PB), UG/L	4	<100	100	4	2	4
MANGANESE (MN), UG/L	4	30	60	4	0	20
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	0	90	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.00	7.70			
BIOMASS, ASH WT., G/SQ M	4	0.00	4.90			
CHLOROPHYLL A, MG/SQ M	4	0.000	16.600			
CHLOROPHYLL B, MG/SQ M	4	0.000	2.500			
ORGANIC CARBON, MG/L	3	1.300	3.100			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	16	6.38	5.50	0.0	15.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	16	291.4	68.9	230	430					
STREAMFLOW (CUBIC FT/SEC)	16	6115.0	5159.6	1500	17900	16	-52.171	21316.422	-0.696	3833.9
PH (STANDARD UNITS)	12	7.81	0.17	7.4	8.0	12	-0.0008	6.0616	-0.368*	0.16
PHOSPHORUS, TOTAL	12	0.022	0.038	0.00	0.14	12	-0.00021	0.08691	-0.409*	0.037
NITRITE + NITRATE, TOTAL	10	0.068	0.068	0.00	0.24	10	-0.00021	0.13206	-0.238*	0.070
NITROGEN, KJELDAHL, TOTAL	10	0.356	0.297	0.02	0.98	10	-0.00114	0.70768	-0.299*	0.301
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	929.1	661.1	330	2400	11	-2.230	1604.162	-0.262*	672.6
SEDIMENT SUSPENDED	11	62.5	133.5	4	457					
SEDIMENT, CLAY-SILT (PERCENT)	10	58.2	20.2	38	88					
COLIFORM, FECAL (COL/100 ML)	12	21.0	12.6	4	42					
STREPTOCOCCI, FECAL (COL/100 ML)	9	9.1	13.7	<1	41					
SILICA, DISSOLVED	12	11.84	1.73	9.4	15.0	12	0.0033	10.8417	0.141*	1.79
CALCIUM, DISSOLVED	12	39.50	9.42	25.0	49.0	12	0.1039	7.8221	0.820	5.66
MAGNESIUM, DISSOLVED	12	9.23	2.28	5.7	12.0	12	0.0262	1.2538	0.852	1.26
SODIUM, DISSOLVED	12	10.01	4.77	5.9	24.0	12	0.0043	8.6952	0.067*	4.99
POTASSIUM, DISSOLVED	12	2.26	0.93	1.4	4.9	12	0.0017	1.7321	0.139*	0.96
BICARBONATE, ION	12	130.6	21.1	97	150	12	0.242	56.852	0.853	11.5
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	42.58	17.88	13.0	60.0	12	0.1805	-12.4771	0.751	12.38
CHLORIDE, DISSOLVED	12	6.48	5.16	1.8	20.0	12	0.0093	3.6564	0.133*	5.37
DISSOLVED SOLIDS, SUM OF CONST	12	187.6	44.1	128	230	12	0.446	51.549	0.752	30.5
DISSOLVED SOLIDS, ROE 180 DEG C	0									
HARDNESS, TOTAL	12	137.4	33.7	87	170	12	0.382	20.980	0.842	19.1
HARDNESS, NONCARBONATE	12	30.3	18.0	5	55	12	0.184	-25.938	0.763	12.2
TURBIDITY (JTU)	12	7.2	12.6	0	45	12	-0.059	25.011	-0.344*	12.4
FLUORIDE, DISSOLVED	12	0.52	0.13	0.4	0.9	12	-0.0003	0.6019	-0.155*	0.14

*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%
	375	363	358	351	344	328	249	214	208	200

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	6.03	6.33	2.58	89	1.59

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	10	4	3	7
CADMIUM (CD), UG/L	4	0	<10	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	4	0	10	4	1	3
IRON (FE), UG/L	4	30	380	4	0	30
LEAD (PB), UG/L	4	<100	100	4	3	8
MANGANESE (MN), UG/L	4	0	30	4	0	0
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	0	50	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	3	1.900	8.800			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	13.00	6.33	6.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	489.4	61.6	421	633					
STREAMFLOW (CUBIC FT/SEC)	12	13292.5	6558.8	6410	26800	12	-41.778	33739.297	-0.392*	6328.1
PH (STANDARD UNITS)	12	8.37	0.15	8.1	8.7	12	0.0005	8.1250	0.203*	0.15
PHOSPHORUS, TOTAL	12	0.090	0.051	0.05	0.24	12	-0.00006	0.12124	-0.077*	0.054
NITRITE + NITRATE, TOTAL	12	0.927	0.328	0.38	1.30	12	0.00076	0.55659	0.142*	0.341
NITROGEN, KJELDAHL, TOTAL	12	0.494	0.149	0.33	0.78	12	-0.00037	0.67465	-0.153*	0.154
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	4324.0	3500.1	840	11000	10	-34.810	20942.469	-0.458*	3300.5
SEDIMENT SUSPENDED	12	35.6	57.6	8	216					
SEDIMENT, CLAY-SILT (PERCENT)	12	81.8	26.7	9	99					
COLIFORM, FECAL (COL/100 ML)	12	41.8	34.3	6	127					
STREPTOCOCCI, FECAL (COL/100 ML)	12	110.5	120.7	9	376					
SILICA, DISSOLVED	12	27.08	5.02	17.0	33.0	12	0.0536	0.8552	0.657	3.97
CALCIUM, DISSOLVED	12	45.92	2.94	41.0	50.0	12	-0.0025	47.1565	-0.053*	3.08
MAGNESIUM, DISSOLVED	12	17.75	1.71	15.0	20.0	12	0.0198	8.0594	0.712	1.26
SODIUM, DISSOLVED	12	26.50	3.85	20.0	32.0	12	0.0450	4.4885	0.719	2.81
POTASSIUM, DISSOLVED	12	4.38	0.52	3.4	4.9	12	0.0041	2.3661	0.489*	0.47
BICARBONATE, ION	12	171.4	82.7	7	244	12	-0.268	302.594	-0.199*	85.0
CARBONATE, ION	12	24.9	40.5	0	108	12	0.212	-78.928	0.322*	40.2
SULFATE, DISSOLVED	12	47.08	7.62	34.0	61.0	12	0.0648	15.3597	0.524*	6.81
CHLORIDE, DISSOLVED	12	22.58	3.42	17.0	28.0	12	0.0338	6.0605	0.607	2.85
DISSOLVED SOLIDS, SUM OF CONST	12	301.3	25.4	258	328	12	0.298	155.407	0.723	18.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	299.8	22.3	257	329	12	0.232	186.254	0.641	17.9
HARDNESS, TOTAL	12	186.7	11.5	170	200	12	0.055	159.815	0.292*	11.6
HARDNESS, NONCARBONATE	12	7.8	12.6	0	41	12	-0.043	28.819	-0.210*	12.9
TURBIDITY (JTU)	12	5.8	3.3	0	10	12	-0.011	11.301	-0.215*	3.3
FLUORIDE, DISSOLVED	12	0.62	0.08	0.5	0.8	12	-0.0001	0.6499	-0.042*	0.08

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 365

	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	528	518	515	511	503	488	467	426	417	407

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
362	12.03	6.99	2.69	95	1.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	6	4	3	4
CADMIUM (CD), UG/L	4	1	<10	4	1	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	1	<50	4	0	2
COPPER (CU), UG/L	4	0	10	4	0	5
IRON (FE), UG/L	4	50	530	4	10	40
LEAD (PB), UG/L	4	6	<100	4	4	10
MANGANESE (MN), UG/L	4	20	40	4	10	10
MERCURY (HG), UG/L	4	0.1	1.7	4	0.0	1.3
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	60	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	38.10	150.00			
BIOMASS, ASH WT., G/SQ M	3	31.50	130.00			
CHLOROPHYLL A, MG/SQ M	3	46.000	80.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	11.000			
ORGANIC CARBON, MG/L	4	1.400	65.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	10.75	7.33	2.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	390.8	144.6	143	531					
STREAMFLOW (CUBIC FT/SEC)	12	3048.0	3739.5	624	13900	12	-5.443	5175.457	-0.210*	3834.1
PH (STANDARD UNITS)	12	7.90	0.39	7.2	8.3	12	0.0023	6.9816	0.875	0.20
PHOSPHORUS, TOTAL	12	0.251	0.101	0.11	0.42	12	0.00061	0.01190	0.876	0.051
NITRITE + NITRATE, TOTAL	12	1.495	0.670	0.56	2.60	12	0.00364	0.07242	0.785	0.435
NITROGEN, KJELDAHL, TOTAL	12	0.669	0.231	0.31	1.10	12	0.00125	0.18234	0.779	0.152
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	3890.9	1986.7	2400	9000	11	0.029	3879.474	0.002*	2094.1
SEDIMENT SUSPENDED	12	108.8	121.9	9	467					
SEDIMENT, CLAY-SILT (PERCENT)	10	64.4	34.9	7	97					
COLIFORM, FECAL (COL/100 ML)	11	427.6	290.2	160	1180					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1017.8	848.1	105	2616					
SILICA, DISSOLVED	12	24.58	6.22	14.0	32.0	12	0.0419	8.1969	0.975	1.44
CALCIUM, DISSOLVED	12	32.92	11.22	14.0	45.0	12	0.0761	3.1579	0.981	2.27
MAGNESIUM, DISSOLVED	12	8.71	3.46	3.0	13.0	12	0.0234	-0.4427	0.980	0.72
SODIUM, DISSOLVED	12	40.00	17.34	11.0	57.0	12	0.1190	-6.5225	0.992	2.22
POTASSIUM, DISSOLVED	12	3.73	1.29	1.6	5.7	12	0.0085	0.4176	0.949	0.43
BICARBONATE, ION	12	185.4	69.3	73	261	12	0.472	0.836	0.986	12.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	40.42	18.81	10.0	64.0	12	0.1230	-7.6707	0.946	6.40
CHLORIDE, DISSOLVED	12	12.58	5.41	4.0	19.0	12	0.0366	-1.7324	0.979	1.15
DISSOLVED SOLIDS, SUM OF CONST	12	254.7	96.7	94	356	12	0.661	-3.741	0.989	15.1
DISSOLVED SOLIDS, ROE 180 DEG C	12	255.3	92.8	105	350	12	0.637	6.152	0.993	11.7
HARDNESS, TOTAL	12	117.9	42.5	47	170	12	0.288	5.420	0.979	9.2
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	11.6	8.2	2	31	12	0.015	5.577	0.271*	8.3
FLUORIDE, DISSOLVED	12	0.42	0.09	0.3	0.5	12	0.0005	0.2336	0.818	0.05

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE   SAMPLE SIZE = 121

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%
	543	535	532	526	522	517	508	472	331	186

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
121	11.23	8.23	2.66	90	1.38

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	5	13	4	4	11
CADMIUM (CD), UG/L	4	1	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	10
COBALT (CO), UG/L	4	2	<50	4	0	0
COPPER (CU), UG/L	4	0	10	4	4	10
IRON (FE), UG/L	4	150	1500	4	10	50
LEAD (PB), UG/L	4	6	<100	4	1	2
MANGANESE (MN), UG/L	4	50	80	4	0	30
MERCURY (HG), UG/L	4	0.1	4.2	4	0.0	2.1
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	40	4	10	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	8.31	150.00			
BIOMASS, ASH WT., G/SQ M	3	6.69	140.00			
CHLOROPHYLL A, MG/SQ M	3	7.600	130.000			
CHLOROPHYLL B, MG/SQ M	3	0.000	1.800			
ORGANIC CARBON, MG/L	4	2.300	6.500			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.13	7.55	1.0	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	479.1	61.1	375	556					
STREAMFLOW (CUBIC FT/SEC)	13	17780.8	8625.3	7250	36200	12	-91.708	62331.383	-0.644	6985.7
PH (STANDARD UNITS)	10	8.55	0.40	7.5	8.9	10	-0.0008	8.9360	-0.135*	0.42
PHOSPHORUS, TOTAL	12	0.093	0.026	0.06	0.14	12	0.00003	0.07706	0.079*	0.028
NITRITE + NITRATE, TOTAL	12	0.878	0.335	0.29	1.30	12	0.00461	-1.33235	0.841	0.190
NITROGEN, KJELDAHL, TOTAL	12	0.612	0.117	0.46	0.88	12	-0.00035	0.77868	-0.182*	0.121
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	15536.4	10342.6	3000	34000	11	-57.231	42861.332	-0.353*	10199.0
SEDIMENT SUSPENDED	12	39.5	20.2	9	87					
SEDIMENT, CLAY-SILT (PERCENT)	11	71.1	21.3	39	96					
COLIFORM, FECAL (COL/100 ML)	11	112.5	83.4	14	253					
STREPTOCOCCI, FECAL (COL/100 ML)	10	497.0	697.0	51	2339					
SILICA, DISSOLVED	12	23.08	5.43	13.0	29.0	12	0.0746	-12.6488	0.839	3.10
CALCIUM, DISSOLVED	12	43.75	5.67	34.0	52.0	12	0.0565	16.6850	0.609	4.72
MAGNESIUM, DISSOLVED	12	16.08	2.50	13.0	19.0	12	0.0362	-1.2694	0.885	1.22
SODIUM, DISSOLVED	12	32.67	7.60	21.0	43.0	12	0.0994	-14.9347	0.800	4.78
POTASSIUM, DISSOLVED	12	4.64	0.67	3.6	5.4	12	0.0084	0.6177	0.764	0.45
BICARBONATE, ION	12	161.9	55.7	54	234	12	0.638	-143.634	0.700	41.7
CARBONATE, ION	12	24.3	23.0	0	67	12	-0.113	78.272	-0.300*	23.0
SULFATE, DISSOLVED	12	53.50	13.04	33.0	78.0	12	0.1376	-12.4128	0.645	10.45
CHLORIDE, DISSOLVED	12	22.42	5.16	16.0	34.0	12	0.0655	-8.9761	0.776	3.41
DISSOLVED SOLIDS, SUM OF CONST	12	300.5	43.8	218	366	12	0.688	-29.217	0.961	12.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	304.0	37.5	239	363	12	0.577	27.506	0.942	13.2
HARDNESS, TOTAL	12	175.8	20.2	140	210	12	0.280	41.640	0.847	11.3
HARDNESS, NONCARBONATE	12	6.8	9.2	0	28	12	-0.033	22.749	-0.221*	9.4
TURBIDITY (JTU)	12	9.3	4.8	3	15	12	-0.036	26.595	-0.460*	4.5
FLUORIDE, DISSOLVED	12	0.61	0.05	0.5	0.7	12	0.0001	0.5700	0.095*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
86	12.67	9.72	2.81	88	1.58

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	6
CADMIUM (CD), UG/L	4	1	<10	4	1	2
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	4	1	<50	4	0	2
COPPER (CU), UG/L	4	0	10	4	0	11
IRON (FE), UG/L	4	540	1100	4	10	40
LEAD (PB), UG/L	4	10	<100	4	3	12
MANGANESE (MN), UG/L	4	30	60	4	10	20
MERCURY (HG), UG/L	4	0.1	0.5	4	0.0	0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	50	4	0	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	50.00	61.00			
BIOMASS, ASH WT., G/SQ M	2	44.00	57.00			
CHLOROPHYLL A, MG/SQ M	2	63.000	100.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.400			
ORGANIC CARBON, MG/L	4	2.000	7.100			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	11.14	6.95	3.0	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	400.5	86.6	281	518					
STREAMFLOW (CUBIC FT/SEC)	11	26500.0	9778.9	12200	45600	11	-4.110	28146.219	-0.036*	10300.9
PH (STANDARD UNITS)	11	8.25	0.19	8.0	8.6	11	-0.0008	8.5831	-0.361*	0.19
PHOSPHORUS, TOTAL	11	0.057	0.021	0.03	0.10	11	0.00014	0.00256	0.576*	0.018
NITRITE + NITRATE, TOTAL	11	0.665	0.383	0.19	1.20	11	0.00399	-0.93239	0.903	0.173
NITROGEN, KJELDAHL, TOTAL	11	0.365	0.153	0.20	0.69	11	0.00048	0.17298	0.272*	0.155
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2936.0	4931.2	110	16000	10	-22.506	12026.340	-0.413*	4763.4
SEDIMENT SUSPENDED	0									
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	11	2.1	2.0	<1	6					
STREPTOCOCCI, FECAL (COL/100 ML)	11	20.2	22.4	0	71					
SILICA, DISSOLVED	11	18.93	6.77	8.5	27.0	11	0.0683	-8.4286	0.673	3.48
CALCIUM, DISSOLVED	11	36.18	6.18	30.0	43.0	11	0.0674	9.1826	0.945	2.14
MAGNESIUM, DISSOLVED	11	12.65	2.70	9.2	17.0	11	0.0296	0.7862	0.948	0.90
SODIUM, DISSOLVED	11	27.18	7.96	16.0	39.0	11	0.0808	-5.1949	0.879	4.00
POTASSIUM, DISSOLVED	11	3.93	0.74	2.8	5.0	11	0.0070	1.1170	0.817	0.45
BICARBONATE, ION	11	170.0	49.6	98	254	11	0.535	-44.480	0.934	18.6
CARBONATE, ION	11	4.5	8.6	0	26	11	-0.030	16.676	-0.305*	8.6
SULFATE, DISSOLVED	11	43.27	12.01	28.0	60.0	11	0.1058	0.8923	0.763	8.19
CHLORIDE, DISSOLVED	11	15.73	4.34	10.0	23.0	11	0.0462	-2.7873	0.922	1.77
DISSOLVED SOLIDS, SUM OF CONST	11	246.7	57.6	177	340	11	0.641	-9.851	0.963	16.3
DISSOLVED SOLIDS, RDE 180 DEG C	11	243.6	55.9	170	338	11	0.612	-1.410	0.947	18.9
HARDNESS, TOTAL	11	144.5	25.0	120	180	11	0.278	33.346	0.960	7.4
HARDNESS, NONCARBONATE	11	2.5	4.2	0	12	11	-0.022	11.308	-0.450*	4.0
TURBIDITY (JTU)	11	3.0	2.6	1	10	11	-0.012	7.688	-0.389*	2.5
FLUORIDE, DISSOLVED	11	0.51	0.08	0.4	0.7	11	0.0606	0.2806	0.594*	0.07

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	3	5	3	3	5
CADMIUM (CD), UG/L	3	1	<10	3	1	1
CHROMIUM (CR), UG/L	3	0	10	3	0	<10
COBALT (CO), UG/L	3	1	<50	3	0	0
COPPER (CU), UG/L	3	0	<10	3	0	3
IRON (FE), UG/L	3	130	310	3	10	20
LEAD (PB), UG/L	3	10	<100	3	6	8
MANGANESE (MN), UG/L	3	20	30	3	0	20
MERCURY (HG), UG/L	3	0.5	0.7	3	0.3	0.8
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	0	40	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.10	4.40			
BIOMASS, ASH WT., G/SQ M	2	0.00	2.10			
CHLOROPHYLL A, MG/SQ M	2	0.000	34.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	2	1.600	2.300			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	9.88	6.20	2.5	21.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	134.1	43.7	58	193					
STREAMFLOW (CUBIC FT/SEC)	14	17387.1	20069.2	4590	63100	13	-428.677	75650.313	-0.907	9102.8
PH (STANDARD UNITS)	12	7.79	0.29	7.2	8.3	12	0.0043	7.1826	0.581	0.25
PHOSPHORUS, TOTAL	12	0.046	0.053	0.00	0.16	12	-0.00006	0.05383	-0.042*	0.056
NITRITE + NITRATE, TOTAL	12	0.076	0.050	0.00	0.15	12	0.00030	0.03351	0.239*	0.051
NITROGEN, KJELDAHL, TOTAL	12	0.272	0.148	0.08	0.66	12	0.00090	0.14546	0.238*	0.151
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2391.8	4001.5	240	14000	11	59.860	-5841.707	0.599*	3378.9
SEDIMENT SUSPENDED	12	44.1	70.5	3	226					
SEDIMENT, CLAY-SILT (PERCENT)	9	72.8	19.9	50	99					
COLIFORM, FECAL (COL/100 ML)	12	17.5	12.8	3	42					
STREPTOCOCCI, FECAL (COL/100 ML)	12	41.6	40.8	0	151					
SILICA, DISSOLVED	11	13.82	0.98	12.0	15.0	11	0.0129	11.9453	0.490*	0.90
CALCIUM, DISSOLVED	12	17.01	4.20	8.1	21.0	12	0.1024	2.6417	0.958	1.27
MAGNESIUM, DISSOLVED	12	3.67	1.23	1.2	4.9	12	0.0280	-0.2654	0.895	0.58
SODIUM, DISSOLVED	12	6.08	2.12	2.1	8.7	12	0.0514	-1.1203	0.950	0.69
POTASSIUM, DISSOLVED	12	1.38	0.40	0.8	2.2	12	0.0077	0.3014	0.767	0.27
BICARBONATE, ION	12	75.1	19.9	32	100	12	0.467	9.555	0.921	8.2
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	10.87	2.29	6.2	15.0	11	-0.0045	11.5195	-0.072*	2.41
CHLORIDE, DISSOLVED	11	2.70	1.15	1.6	5.5	11	0.0150	0.5300	0.486*	1.05
DISSOLVED SOLIDS, SUM OF CONST	11	94.5	19.0	46	111	11	0.485	24.103	0.949	6.3
DISSOLVED SOLIDS, ROE 180 DEG C	12	92.8	23.5	48	116	12	0.547	16.018	0.914	10.0
HARDNESS, TOTAL	12	57.6	15.5	25	73	12	0.374	5.147	0.949	5.1
HARDNESS, NONCARBONATE	12	0.8	1.9	0	6	12	0.013	-1.140	0.284*	1.9
TURBIDITY (JTU)	12	7.3	11.9	1	43	12	-0.027	11.051	-0.088*	12.4
FLUORIDE, DISSOLVED	11	0.31	0.05	0.2	0.4	11	0.0008	0.1869	0.582*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	9.73	7.95	2.55	87	2.45

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

13317000 -- SALMON RIVER AT WHITEBIRD, IDAHO

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	2	3	4	1	2
CADMIUM (CD), UG/L	4	1	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	10	4	0	<10
COBALT (CO), UG/L	4	1	<50	4	0	2
COPPER (CU), UG/L	4	0	10	4	0	5
IRON (FE), UG/L	4	240	2700	4	20	60
LEAD (PB), UG/L	4	12	100	4	3	8
MANGANESE (MN), UG/L	4	10	80	4	0	50
MERCURY (HG), UG/L	4	0.0	0.6	4	0.0	0.8
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	40	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	3	1.400	5.300			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, K	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.17	6.38	3.5	20.7					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	196.1	59.3	108	269					
STREAMFLOW (CUBIC FT/SEC)	12	71858.3	39543.2	33400	168000	12	-348.877	140267.250	-0.523*	35343.3
PH (STANDARD UNITS)	12	7.89	0.21	7.5	8.2	12	0.0001	7.8668	0.036*	0.22
PHOSPHORUS, TOTAL	12	0.073	0.036	0.03	0.14	12	0.00019	0.03604	0.311*	0.036
NITRITE + NITRATE, TOTAL	12	0.401	0.304	0.00	0.79	12	0.00366	-0.31633	0.714	0.223
NITROGEN, KJELDAHL, TOTAL	12	0.338	0.152	0.18	0.61	12	0.00084	0.17360	0.328*	0.151
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	2260.0	2149.2	560	6900	12	-21.227	6422.234	-0.586	1827.0
SEDIMENT SUSPENDED	12	22.4	18.3	6	59					
SEDIMENT, CLAY-SILT (PERCENT)	12	98.2	2.9	91	100					
COLIFORM, FECAL (COL/100 ML)	12	8.8	11.8	<1	39					
STREPTOCOCCI, FECAL (COL/100 ML)	11	29.7	45.1	3	160					
SILICA, DISSOLVED	12	15.57	4.21	9.8	21.0	12	0.0426	7.2183	0.599	3.54
CALCIUM, DISSOLVED	12	19.58	5.05	11.0	27.0	12	0.0608	3.7465	0.948	1.69
MAGNESIUM, DISSOLVED	12	6.29	2.11	3.1	9.8	12	0.0320	0.0155	0.901	0.96
SODIUM, DISSOLVED	12	13.65	4.90	6.5	20.0	12	0.0798	-1.9984	0.966	1.34
POTASSIUM, DISSOLVED	12	2.21	0.59	1.2	2.9	12	0.0093	0.3781	0.938	0.21
BICARBONATE, ION	12	91.2	25.1	52	126	12	0.412	10.458	0.974	6.0
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	19.43	7.34	8.2	30.0	12	0.1221	-4.5112	0.987	1.25
CHLORIDE, DISSOLVED	12	7.48	2.87	3.3	12.0	12	0.0474	-1.8097	0.981	0.58
DISSOLVED SOLIDS, SUM OF CONST	12	129.5	37.7	69	182	12	0.620	8.020	0.975	8.8
DISSOLVED SOLIDS, ROE 180 DEG C	12	134.4	40.6	76	205	12	0.645	8.020	0.938	14.9
HARDNESS, TOTAL	12	74.9	21.4	40	110	12	0.340	8.318	0.941	7.6
HARDNESS, NONCARBONATE	12	1.5	2.0	0	6	12	0.010	-0.464	0.300*	2.0
TURBIDITY (JTU)	12	10.7	9.8	2	30	12	0.045	1.926	0.268*	9.9
FLUORIDE, DISSOLVED	12	0.26	0.07	0.2	0.4	12	0.0010	0.0625	0.886	0.03

*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%
	317	287	268	255	249	207	148	96	93	91

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
322	11.19	8.82	2.37	96	1.29

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	4	4	1	4
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	60	4	0	0
COBALT (CO), UG/L	4	30	<50	4	0	2
COPPER (CU), UG/L	4	10	10	4	2	26
IRON (FE), UG/L	4	240	2700	4	0	140
LEAD (PB), UG/L	4	<100	<100	4	3	6
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	0	50	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.00	20.20			
BIOMASS, ASH WT., G/SQ M	3	0.00	18.50			
CHLOROPHYLL A, MG/SQ M	3	0.000	18.200			
CHLOROPHYLL B, MG/SQ M	3	0.000	0.000			
ORGANIC CARBON, MG/L	4	2.600	14.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	12.01	7.83	2.5	24.8					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	205.1	77.5	108	320					
STREAMFLOW (CUBIC FT/SEC)	12	1813.1	1927.7	201	6760	12	-18.594	5626.422	-0.747	1343.3
PH (STANDARD UNITS)	11	8.21	0.39	7.7	8.8	11	0.0027	7.6749	0.532*	0.34
PHOSPHORUS, TOTAL	12	0.052	0.045	0.01	0.16	12	-0.00009	0.07080	-0.154*	0.047
NITRITE + NITRATE, TOTAL	12	0.043	0.068	0.00	0.20	12	0.00010	0.02285	0.114*	0.071
NITROGEN, KJELDAHL, TOTAL	12	0.322	0.152	0.00	0.57	12	0.00002	0.31844	0.008*	0.159
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	2042.7	1611.7	380	5700	11	11.061	-323.233	0.512*	1458.8
SEDIMENT SUSPENDED	12	30.2	33.3	2	102					
SEDIMENT, CLAY-SILT (PERCENT)	11	82.5	13.5	58	98					
COLIFORM, FECAL (COL/100 ML)	12	39.3	43.6	2	168					
STREPTOCOCCI, FECAL (COL/100 ML)	12	93.3	190.5	9	680					
SILICA, DISSOLVED	12	23.07	6.54	8.8	29.0	12	-0.0517	33.6661	-0.612	5.42
CALCIUM, DISSOLVED	12	19.08	5.71	8.0	26.0	12	0.0704	4.6426	0.955	1.77
MAGNESIUM, DISSOLVED	12	8.55	2.81	4.7	13.0	12	0.0353	1.3027	0.976	0.64
SODIUM, DISSOLVED	12	11.29	4.66	5.5	20.0	12	0.0580	-0.6133	0.966	1.27
POTASSIUM, DISSOLVED	12	1.92	0.46	1.4	2.8	12	0.0054	0.8018	0.910	0.20
BICARBONATE, ION	12	121.6	37.9	65	174	12	0.482	22.806	0.985	7.0
CARBONATE, ION	11	0.7	1.4	0	4	11	0.014	-1.994	0.737	1.0
SULFATE, DISSOLVED	12	6.70	2.65	2.3	10.0	12	0.0312	0.2923	0.912	1.14
CHLORIDE, DISSOLVED	12	2.02	0.82	0.7	3.2	12	0.0088	0.2279	0.824	0.49
DISSOLVED SOLIDS, SUM OF CONST	12	133.4	32.2	87	176	12	0.406	50.129	0.978	7.0
DISSOLVED SOLIDS, RDE 180 DEG C	12	140.6	31.5	102	184	12	0.399	58.855	0.982	6.3
HARDNESS, TOTAL	12	82.5	25.3	39	120	12	0.318	17.238	0.976	5.7
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	8.5	11.4	0	40	12	0.010	6.443	0.068*	11.9
FLUORIDE, DISSOLVED	12	0.12	0.05	0.1	0.2	12	0.0002	0.0788	0.386*	0.04

*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%
	375	312	300	291	222	183	160	138	127	110

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.79	10.19	2.77	90	2.74

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	4	0	1
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	6	4	0	4
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	<10	30	4	2	7
IRON (FE), UG/L	4	100	2600	4	0	90
LEAD (PB), UG/L	4	<100	<100	4	0	3
MANGANESE (MN), UG/L	4	10	70	4	0	10
MERCURY (HG), UG/L	4	0.0	1.2	4	0.0	0.7
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	60	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	6.77	15.00			
BIOMASS, ASH WT., G/SQ M	2	4.77	14.00			
CHLOROPHYLL A, MG/SQ M	2	1.300	18.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	1.400			
ORGANIC CARBON, MG/L	4	3.500	5.500			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	11.36	4.57	6.0	19.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	125.2	19.7	103	161					
STREAMFLOW (CUBIC FT/SEC)	12	6173.3	966.2	4940	7765	12	-14.633	8004.859	-0.298*	967.4
PH (STANDARD UNITS)	11	8.30	0.37	7.7	8.8	11	0.0014	8.1292	0.077*	0.38
PHOSPHORUS, TOTAL	12	0.090	0.057	0.05	0.26	12	-0.00069	0.17672	-0.241*	0.058
NITRITE + NITRATE, TOTAL	12	0.107	0.079	0.00	0.22	12	0.00212	-0.15724	0.526*	0.071
NITROGEN, KJELDAHL, TOTAL	12	0.206	0.124	0.04	0.47	12	0.00385	-0.27595	0.612	0.103
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	2586.0	1794.1	690	5300	10	-62.762	10349.621	-0.564*	1545.3
SEDIMENT SUSPENDED	12	10.2	3.1	4	14					
SEDIMENT, CLAY-SILT (PERCENT)	12	60.1	16.7	21	85					
COLIFORM, FECAL (COL/100 ML)	12	5.9	5.3	1	17					
STREPTOCOCCI, FECAL (COL/100 ML)	11	8.2	7.5	1	28					
SILICA, DISSOLVED	12	27.08	1.62	25.0	30.0	12	0.0448	21.4732	0.544*	1.43
CALCIUM, DISSOLVED	12	8.33	1.39	7.0	12.0	12	-0.0046	8.9029	-0.064*	1.45
MAGNESIUM, DISSOLVED	12	5.06	0.63	4.2	6.2	12	0.0178	2.8541	0.557*	0.55
SODIUM, DISSOLVED	12	9.57	1.64	4.8	11.0	12	0.0546	2.7359	0.653	1.30
POTASSIUM, DISSOLVED	12	1.85	0.25	1.2	2.2	12	0.0061	1.0856	0.487*	0.23
BICARBONATE, ION	12	69.5	6.4	58	78	12	0.281	34.311	0.860	3.4
CARBONATE, ION	11	0.5	1.5	0	5	11	-0.026	3.732	-0.358*	1.5
SULFATE, DISSOLVED	12	2.83	0.82	1.0	4.2	12	0.0299	-0.9131	0.715	0.60
CHLORIDE, DISSOLVED	12	2.24	0.50	1.6	3.4	12	0.0170	0.1127	0.672	0.39
DISSOLVED SOLIDS, SUM OF CONST	12	91.9	6.1	81	103	12	0.273	57.693	0.880	3.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	92.1	7.1	82	104	12	0.197	67.365	0.550*	6.2
HARDNESS, TOTAL	12	41.8	4.3	35	50	12	0.055	34.856	0.254*	4.3
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	3.3	2.5	1	10	12	-0.027	6.587	-0.208*	2.6
FLUORIDE, DISSOLVED	12	0.12	0.05	0.1	0.2	12	0.0007	0.0383	0.301*	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%
	195	166	161	155	143	122	110	98	86	73

SUMMARY OF HARMONIC ANALYSIS OF STREAM TEMPERATURE
FORM OF EQUATION: T°(D) = M + A * SIN(.0172 * D + C)

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.21	5.75	2.60	85	1.97

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1	2
CADMIUM (CD), UG/L	4	<10	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	2	4	0	0
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	190	220	4	0	120
LEAD (PB), UG/L	4	<100	<100	4	1	3
MANGANESE (MN), UG/L	4	10	30	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	20	80	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	3.50	260.00			
BIOMASS, ASH WT., G/SQ M	3	2.70	260.00			
CHLOROPHYLL A, MG/SQ M	3	16.000	60.000			
CHLOROPHYLL B, MG/SQ M	3	0.300	1.400			
ORGANIC CARBON, MG/L	4	1.100	4.700			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 14113000   NAME: KLICKITAT R NR PITT OREG.

LAT 45D45M24S LONG 121D12M32S
DRAINAGE AREA: 1297 SQ MI (3359 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	7.97	3.97	1.7	12.8					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	65.1	9.1	48	77					
STREAMFLOW (CUBIC FT/SEC)	12	1865.8	827.1	1000	3400	12	-47.823	4978.309	-0.528*	736.4
PH (STANDARD UNITS)	12	7.64	0.24	7.1	8.0	12	0.0152	6.6530	0.590	0.20
PHOSPHORUS, TOTAL	12	0.048	0.024	0.02	0.12	12	0.00059	0.00997	0.220*	0.025
NITRITE + NITRATE, TOTAL	12	0.128	0.160	0.00	0.50	12	0.00020	0.11546	0.011*	0.167
NITROGEN, KJELDAHL, TOTAL	12	0.209	0.131	0.09	0.53	12	0.00016	0.19847	0.011*	0.138
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	566.9	360.8	13	1300	12	-6.633	998.596	-0.168*	373.0
SEDIMENT SUSPENDED	12	21.5	20.3	6	72					
SEDIMENT, CLAY-SILT (PERCENT)	12	44.7	32.7	5	94					
COLIFORM, FECAL (COL/100 ML)	12	14.9	13.5	5	51					
STREPTOCOCCI, FECAL (COL/100 ML)	11	12.0	9.5	4	30					
SILICA, DISSOLVED	12	25.33	2.64	20.0	28.0	12	0.2401	9.7044	0.831	1.54
CALCIUM, DISSOLVED	12	6.49	1.68	4.3	11.0	12	0.0702	1.9227	0.382*	1.63
MAGNESIUM, DISSOLVED	12	3.03	0.63	1.9	3.9	12	0.0478	-0.0808	0.693	0.48
SODIUM, DISSOLVED	12	3.60	0.60	2.6	4.3	12	0.0550	0.0230	0.841	0.34
POTASSIUM, DISSOLVED	12	1.40	0.27	1.0	1.9	12	0.0198	0.1110	0.671	0.21
BICARBONATE, ION	12	41.1	5.8	31	49	12	0.416	14.034	0.652	4.6
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	2.92	1.51	1.5	5.8	12	0.0571	-0.7918	0.346*	1.49
CHLORIDE, DISSOLVED	12	1.25	1.11	0.5	4.5	12	0.0130	0.4037	0.107*	1.16
DISSOLVED SOLIDS, SUM OF CONST	12	64.5	9.5	48	83	12	0.692	19.490	0.669	7.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	62.9	7.9	53	76	12	0.524	28.843	0.603	6.6
HARDNESS, TOTAL	12	28.8	6.1	19	43	12	0.368	4.793	0.548*	5.4
HARDNESS, NONCARBONATE	12	0.3	0.9	0	3	12	-0.007	0.693	-0.072*	0.9
TURBIDITY (JTU)	12	4.1	5.3	1	20	12	0.002	3.948	0.004*	5.5
FLUORIDE, DISSOLVED	12	0.16	0.15	0.1	0.6	12	0.0029	-0.0288	0.175*	0.16

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	8.09	4.97	2.81	88	1.50

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	7	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	70	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	0	10	4	2	6
IRON (FE), UG/L	4	150	2300	4	40	170
LEAD (PB), UG/L	4	<100	<100	4	2	11
MANGANESE (MN), UG/L	4	0	40	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	10	60	4	0	40
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.00	10.50			
BIOMASS, ASH WT., G/SQ M	2	0.00	8.31			
CHLOROPHYLL A, MG/SQ M	2	0.000	3.500			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	4	2.300	8.200			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 14128910 NAME: COLUMBIA RIVER AT WARRENDALE,OREG.

LAT 45D36M45S LONG 122D01M35S
DRAINAGE AREA: 240400 SQ MI (622636 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	11	10.78	5.68	4.0	19.3					
SPECIFIC CONDUCTANCE (MICROMHOS)	11	156.8	32.7	105	196					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	11	7.86	0.29	7.4	8.3	11	-0.0041	8.5129	-0.465*	0.27
PHOSPHORUS, TOTAL	11	0.049	0.012	0.03	0.07	11	0.00006	0.03971	0.160*	0.013
NITRITE + NITRATE, TOTAL	11	0.185	0.180	0.00	0.46	11	0.00347	-0.35900	0.631	0.147
NITROGEN, KJELDAHL, TOTAL	11	0.321	0.342	0.00	1.20	11	0.00578	-0.58535	0.552*	0.301
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	7123.0	5444.4	660	15000	10	-103.077	22914.406	-0.606*	4591.9
SEDIMENT SUSPENDED	11	13.0	5.1	6	21					
SEDIMENT, CLAY-SILT (PERCENT)	11	85.1	7.4	73	99					
COLIFORM, FECAL (COL/100 ML)	11	4.0	5.1	0	17					
STREPTOCOCCI, FECAL (COL/100 ML)	10	18.3	25.8	<1	83					
SILICA, DISSOLVED	11	9.60	3.16	4.4	13.0	11	0.0538	1.1637	0.555*	2.77
CALCIUM, DISSOLVED	11	18.36	2.87	13.0	22.0	11	0.0703	7.3318	0.800	1.82
MAGNESIUM, DISSOLVED	11	4.90	1.26	2.9	6.5	11	0.0317	-0.0771	0.826	0.75
SODIUM, DISSOLVED	11	6.20	2.34	2.8	9.1	11	0.0627	-3.6395	0.875	1.19
POTASSIUM, DISSOLVED	11	1.33	0.38	0.8	1.8	11	0.0099	-0.2268	0.859	0.20
BICARBONATE, ION	11	76.3	13.4	56	90	11	0.368	18.587	0.897	6.3
CARBONATE, ION	11	0.0	0.0	0	0	11	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	11	12.27	4.17	5.0	16.0	11	0.1098	-4.9430	0.860	2.24
CHLORIDE, DISSOLVED	11	3.25	1.33	1.5	5.6	11	0.0291	-1.3112	0.715	0.98
DISSOLVED SOLIDS, SUM OF CONST	11	93.6	20.8	63	113	11	0.551	7.300	0.864	11.0
DISSOLVED SOLIDS, RDE 180 DEG C	11	97.9	15.4	68	113	11	0.366	40.572	0.775	10.3
HARDNESS, TOTAL	11	66.1	12.0	44	79	11	0.307	17.948	0.834	7.0
HARDNESS, NONCARBONATE	11	3.9	3.0	0	11	11	0.001	3.706	0.014*	3.2
TURBIDITY (JTU)	11	7.3	4.0	2	15	11	0.036	1.666	0.290*	4.1
FLUORIDE, DISSOLVED	11	0.19	0.05	0.1	0.3	11	0.0008	0.0604	0.504*	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%
	208	199	193	183	177	161	133	115	111	109

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

14128910 -- COLUMBIA RIVER AT WARRENDALE,OREG.

CONSTITUENT	TOTAL NO. SAMPLES	TOTAL MINIMUM CONC.	TOTAL MAXIMUM CONC.	DISSOLVED NO. SAMPLES	DISSOLVED MINIMUM CONC.	DISSOLVED MAXIMUM CONC.
MINOR ELEMENTS:						
ARSENIC (AS), UG/L	4	1	2	4	1	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	0
COPPER (CU), UG/L	4	<10	20	4	2	8
IRON (FE), UG/L	4	390	850	4	10	70
LEAD (PB), UG/L	4	<100	<100	4	0	2
MANGANESE (MN), UG/L	4	20	30	4	0	4
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	30	70	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	8.10				
BIOMASS, ASH WT., G/SQ M	1	7.60				
CHLOROPHYLL A, MG/SQ M	1	37.000				
CHLOROPHYLL B, MG/SQ M	1	0.900				
ORGANIC CARBON, MG/L	3	2.800	5.800			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.17	5.23	6.0	20.3					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	120.3	37.5	72	180					
STREAMFLOW (CUBIC FT/SEC)	12	1551.8	1798.9	110	5488	12	-38.349	6163.242	-0.799	1135.0
PH (STANDARD UNITS)	12	7.24	0.34	6.7	7.8	12	-0.0007	7.3229	-0.075*	0.35
PHOSPHORUS, TOTAL	12	0.345	0.190	0.14	0.73	12	0.00458	-0.20544	0.904	0.085
NITRITE + NITRATE, TOTAL	12	1.126	0.235	0.78	1.60	12	0.00145	0.95175	0.231*	0.240
NITROGEN, KJELDAHL, TOTAL	12	0.859	0.356	0.51	1.90	12	0.00462	0.30369	0.486*	0.326
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	8497.3	19706.7	210	67000	11	147.200	-8885.652	0.288*	19894.4
SEDIMENT SUSPENDED	10	24.7	20.9	8	64					
SEDIMENT, CLAY-SILT (PERCENT)	9	85.6	8.2	72	94					
COLIFORM, FECAL (COL/100 ML)	12	162.4	299.9	9	1100					
STREPTOCOCCI, FECAL (COL/100 ML)	12	164.4	172.0	11	560					
SILICA, DISSOLVED	12	20.08	3.32	16.0	25.0	12	0.0680	11.9110	0.768	2.23
CALCIUM, DISSOLVED	12	11.11	3.49	6.2	19.0	12	0.0741	2.2024	0.795	2.22
MAGNESIUM, DISSOLVED	12	3.52	0.88	2.4	5.1	12	0.0226	0.8000	0.962	0.25
SODIUM, DISSOLVED	12	7.94	2.86	4.1	14.0	12	0.0728	-0.8140	0.954	0.90
POTASSIUM, DISSOLVED	12	1.67	0.62	1.0	3.2	12	0.0151	-0.1504	0.911	0.27
BICARBONATE, ION	12	46.3	12.7	29	70	12	0.305	9.534	0.898	5.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	5.73	1.57	3.8	8.8	12	0.0306	2.0596	0.731	1.12
CHLORIDE, DISSOLVED	12	7.67	3.10	3.4	14.0	12	0.0770	-1.5913	0.931	1.19
DISSOLVED SOLIDS, SUM OF CONST	12	80.6	20.2	52	121	12	0.513	18.955	0.953	6.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	88.5	21.8	62	135	12	0.534	24.332	0.916	9.2
HARDNESS, TOTAL	12	42.2	11.7	25	68	12	0.278	8.734	0.891	5.6
HARDNESS, NONCARBONATE	12	4.7	5.4	0	16	12	0.025	1.701	0.172*	5.5
TURBIDITY (JTU)	12	12.3	10.6	2	35	12	-0.180	33.867	-0.635	8.6
FLUORIDE, DISSOLVED	12	0.08	0.04	0.0	0.1	12	0.0006	0.0160	0.539*	0.03

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE	1%	5%	10%	20%	30%	50%	70%	90%	95%	99%
DAILY SPECIFIC CONDUCTANCE IN MICROMHOS AT 25 DEG C, THAT WAS EQUALLED OR EXCEEDED FOR THE INDICATED PERCENTAGE OF TIME	202	169	153	137	121	103	90	76	71	69

SAMPLE SIZE = 254

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	12.21	6.71	2.67	95	1.35

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	6	4	0	6
CADMIUM (CD), UG/L	4	<10	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	24	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	1
COPPER (CU), UG/L	4	<10	30	4	8	27
IRON (FE), UG/L	4	610	1600	4	40	120
LEAD (PB), UG/L	4	<100	200	4	2	4
MANGANESE (MN), UG/L	4	50	220	4	10	160
MERCURY (HG), UG/L	4	0.0	0.2	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	20	40	4	5	30
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	9.92				
BIOMASS, ASH WT., G/SQ M	1	6.00				
CHLOROPHYLL A, MG/SQ M	1	17.300				
CHLOROPHYLL B, MG/SQ M	1	2.000				
ORGANIC CARBON, MG/L	3	2.800	4.100			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 14211720 NAME: WILLAMETTE RIVER AT PORTLAND,OREG.

LAT 45D31M03S LONG 122040M03S
DRAINAGE AREA: 11100 SQ MI (28749 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	12	12.12	5.76	5.5	21.3					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	66.7	13.1	51	68					
STREAMFLOW (CUBIC FT/SEC)	0									
PH (STANDARD UNITS)	12	7.23	0.27	6.7	7.7	12	-0.0139	8.1632	-0.684	0.70
PHOSPHORUS, TOTAL	12	0.082	0.037	0.03	0.16	12	0.00161	-0.02504	0.572*	0.032
NITRITE + NITRATE, TOTAL	12	0.466	0.171	0.19	0.76	12	0.00380	0.21254	0.291*	0.172
NITROGEN, KJELDAHL, TOTAL	11	0.460	0.192	0.22	0.78	11	0.00084	0.40499	0.056*	0.202
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	8455.8	20638.5	140	73000	12	525.435	-26573.164	0.334*	20404.3
SEDIMENT SUSPENDED	11	19.5	24.0	5	91					
SEDIMENT, CLAY-SILT (PERCENT)	10	86.9	6.7	75	96					
COLIFORM, FECAL (COL/100 ML)	12	222.4	471.3	<1	1700					
STREPTOCOCCI, FECAL (COL/100 ML)	12	74.3	74.9	9	280					
SILICA, DISSOLVED	12	14.42	1.51	11.0	16.0	12	0.0374	11.9249	0.326*	1.49
CALCIUM, DISSOLVED	12	6.20	1.03	4.8	7.9	12	0.0648	1.8771	0.825	0.61
MAGNESIUM, DISSOLVED	12	2.00	0.43	1.1	2.7	12	0.0053	1.6438	0.163*	0.45
SODIUM, DISSOLVED	12	4.31	0.81	3.3	5.7	12	0.0531	0.7669	0.857	0.44
POTASSIUM, DISSOLVED	12	0.76	0.16	0.6	1.0	12	0.0081	0.2212	0.675	0.12
BICARBONATE, ION	12	27.3	3.6	21	32	12	0.127	18.787	0.456*	3.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	4.79	1.17	3.2	6.5	12	0.0649	0.4627	0.725	0.65
CHLORIDE, DISSOLVED	12	4.12	1.41	2.4	6.7	12	0.0837	-1.4641	0.780	0.92
DISSOLVED SOLIDS, SUM OF CONST	12	50.2	6.3	41	61	12	0.387	24.367	0.806	3.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	53.8	9.5	35	65	12	0.513	19.654	0.705	7.1
HARDNESS, TOTAL	12	23.7	3.1	19	28	12	0.182	11.549	0.765	2.1
HARDNESS, NONCARBONATE	12	1.8	1.7	0	5	12	0.057	-1.951	0.425*	1.7
TURBIDITY (JTU)	12	10.0	11.3	3	45	12	-0.157	20.437	-0.161*	11.7
FLUORIDE, DISSOLVED	12	0.08	0.04	0.0	0.1	12	0.0008	0.0328	0.255*	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 305

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%
	93	89	88	83	80	70	64	54	49	46

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.96	7.73	2.64	96	1.22

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0
CADMIUM (CD), UG/L	4	0	<10	4	0	1
CHROMIUM (CR), UG/L	4	0	16	4	0	10
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	10	20	4	2	12
IRON (FE), UG/L	4	430	810	4	60	90
LEAD (PB), UG/L	4	<100	<100	4	0	2
MANGANESE (MN), UG/L	4	30	70	4	5	20
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	7	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	4	2.100	4.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	10.97	5.42	5.2	20.1					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	61.0	14.0	44	84					
STREAMFLOW (CUBIC FT/SEC)	12	2982.1	3386.4	126	9370	12	-170.955	13410.309	-0.707	2511.4
PH (STANDARD UNITS)	12	7.44	0.33	7.0	8.0	12	0.0083	6.9358	0.356*	0.32
PHOSPHORUS, TOTAL	12	0.053	0.071	0.00	0.27	12	-0.00002	0.05446	-0.004*	0.074
NITRITE + NITRATE, TOTAL	12	0.241	0.165	0.00	0.47	12	-0.00709	0.67303	-0.603	0.138
NITROGEN, KJELDAHL, TOTAL	12	0.197	0.121	0.03	0.38	12	0.00304	0.01206	0.353*	0.118
PHYTOPLANKTON, TOTAL (CELLS/ML)	10	4709.4	8751.6	37	24000	10	306.371	-14163.043	0.530*	7870.4
SEDIMENT SUSPENDED	12	14.0	16.9	2	62					
SEDIMENT, CLAY-SILT (PERCENT)	12	84.0	6.4	71	95					
COLIFORM, FECAL (COL/100 ML)	12	33.8	44.7	1	156					
STREPTOCOCCI, FECAL (COL/100 ML)	11	55.8	54.2	1	140					
SILICA, DISSOLVED	12	13.08	1.00	12.0	15.0	12	0.0153	12.1505	0.215*	1.02
CALCIUM, DISSOLVED	12	5.43	1.08	3.6	6.9	12	0.0636	1.5550	0.821	0.65
MAGNESIUM, DISSOLVED	12	1.38	0.35	0.7	1.9	12	0.0104	0.7473	0.416*	0.33
SODIUM, DISSOLVED	12	5.07	1.23	3.9	7.1	12	0.0669	0.9960	0.764	0.83
POTASSIUM, DISSOLVED	12	0.68	0.16	0.5	1.0	12	0.0058	0.3272	0.498*	0.15
BICARBONATE, ION	12	23.5	5.9	16	33	12	0.303	5.042	0.722	4.3
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	4.33	1.20	3.1	6.3	12	0.0228	2.9425	0.267*	1.21
CHLORIDE, DISSOLVED	12	4.70	1.04	3.4	6.6	12	0.0561	1.2796	0.754	0.72
DISSOLVED SOLIDS, SUM OF CONST	12	46.3	7.2	39	57	12	0.387	22.702	0.751	5.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	48.7	10.6	36	64	12	0.524	16.725	0.690	8.1
HARDNESS, TOTAL	12	19.4	3.7	14	25	12	0.197	7.403	0.755	2.5
HARDNESS, NONCARBONATE	12	1.0	1.3	0	4	12	-0.029	2.753	-0.298*	1.3
TURBIDITY (JTU)	12	7.2	10.0	1	36	12	-0.401	31.618	-0.559*	8.7
FLUORIDE, DISSOLVED	12	0.06	0.05	0.0	0.1	12	0.0016	-0.0406	0.441*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	11.03	6.86	2.66	93	1.63

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	1
CADMIUM (CD), UG/L	4	<10	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	34	4	0	0
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	10	20	4	5	11
IRON (FE), UG/L	4	190	570	4	40	240
LEAD (PB), UG/L	4	<100	<100	4	0	4
MANGANESE (MN), UG/L	4	10	20	4	0	10
MERCURY (HG), UG/L	4	0.0	2.3	4	0.0	0.0
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	20	190	4	5	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	6.15				
BIOMASS, ASH WT., G/SQ M	1	3.15				
CHLOROPHYLL A, MG/SQ M	1	2.800				
CHLOROPHYLL B, MG/SQ M	1	0.200				
ORGANIC CARBON, MG/L	3	1.100	2.800			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.29	6.09	5.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	71.1	9.6	59	87					
STREAMFLOW (CUBIC FT/SEC)	12	6392.5	4921.0	1440	15900	12	-208.556	21217.348	-0.405*	4718.8
PH (STANDARD UNITS)	12	7.48	0.40	7.1	8.4	12	0.0041	7.1923	0.097*	0.42
PHOSPHORUS, TOTAL	12	0.046	0.016	0.02	0.07	12	-0.00070	0.09576	-0.429*	0.015
NITRITE + NITRATE, TOTAL	11	0.054	0.053	0.00	0.14	11	-0.00004	0.05622	-0.007*	0.056
NITROGEN, KJELDAHL, TOTAL	11	0.513	1.030	0.05	3.60	11	-0.03926	3.29676	-0.381*	1.004
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1381.1	2763.2	11	9600	11	-47.365	4799.945	-0.158*	2876.2
SEDIMENT SUSPENDED	12	11.0	14.7	1	54					
SEDIMENT, CLAY-SILT (PERCENT)	4	65.8	9.7	57	76					
COLIFORM, FECAL (COL/100 ML)	11	59.5	89.1	1	225					
STREPTOCOCCI, FECAL (COL/100 ML)	7	61.6	67.2	1	160					
SILICA, DISSOLVED	12	16.00	1.76	13.0	19.0	12	0.0657	11.3315	0.357*	1.72
CALCIUM, DISSOLVED	12	6.93	0.76	6.1	8.4	12	0.0591	2.7338	0.740	0.54
MAGNESIUM, DISSOLVED	12	2.48	0.35	2.0	3.3	12	0.0257	0.6570	0.699	0.26
SODIUM, DISSOLVED	12	4.14	0.82	2.8	5.3	12	0.0641	-0.4179	0.746	0.57
POTASSIUM, DISSOLVED	12	0.76	0.24	0.4	1.1	12	0.0140	-0.2348	0.550*	0.21
BICARBONATE, ION	12	36.8	4.0	30	43	12	0.293	16.025	0.704	3.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.07	1.10	1.3	5.2	12	0.0526	-0.6618	0.456*	1.03
CHLORIDE, DISSOLVED	12	2.50	0.66	1.5	3.6	12	0.0137	1.5238	0.199*	0.68
DISSOLVED SOLIDS, SUM OF CONST	12	54.3	5.0	47	63	12	0.451	22.224	0.856	2.7
DISSOLVED SOLIDS, ROE 180 DEG C	12	53.0	5.8	42	62	12	0.342	28.667	0.561*	5.1
HARDNESS, TOTAL	12	27.6	2.9	24	32	12	0.267	8.597	0.888	1.4
HARDNESS, NONCARBONATE	12	0.1	0.3	0	1	12	0.007	-0.406	0.228*	0.3
TURBIDITY (JTU)	12	7.3	9.4	0	30	12	-0.391	35.067	-0.398*	9.0
FLUORIDE, DISSOLVED	12	0.07	0.05	0.0	0.1	12	-0.0005	0.1086	-0.100*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	12.36	7.98	2.72	94	1.60

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 WY)

14321000 -- UMPQUA RIVER NEAR ELKTON, OREG.

CONSTITUENT	TOTAL NO. SAMPLES	MINIMUM CONC.	MAXIMUM CONC.	DISSOLVED 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	2
CHROMIUM (CR), UG/L	4	0	2	4	0	2
COBALT (CO), UG/L	4	<50	<50	4	0	2
COPPER (CU), UG/L	4	10	20	4	1	6
IRON (FE), UG/L	4	110	550	4	10	50
LEAD (PB), UG/L	4	<100	<100	4	0	4
MANGANESE (MN), UG/L	4	6	20	4	0	0
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	190	4	0	50
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	3	0.621	7.92			
BIOMASS, ASH WT., G/SQ M	3	0.23	6.46			
CHLOROPHYLL A, MG/SQ M	3	1.700	13.000			
CHLOROPHYLL B, MG/SQ M	3	0.400	2.300			
ORGANIC CARBON, MG/L	3	1.300	2.500			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 14372300 NAME: ROGUE RIVER NR AGNESS OREG.

LAT 42D34M50S LONG 124D03M30S
DRAINAGE AREA: 3939 SQ MI (10202 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	12.00	5.74	5.5	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	97.6	13.1	73	115					
STREAMFLOW (CUBIC FT/SEC)	12	4655.0	2337.2	1650	8620	12	-56.023	10121.887	-0.315*	2326.4
PH (STANDARD UNITS)	12	7.39	0.20	7.1	7.7	12	-0.0000	7.3943	-0.002*	0.21
PHOSPHORUS, TOTAL	12	0.074	0.022	0.05	0.11	12	0.00066	0.00996	0.387*	0.022
NITRITE + NITRATE, TOTAL	12	0.094	0.050	0.03	0.18	12	0.00241	-0.14099	0.636	0.040
NITROGEN, KJELDAHL, TOTAL	12	0.240	0.212	0.05	0.87	12	0.00081	0.16093	0.050*	0.222
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	1348.2	892.2	200	3000	11	2.912	1058.604	0.039*	939.8
SEDIMENT SUSPENDED	12	30.4	28.1	6	78					
SEDIMENT, CLAY-SILT (PERCENT)	4	60.5	31.9	23	99					
COLIFORM, FECAL (COL/100 ML)	11	17.3	15.4	1	41					
STREPTOCOCCI, FECAL (COL/100 ML)	8	183.4	327.1	<1	940					
SILICA, DISSOLVED	12	20.83	2.52	17.0	24.0	12	0.0964	11.4305	0.503*	2.28
CALCIUM, DISSOLVED	12	9.52	1.58	6.9	12.0	12	0.1128	-1.4885	0.937	0.58
MAGNESIUM, DISSOLVED	12	3.85	0.49	2.8	4.4	12	0.0329	0.6440	0.883	0.24
SODIUM, DISSOLVED	12	4.67	1.00	3.0	6.4	12	0.0648	-1.6542	0.849	0.56
POTASSIUM, DISSOLVED	12	1.06	0.26	0.7	1.4	12	0.0124	-0.1527	0.625	0.21
BICARBONATE, ION	12	55.2	6.5	44	67	12	0.459	10.411	0.925	2.6
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.42	1.25	1.2	5.4	12	0.0883	-5.2018	0.932	0.47
CHLORIDE, DISSOLVED	12	2.17	0.84	1.3	3.8	12	0.0224	-0.0106	0.352*	0.82
DISSOLVED SOLIDS, SUM OF CONST	12	72.9	9.5	58	90	12	0.660	8.513	0.909	4.2
DISSOLVED SOLIDS, ROE 180 DEG C	12	72.3	9.7	55	86	12	0.621	11.775	0.841	5.5
HARDNESS, TOTAL	12	39.7	5.6	30	47	12	0.412	-0.546	0.971	1.4
HARDNESS, NONCARBONATE	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
TURBIDITY (JTU)	12	6.3	6.7	1	25	12	0.032	3.219	0.063*	7.0
FLUORIDE, DISSOLVED	12	0.07	0.05	0.0	0.1	12	0.0012	-0.0469	0.363*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	12.05	7.46	2.84	92	1.80

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	1	4	0	1
CADMIUM (CD), UG/L	4	<10	10	4	0	1
CHROMIUM (CR), UG/L	4	0	30	4	0	2
COBALT (CO), UG/L	4	<50	<50	4	0	0
COPPER (CU), UG/L	4	10	30	4	1	4
IRON (FE), UG/L	4	230	880	4	20	80
LEAD (PB), UG/L	4	<100	<100	4	0	3
MANGANESE (MN), UG/L	4	0	60	4	0	0
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	90	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.10	5.38			
BIOMASS, ASH WT., G/SQ M	2	0.20	3.62			
CHLOROPHYLL A, MG/SQ M	2	4.100	19.500			
CHLOROPHYLL B, MG/SQ M	2	0.300	1.900			
ORGANIC CARBON, MG/L	3	1.800	3.300			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, E	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	3	6.83	2.47	4.0	8.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	3	111.3	16.3	100	130					
STREAMFLOW (CUBIC FT/SEC)	3	71400.0	36805.3	36700	110000					
PH (STANDARD UNITS)	2	7.80	0.00	7.8	7.8					
PHOSPHORUS, TOTAL	3	0.043	0.021	0.02	0.06					
NITRITE + NITRATE, TOTAL	3	0.153	0.096	0.05	0.24					
NITROGEN, KJELDAHL, TOTAL	3	0.173	0.095	0.10	0.28					
PHYTOPLANKTON, TOTAL (CELLS/ML)	3	62.7	32.5	41	100					
SEDIMENT SUSPENDED	3	132.3	43.7	84	169					
SEDIMENT, CLAY-SILT (PERCENT)	3	43.0	12.3	29	52					
COLIFORM, FECAL (COL/100 ML)	2	1.0	0.0	<1	<1					
STREPTOCOCCI, FECAL (COL/100 ML)	2	1.0	0.0	<1	<1					
SILICA, DISSOLVED	3	3.80	0.66	3.2	4.5					
CALCIUM, DISSOLVED	3	18.00	3.61	15.0	22.0					
MAGNESIUM, DISSOLVED	3	2.67	0.35	2.3	3.0					
SODIUM, DISSOLVED	3	2.10	0.56	1.5	2.6					
POTASSIUM, DISSOLVED	3	0.63	0.06	0.6	0.7					
BICARBONATE, ION	3	56.0	6.9	48	60					
CARBONATE, ION	3	0.0	0.0	0	0					
SULFATE, DISSOLVED	3	9.63	1.46	8.1	11.0					
CHLORIDE, DISSOLVED	3	3.70	5.20	0.6	9.7					
DISSOLVED SOLIDS, SUM OF CONST	3	68.3	13.0	55	81					
DISSOLVED SOLIDS, ROE 180 DEG C	3	67.3	18.2	47	82					
HARDNESS, TOTAL	3	56.0	9.5	47	66					
HARDNESS, NONCARBONATE	3	10.3	5.9	6	17					
TURBIDITY (JTU)	3	26.3	20.7	4	45					
FLUORIDE, DISSOLVED	3	0.03	0.06	0.0	0.1					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	3	0	3	3	0	1
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	50	3	0	0
COPPER (CU), UG/L	3	10	20	3	4	8
IRON (FE), UG/L	3	930	6600	3	30	210
LEAD (PB), UG/L	3	100	100	3	0	20
MANGANESE (MN), UG/L	3	40	170	3	10	30
MERCURY (HG), UG/L	3	0.1	3.3	3	0.0	0.2
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	30	100	3	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	3	1.600	3.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	9	3.50	4.54	0.0	12.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	9	171.3	53.4	90	225					
STREAMFLOW (CUBIC FT/SEC)	9	33266.7	35430.0	5140	99100	9	-616.220	138845.625	-0.929	13970.6
PH (STANDARD UNITS)	8	7.39	0.39	6.9	8.0	8	0.0017	7.0974	0.234*	0.41
PHOSPHORUS, TOTAL	9	0.132	0.182	0.00	0.57	9	-0.00219	0.50781	-0.645*	0.148
NITRITE + NITRATE, TOTAL	9	0.350	0.179	0.03	0.67	9	-0.00037	0.41307	-0.110*	0.191
NITROGEN, KJELDAHL, TOTAL	9	0.292	0.193	0.00	0.51	9	-0.00127	0.51064	-0.353*	0.193
PHYTOPLANKTON, TOTAL (CELLS/ML)	9	72.2	103.2	0	320	9	-1.233	283.424	-0.636*	84.9
SEDIMENT SUSPENDED	9	185.7	274.2	2	785					
SEDIMENT, CLAY-SILT (PERCENT)	3	56.3	14.6	41	70					
COLIFORM, FECAL (COL/100 ML)	9	5.3	5.1	1	15					
STREPTOCOCCI, FECAL (COL/100 ML)	9	9.4	9.2	1	26					
SILICA, DISSOLVED	9	7.61	2.47	3.4	10.0	9	0.0416	0.4792	0.900	1.16
CALCIUM, DISSOLVED	9	22.67	6.06	13.0	31.0	9	0.1103	3.7771	0.972	1.53
MAGNESIUM, DISSOLVED	9	3.57	1.20	1.8	4.9	9	0.0218	-0.1632	0.966	0.33
SODIUM, DISSOLVED	9	5.88	3.08	1.9	8.9	9	0.0562	-3.7436	0.973	0.76
POTASSIUM, DISSOLVED	9	1.62	0.40	0.8	2.1	9	0.0066	0.4852	0.881	0.20
BICARBONATE, ION	9	70.8	20.1	39	90	9	0.374	6.778	0.991	2.8
CARBONATE, ION	7	0.0	0.0	0	0	7	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	9	14.54	3.84	6.9	19.0	9	0.0658	3.2627	0.917	1.63
CHLORIDE, DISSOLVED	9	9.11	5.47	2.1	15.0	9	0.0960	-7.3433	0.939	2.01
DISSOLVED SOLIDS, SUM OF CONST	9	100.1	31.2	55	133	9	0.583	0.267	0.998	2.1
DISSOLVED SOLIDS, ROE 180 DEG C	9	104.6	29.3	63	139	9	0.533	13.165	0.973	7.2
HARDNESS, TOTAL	9	71.3	19.7	40	96	9	0.362	9.385	0.980	4.2
HARDNESS, NONCARBONATE	9	13.3	5.3	7	23	9	0.057	3.562	0.571*	4.7
TURBIDITY (JTU)	9	46.9	80.1	2	230	9	-0.987	215.955	-0.659*	64.4
FLUORIDE, DISSOLVED	9	0.14	0.05	0.1	0.2	9	0.0007	0.0172	0.753	0.04

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	4	1	7	4	0	1
CADMIUM (CD), UG/L	4	2	10	4	0	1
CHROMIUM (CR), UG/L	4	0	40	4	<0	10
COBALT (CO), UG/L	4	2	<50	4	0	2
COPPER (CU), UG/L	4	10	50	4	0	10
IRON (FE), UG/L	4	240	26000	4	30	140
LEAD (PB), UG/L	4	16	<100	4	1	5
MANGANESE (MN), UG/L	4	30	540	4	0	30
MERCURY (HG), UG/L	4	0.0	<0.5	4	0.0	<0.5
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	10	100	4	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	1.08	5.60			
BIOMASS, ASH WT., G/SQ M	2	0.85	4.70			
CHLOROPHYLL A, MG/SQ M	2	0.500	1.200			
CHLOROPHVLL B, MG/SQ M	2	0.000	0.100			
ORGANIC CARBON, MG/L	4	0.400	5.300			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	6	5.67	5.56	0.0	15.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	195.8	47.5	115	250					
STREAMFLOW (CUBIC FT/SEC)	6	34255.0	25276.1	8730	77200	6	-526.854	137430.563	-0.990	4058.9
PH (STANDARD UNITS)	4	7.70	0.34	7.2	7.9					
PHOSPHORUS, TOTAL	5	0.074	0.069	0.01	0.16					
NITRITE + NITRATE, TOTAL	5	0.150	0.098	0.02	0.27					
NITROGEN, KJELDAHL, TOTAL	5	0.272	0.215	0.02	0.59					
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	640.4	1053.4	4	2500					
SEDIMENT SUSPENDED	5	51.6	64.2	1	144					
SEDIMENT, CLAY-SILT (PERCENT)	2	65.0	25.5	47	83					
COLIFORM, FECAL (COL/100 ML)	5	9.2	11.6	<1	28					
STREPTOCOCCI, FECAL (COL/100 ML)	5	23.4	16.0	<1	37					
SILICA, DISSOLVED	5	8.42	2.41	6.3	11.0					
CALCIUM, DISSOLVED	5	28.20	8.07	16.0	36.0					
MAGNESIUM, DISSOLVED	5	6.48	2.24	3.5	9.5					
SODIUM, DISSOLVED	5	2.10	0.52	1.6	2.9					
POTASSIUM, DISSOLVED	6	0.92	0.13	0.8	1.1	6	0.0012	0.6749	0.441*	0.13
BICARBONATE, ION	5	102.4	30.8	61	135					
CARBONATE, ION	4	0.0	0.0	0	0					
SULFATE, DISSOLVED	5	16.24	5.14	8.2	22.0					
CHLORIDE, DISSOLVED	5	0.60	0.33	0.3	1.1					
DISSOLVED SOLIDS, SUM OF CONST	5	114.0	31.0	68	146					
DISSOLVED SOLIDS, ROE 180 DEG C	5	117.8	28.5	79	147					
HARDNESS, TOTAL	5	97.4	29.7	54	130					
HARDNESS, NONCARBONATE	5	13.2	5.3	4	17					
TURBIDITY (JTU)	5	25.4	35.4	3	87					
FLUORIDE, DISSOLVED	5	0.18	0.04	0.1	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	5	3	1	1
CADMIUM (CD), UG/L	3	<10	<10	3	0	0
CHROMIUM (CR), UG/L	3	0	20	3	0	10
COBALT (CO), UG/L	3	<50	<50	3	0	2
COPPER (CU), UG/L	3	<10	20	3	0	1
IRON (FE), UG/L	3	760	8400	3	40	150
LEAD (PB), UG/L	3	<100	<100	3	0	1
MANGANESE (MN), UG/L	3	20	210	3	0	20
MERCURY (HG), UG/L	3	0.0	0.1	3	0.0	0.2
SELENIUM (SE), UG/L	3	0	1	3	0	1
ZINC (ZN), UG/L	3	0	50	3	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	3.46				
BIOMASS, ASH WT., G/SQ M	1	2.46				
CHLOROPHYLL A, MG/SQ M	1	0.900				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	3	1.000	3.700			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	5	6.90	7.30	0.0	17.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	5	226.6	71.8	140	300					
STREAMFLOW (CUBIC FT/SEC)	5	255659.8	216913.8	37500	561000					
PH (STANDARD UNITS)	5	7.50	0.46	6.9	8.1					
PHOSPHORUS, TOTAL	5	0.186	0.184	0.02	0.46					
NITRITE + NITRATE, TOTAL	5	0.218	0.145	0.08	0.43					
NITROGEN, KJELDAHL, TOTAL	5	0.524	0.203	0.17	0.68					
PHYTOPLANKTON, TOTAL (CELLS/ML)	5	414.6	535.0	1	1300					
SEDIMENT SUSPENDED	5	173.0	193.6	2	421					
SEDIMENT, CLAY-SILT (PERCENT)	3	81.3	16.9	62	93					
COLIFORM, FECAL (COL/100 ML)	4	5.3	6.1	<1	14					
STREPTOCOCCI, FECAL (COL/100 ML)	4	2.0	2.0	<1	5					
SILICA, DISSOLVED	5	8.32	3.37	5.6	12.0					
CALCIUM, DISSOLVED	5	34.20	11.52	20.0	47.0					
MAGNESIUM, DISSOLVED	5	7.48	2.63	4.0	10.0					
SODIUM, DISSOLVED	5	2.60	0.95	1.3	3.8					
POTASSIUM, DISSOLVED	5	1.48	0.41	1.1	2.1					
BICARBONATE, ION	5	129.4	48.9	70	183					
CARBONATE, ION	5	0.0	0.0	0	0					
SULFATE, DISSOLVED	5	19.02	5.66	9.1	23.0					
CHLORIDE, DISSOLVED	5	1.10	0.43	0.7	1.8					
DISSOLVED SOLIDS, SUM OF CONST	5	138.2	46.3	78	189					
DISSOLVED SOLIDS, ROE 180 DEG C	5	147.2	42.0	100	197					
HARDNESS, TOTAL	5	116.0	39.1	66	160					
HARDNESS, NONCARBONATE	5	10.0	1.9	8	12					
TURBIDITY (JTU)	5	58.0	66.0	9	170					
FLUORIDE, DISSOLVED	5	0.12	0.04	0.1	0.2					

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	15	3	1	1
CADMIUM (CD), UG/L	3	<10	<10	3	0	1
CHROMIUM (CR), UG/L	3	0	20	3	0	0
COBALT (CO), UG/L	3	<50	<50	3	0	1
COPPER (CU), UG/L	3	10	40	3	2	5
IRON (FE), UG/L	3	1600	18000	3	20	60
LEAD (PB), UG/L	3	<100	<100	3	0	1
MANGANESE (MN), UG/L	3	140	400	3	0	200
MERCURY (HG), UG/L	3	0.0	0.2	3	0.0	0.3
SELENIUM (SE), UG/L	3	0	1	3	0	0
ZINC (ZN), UG/L	3	0	60	3	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	2	0.85	0.85			
BIOMASS, ASH WT., G/SQ M	2	0.31	0.39			
CHLOROPHYLL A, MG/SQ M	2	0.500	1.000			
CHLOROPHYLL B, MG/SQ M	2	0.000	0.000			
ORGANIC CARBON, MG/L	3	2.600	16.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	2	7.00	9.90	0.0	14.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	2	174.0	1.4	173	175					
STREAMFLOW (CUBIC FT/SEC)	2	4960.0	5586.1	1010	8910					
PH (STANDARD UNITS)	2	7.10	0.00	7.1	7.1					
PHOSPHORUS, TOTAL	2	0.000	0.000	0.00	0.00					
NITRITE + NITRATE, TOTAL	2	0.210	0.127	0.12	0.30					
NITROGEN, KJELDAHL, TOTAL	2	0.075	0.106	0.00	0.15					
PHYTOPLANKTON, TOTAL (CELLS/ML)	2	97.0	117.4	14	180					
SEDIMENT SUSPENDED	1	49.0	0.0	49						
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	2	0.5	0.7	0	1					
STREPTOCOCCI, FECAL (COL/100 ML)	1	0.0	0.0	0						
SILICA, DISSOLVED	2	4.00	2.12	2.5	5.5					
CALCIUM, DISSOLVED	2	31.00	4.24	28.0	34.0					
MAGNESIUM, DISSOLVED	2	5.25	1.48	4.2	6.3					
SODIUM, DISSOLVED	2	1.75	1.06	1.0	2.5					
POTASSIUM, DISSOLVED	2	1.40	1.13	0.6	2.2					
BICARBONATE, ION	2	103.5	19.1	90	117					
CARBONATE, ION	2	0.0	0.0	0	0					
SULFATE, DISSOLVED	2	11.00	0.00	11.0	11.0					
CHLORIDE, DISSOLVED	2	0.80	0.28	0.6	1.0					
DISSOLVED SOLIDS, SUM OF CONST	2	106.5	19.1	93	120					
DISSOLVED SOLIDS, ROE 180 DEG C	2	114.5	3.5	112	117					
HARDNESS, TOTAL	2	98.5	16.3	87	110					
HARDNESS, NONCARBONATE	2	14.0	1.4	13	15					
TURBIDITY (JTU)	2	1.5	0.7	1	2					
FLUORIDE, 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 (1976 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	1	1		1	0	
CADMIUM (CD), UG/L	1	10		1	1	
CHROMIUM (CR), UG/L	1	10		1	0	
COBALT (CO), UG/L	1	50		1	0	
COPPER (CU), UG/L	1	50		1	9	
IRON (FE), UG/L	1	380		1	110	
LEAD (PB), UG/L	1	<100		1	6	
MANGANESE (MN), UG/L	1	20		1	20	
MERCURY (HG), UG/L	1	0.0		1	0.0	
SELENIUM (SE), UG/L	1	0		1	0	
ZINC (ZN), UG/L	1	100		1	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	2.300				

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	6	3.67	5.45	0.0	12.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	6	158.7	111.9	29	320					
STREAMFLOW (CUBIC FT/SEC)	11	9764.1	12350.1	0	40200	6	-30.597	7410.559	-0.590*	5241.0
PH (STANDARD UNITS)	6	7.18	0.53	6.4	7.8	6	0.0030	6.7124	0.621*	0.47
PHOSPHORUS, TOTAL	6	0.008	0.016	0.00	0.04	6	-0.00006	0.01739	-0.399*	0.016
NITRITE + NITRATE, TOTAL	6	0.173	0.192	0.00	0.42	6	0.00167	-0.09162	0.973	0.049
NITROGEN, KJELDAHL, TOTAL	5	0.410	0.167	0.16	0.55					
PHYTOPLANKTON, TOTAL (CELLS/ML)	6	732.5	999.8	4	2200	6	-6.018	1687.411	-0.674*	626.1
SEDIMENT SUSPENDED	8	103.5	118.0	0	336					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	3	0.3	0.6	0	1					
STREPTOCOCCI, FECAL (COL/100 ML)	3	2.7	4.6	0	8					
SILICA, DISSOLVED	6	1.52	0.95	0.7	3.0	6	0.0082	0.2101	0.970	0.26
CALCIUM, DISSOLVED	6	29.28	18.55	5.7	54.0	6	0.1652	3.0771	0.996	1.81
MAGNESIUM, DISSOLVED	6	2.93	1.80	0.8	5.5	6	0.0160	0.3902	0.999	0.08
SODIUM, DISSOLVED	6	2.33	1.61	0.4	4.7	6	0.0143	0.0677	0.994	0.20
POTASSIUM, DISSOLVED	6	0.62	0.28	0.3	0.9	6	0.0014	0.3890	0.576*	0.25
BICARBONATE, ION	6	105.3	69.0	15	203	6	0.613	8.078	0.995	8.0
CARBONATE, ION	6	0.0	0.0	0	0	6	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	6	5.18	1.83	2.9	7.3	6	-0.0019	5.4860	-0.117*	2.03
CHLORIDE, DISSOLVED	6	1.30	0.61	0.5	2.2	6	0.0041	0.6435	0.763*	0.44
DISSOLVED SOLIDS, SUM OF CONST	6	95.3	57.1	24	174	6	0.509	14.586	0.997	4.8
DISSOLVED SOLIDS, ROE 180 DEG C	6	104.2	65.2	35	211	6	0.576	12.829	0.988	11.3
HARDNESS, TOTAL	6	85.5	53.9	18	160	6	0.481	9.244	0.998	3.9
HARDNESS, NONCARBONATE	6	2.2	3.0	0	6	6	-0.003	2.599	-0.102*	3.3
TURBIDITY (JTU)	6	1.5	2.3	0	6	6	-0.012	3.398	-0.593*	2.0
FLUORIDE, DISSOLVED	6	0.10	0.00	0.1	0.1	6	-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 (1976 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	1	3	0	1
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	0
COPPER (CU), UG/L	3	<10	<10	3	1	5
IRON (FE), UG/L	3	40	1200	3	30	220
LEAD (PB), UG/L	3	<100	<100	3	1	3
MANGANESE (MN), UG/L	3	10	70	3	0	40
MERCURY (HG), UG/L	3	0.0	0.6	3	0.0	0.5
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	3	10	20	3	0	10
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	4.30				
BIOMASS, ASH WY., G/SQ M	1	2.30				
CHLOROPHYLL A, MG/SQ M	1	0.300				
CHLOROPHYLL B, MG/SQ M	1	0.000				
ORGANIC CARBON, MG/L	1	16.000				

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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	22.08	2.45	16.5	24.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	160.5	58.3	67	240					
STREAMFLOW (CUBIC FT/SEC)	15	105.7	256.7	3	1000	13	-0.795	162.148	-0.678	52.5
PH (STANDARD UNITS)	13	7.09	0.64	5.2	7.9	13	0.0072	5.9401	0.657	0.50
PHOSPHORUS, TOTAL	13	0.045	0.122	0.00	0.45	13	-0.00093	0.19403	-0.443*	0.114
NITRITE + NITRATE, TOTAL	13	0.068	0.096	0.00	0.32	13	-0.00108	0.24178	-0.661	0.075
NITROGEN, KJELDAHL, TOTAL	13	0.525	1.041	0.00	3.90	13	-0.00654	1.57572	-0.366*	1.012
PHYTOPLANKTON, TOTAL (CELLS/ML)	13	875.4	780.1	220	2900	13	7.095	-263.580	0.530*	691.0
SEDIMENT SUSPENDED	15	134.8	448.1	2	1740					
SEDIMENT, CLAY-SILT (PERCENT)	12	98.7	4.6	84	100					
COLIFORM, FECAL (COL/100 ML)	13	1421.6	4681.3	62	17000					
STREPTOCOCCI, FECAL (COL/100 ML)	13	8066.2	27624.5	100	>100000					
SILICA, DISSOLVED	13	21.23	4.95	11.0	28.0	13	0.0810	8.2192	0.954	1.56
CALCIUM, DISSOLVED	13	7.69	2.68	2.9	11.0	13	0.0440	0.6340	0.957	0.81
MAGNESIUM, DISSOLVED	13	9.89	3.46	4.1	14.0	13	0.0589	0.4423	0.992	0.47
SODIUM, DISSOLVED	13	8.33	2.18	4.5	11.0	13	0.0366	2.4496	0.979	0.46
POTASSIUM, DISSOLVED	13	0.86	0.42	0.4	2.2	13	-0.0014	1.0929	-0.198*	0.43
BICARBONATE, ION	13	71.2	29.4	18	108	13	0.498	-8.699	0.987	5.0
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	3.54	2.46	0.1	8.5	13	-0.0170	6.2723	-0.403*	2.35
CHLORIDE, DISSOLVED	13	12.32	2.97	7.0	16.0	13	0.0487	4.5110	0.955	0.92
DISSOLVED SOLIDS, SUM OF CONST	13	99.4	29.0	46	136	13	0.492	20.362	0.989	4.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	106.1	28.0	52	136	12	0.491	23.757	0.957	8.5
HARDNESS, TOTAL	13	59.9	20.9	24	85	13	0.354	3.015	0.989	3.2
HARDNESS, NONCARBONATE	13	2.8	4.0	0	14	13	-0.042	9.552	-0.621	3.2
TURBIDITY (JTU)	13	48.5	165.7	1	600	13	-1.261	250.683	-0.443*	155.1
FLUORIDE, DISSOLVED	13	0.10	0.00	0.1	0.1	13	0.0000	0.1000	1.082	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	22.18	3.06	2.43	82	1.14

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	0
CADMIUM (CD), UG/L	4	<10	30	4	0	28
CHROMIUM (CR), UG/L	4	0	360	4	0	<10
COBALT (CO), UG/L	4	0	50	4	0	4
COPPER (CU), UG/L	4	<10	90	4	0	5
IRON (FE), UG/L	4	240	91000	3	70	170
LEAD (PB), UG/L	4	<100	140	4	8	32
MANGANESE (MN), UG/L	4	20	980	4	20	80
MERCURY (HG), UG/L	4	0.0	0.3	4	0.0	0.3
SELENIUM (SE), UG/L	4	0	1	4	0	1
ZINC (ZN), UG/L	4	0	100	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	2.20	20.00			
BIOMASS, ASH WT., G/SQ M	5	2.40	13.20			
CHLOROPHYLL A, MG/SQ M	6	0.400	10.800			
CHLOROPHYLL B, MG/SQ M	6	0.000	2.600			
ORGANIC CARBON, MG/L	4	1.700	40.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	14	22.31	1.07	19.9	24.2					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	295.8	117.9	85	420					
STREAMFLOW (CUBIC FT/SEC)	16	449.7	845.6	4	2380	14	-3.399	1233.544	-0.632	511.8
PH (STANDARD UNITS)	14	6.44	0.26	5.8	6.9	14	0.0010	6.1403	0.455*	0.24
PHOSPHORUS, TOTAL	13	1.133	0.355	0.45	1.80	13	0.00177	0.58187	0.524*	0.316
NITRITE + NITRATE, TOTAL	13	2.289	1.040	0.13	3.60	13	0.00850	-0.36211	0.860	0.555
NITROGEN, KJELDAHL, TOTAL	13	1.035	1.037	0.00	4.00	13	-0.00794	3.51281	-0.806	0.641
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	1635.7	3051.4	48	11000	12	-14.816	6537.320	-0.408*	2921.9
SEDIMENT SUSPENDED	14	859.8	2455.7	5	9050					
SEDIMENT, CLAY-SILT (PERCENT)	12	98.3	4.7	84	100					
COLIFORM, FECAL (COL/100 ML)	12	3442.5	5033.9	290	18000					
STREPTOCOCCI, FECAL (COL/100 ML)	11	3677.3	4485.4	150	13000					
SILICA, DISSOLVED	13	42.15	17.19	6.0	60.0	13	0.1617	-8.2867	0.992	2.27
CALCIUM, DISSOLVED	13	9.42	2.73	4.6	15.0	13	0.0222	2.5034	0.857	1.47
MAGNESIUM, DISSOLVED	13	6.74	2.31	1.9	9.6	13	0.0214	0.0535	0.978	0.50
SODIUM, DISSOLVED	13	42.18	16.40	7.4	64.0	13	0.1540	-5.8462	0.990	2.41
POTASSIUM, DISSOLVED	13	3.18	0.68	1.8	4.5	13	0.0027	2.3410	0.417*	0.64
BICARBONATE, ION	13	58.2	20.0	23	84	13	0.178	2.523	0.938	7.3
CARBONATE, ION	13	0.0	0.0	0	0	13	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	13	17.18	5.34	7.4	24.0	13	0.0495	1.7427	0.978	1.16
CHLORIDE, DISSOLVED	13	53.00	20.06	9.0	77.0	13	0.1876	-5.5032	0.986	3.52
DISSOLVED SOLIDS, SUM OF CONST	13	204.0	72.0	61	288	13	0.678	-7.547	0.993	8.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	228.0	57.5	118	300	12	0.670	6.448	0.979	12.4
HARDNESS, TOTAL	13	51.4	15.6	24	72	13	0.143	6.638	0.969	4.0
HARDNESS, NONCARBONATE	13	3.8	2.9	0	8	13	-0.007	6.023	-0.266*	2.9
TURBIDITY (JTU)	14	197.8	557.6	3	2100	14	-2.981	1079.641	-0.631	450.5
FLUORIDE, DISSOLVED	13	0.17	0.06	0.1	0.3	13	0.0004	0.0342	0.724	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%
	538	487	471	453	442	412	349	265	222	180

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
365	22.84	1.12	2.65	66	0.56

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	2	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	0	<50	4	0	2
COPPER (CU), UG/L	4	<10	10	4	3	4
IRON (FE), UG/L	4	340	1100	6	40	110
LEAD (PB), UG/L	4	0	<100	4	0	1
MANGANESE (MN), UG/L	4	70	240	6	5	100
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	2	4	0	2
ZINC (ZN), UG/L	4	0	20	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	5.30	14.30			
BIOMASS, ASH WT., G/SQ M	4	1.50	7.15			
CHLOROPHYLL A, MG/SQ M	4	7.300	83.100			
CHLOROPHYLL B, MG/SQ M	4	1.700	28.300			
ORGANIC CARBON, MG/L	4	1.800	5.800			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	21.71	1.48	18.5	24.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	230.2	51.0	150	305					
STREAMFLOW (CUBIC FT/SEC)	13	19.8	51.4	1	189	13	-0.469	127.711	-0.464*	47.6
PH (STANDARD UNITS)	13	7.19	0.37	6.5	7.6	13	0.0003	7.1302	0.038*	0.36
PHOSPHORUS, TOTAL	13	0.074	0.055	0.02	0.22	13	-0.00068	0.23053	-0.631	0.045
NITRITE + NITRATE, TOTAL	13	0.241	0.354	0.04	1.40	13	-0.00264	0.69355	-0.409*	0.337
NITROGEN, KJELDAHL, TOTAL	13	0.394	0.347	0.13	1.10	13	-0.00451	1.43265	-0.662	0.272
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	401.8	505.5	7	1800	12	-4.636	1493.205	-0.454*	472.4
SEDIMENT SUSPENDED	12	6.8	11.6	0	43					
SEDIMENT, CLAY-SILT (PERCENT)	12	98.8	3.0	90	100					
COLIFORM, FECAL (COL/100 ML)	12	3793.3	2119.0	500	7600					
STREPTOCOCCI, FECAL (COL/100 ML)	11	4851.8	3971.0	870	15000					
SILICA, DISSOLVED	12	13.67	2.02	11.0	17.0	12	0.0249	7.8044	0.612	1.67
CALCIUM, DISSOLVED	12	14.08	3.34	8.0	20.0	12	0.0630	-0.7504	0.933	1.26
MAGNESIUM, DISSOLVED	12	7.76	1.76	4.9	10.0	12	0.0330	-0.0200	0.928	0.69
SODIUM, DISSOLVED	12	21.00	4.35	13.0	27.0	12	0.0869	0.5331	0.990	0.64
POTASSIUM, DISSOLVED	12	1.25	0.22	0.8	1.6	12	0.0008	1.0733	0.169*	0.23
BICARBONATE, ION	12	76.4	22.3	44	112	12	0.436	-26.205	0.970	5.7
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	9.14	1.41	6.4	12.0	12	0.0158	5.4169	0.554*	1.23
CHLORIDE, DISSOLVED	12	30.17	5.75	17.0	38.0	12	0.1064	5.1249	0.916	2.42
DISSOLVED SOLIDS, SUM OF CONST	12	134.9	27.7	83	177	12	0.550	5.435	0.983	5.4
DISSOLVED SOLIDS, ROE 180 DEG C	12	139.3	27.0	93	173	12	0.498	22.089	0.914	11.5
HARDNESS, TOTAL	12	67.1	15.0	40	90	12	0.292	-1.689	0.965	4.1
HARDNESS, NONCARBONATE	12	4.8	3.9	0	12	12	-0.054	17.569	-0.694	2.9
TURBIDITY (JTU)	13	8.3	13.0	0	40	13	-0.175	48.638	-0.687	9.9
FLUORIDE, DISSOLVED	12	0.09	0.05	0.0	0.2	12	0.0004	-0.0003	0.376*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	21.67	1.69	2.78	68	0.92

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	2	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	0
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	10	4	2	4
IRON (FE), UG/L	4	210	400	5	100	170
LEAD (PB), UG/L	4	<100	<100	4	2	7
MANGANESE (MN), UG/L	4	20	50	5	10	30
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	0	10	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	3.00	9.70			
BIOMASS, ASH WT., G/SQ M	4	1.20	7.70			
CHLOROPHYLL A, MG/SQ M	4	2.600	32.800			
CHLOROPHYLL B, MG/SQ M	4	0.100	11.700			
ORGANIC CARBON, MG/L	3	2.400	7.800			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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 COEFFICIENT, R	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	20.42	1.26	19.0	23.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	52.1	3.9	41	57					
STREAMFLOW (CUBIC FT/SEC)	12	31.7	36.0	6	118	12	-3.550	216.566	-0.387*	34.8
PH (STANDARD UNITS)	12	6.24	0.54	5.2	6.9	12	0.0667	2.7698	0.481*	0.50
PHOSPHORUS, TOTAL	12	0.034	0.018	0.01	0.07	12	-0.00056	0.06321	-0.119*	0.019
NITRITE + NITRATE, TOTAL	12	0.068	0.090	0.01	0.34	12	0.00149	-0.00925	0.065*	0.094
NITROGEN, KJELDAHL, TOTAL	12	0.340	0.223	0.00	0.67	12	-0.00835	0.77471	-0.147*	0.231
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	224.5	241.4	15	730	11	11.132	-356.422	0.189*	249.8
SEDIMENT SUSPENDED	12	7.0	4.7	2	14					
SEDIMENT, CLAY-SILT (PERCENT)	12	99.3	2.3	92	100					
COLIFORM, FECAL (COL/100 ML)	12	1033.3	551.5	100	1900					
STREPTOCOCCI, FECAL (COL/100 ML)	12	650.8	566.3	110	1900					
SILICA, DISSOLVED	12	5.30	1.80	2.2	8.3	12	0.2019	-5.2148	0.440*	1.70
CALCIUM, DISSOLVED	12	1.27	0.56	0.9	3.0	12	0.0221	0.1159	0.155*	0.58
MAGNESIUM, DISSOLVED	12	1.15	0.28	0.8	1.6	12	0.0115	0.5489	0.163*	0.29
SODIUM, DISSOLVED	12	6.53	0.57	5.2	7.6	12	0.1212	0.2225	0.827	0.34
POTASSIUM, DISSOLVED	12	0.60	0.13	0.5	0.9	12	0.0041	0.3841	0.120*	0.14
BICARBONATE, ION	12	6.2	2.2	1	9	12	0.200	-4.265	0.362*	2.1
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.99	1.21	2.2	6.7	12	-0.0278	5.4382	-0.090*	1.27
CHLORIDE, DISSOLVED	12	10.47	1.34	8.1	13.0	12	0.2370	-1.8665	0.691	1.02
DISSOLVED SOLIDS, SUM OF CONST	12	32.4	3.2	25	38	12	0.661	-1.989	0.815	1.9
DISSOLVED SOLIDS, ROE 180 DEG C	12	40.5	4.3	33	47	12	-0.595	71.488	-0.543*	3.8
HARDNESS, TOTAL	12	7.8	1.5	6	11	12	0.084	3.465	0.215*	1.6
HARDNESS, NONCARBONATE	12	2.9	2.2	0	8	12	-0.023	4.124	-0.041*	2.3
TURBIDITY (JTU)	12	9.0	4.9	3	20	12	-0.397	29.659	-0.317*	4.9
FLUORIDE, DISSOLVED	12	0.05	0.05	0.0	0.1	12	-0.0050	0.3121	-0.378*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	20.47	1.31	2.28	58	0.90

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	4	0	1
CADMIUM (CD), UG/L	4	0	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	< 50	4	0	0
COBALT (CO), UG/L	4	0	50	4	0	0
COPPER (CU), UG/L	4	<10	10	4	0	1
IRON (FE), UG/L	4	180	710	4	30	200
LEAD (PB), UG/L	4	<100	<100	4	1	12
MANGANESE (MN), UG/L	4	10	20	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	0	20	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	1.20	11.60			
BIOMASS, ASH WT., G/SQ M	4	0.50	7.00			
CHLOROPHYLL A, MG/SQ M	4	1.600	39.400			
CHLOROPHYLL B, MG/SQ M	4	0.100	14.100			
ORGANIC CARBON, MG/L	4	2.100	7.400			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	20.21	1.14	18.0	22.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	80.0	4.5	72	88					
STREAMFLOW (CUBIC FT/SEC)	12	5.4	0.8	4	7	12	-0.134	16.131	-0.762	0.5
PH (STANDARD UNITS)	12	7.12	0.57	6.2	8.0	12	-0.0447	10.6983	-0.351*	0.56
PHOSPHORUS, TOTAL	12	0.022	0.010	0.00	0.04	12	-0.00085	0.08953	-0.372*	0.010
NITRITE + NITRATE, TOTAL	12	0.102	0.037	0.05	0.18	12	-0.00330	0.36676	-0.401*	0.036
NITROGEN, KJELDAHL, TOTAL	12	0.125	0.088	0.00	0.24	12	0.00045	0.08924	0.023*	0.092
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	213.9	155.0	53	620	12	-4.696	589.631	-0.137*	161.0
SEDIMENT SUSPENDED	12	2.0	2.6	0	10					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	450.8	303.5	70	940					
STREPTOCOCCI, FECAL (COL/100 ML)	12	303.3	164.8	120	630					
SILICA, DISSOLVED	12	17.50	1.17	16.0	19.0	12	0.1339	6.7857	0.518*	1.05
CALCIUM, DISSOLVED	12	4.13	0.76	3.4	5.7	12	0.1161	-5.1534	0.671	0.61
MAGNESIUM, DISSOLVED	12	2.56	0.30	1.9	3.0	12	0.0295	0.2005	0.439*	0.29
SODIUM, DISSOLVED	12	7.36	0.40	6.5	8.0	12	0.0755	1.3222	0.854	0.22
POTASSIUM, DISSOLVED	12	0.92	0.11	0.8	1.1	12	0.0022	0.7468	0.095*	0.11
BICARBONATE, ION	12	25.6	2.3	20	28	12	0.299	1.655	0.583	2.0
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	3.10	1.30	1.9	5.7	12	-0.0170	4.4565	-0.059*	1.37
CHLORIDE, DISSOLVED	12	9.46	0.63	8.8	11.0	12	0.0701	3.8538	0.500*	0.57
DISSOLVED SOLIDS, SUM OF CONST	12	57.7	3.1	51	63	12	0.549	13.738	0.788	2.0
DISSOLVED SOLIDS, ROE 180 DEG C	12	58.1	5.4	49	66	12	0.607	9.512	0.504*	4.9
HARDNESS, TOTAL	12	20.8	2.7	17	26	12	0.393	-10.679	0.648	2.2
HARDNESS, NONCARBONATE	12	1.0	2.1	0	7	12	0.129	-9.357	0.274*	2.2
TURBIDITY (JTU)	12	0.5	0.5	0	1	12	0.009	-0.214	0.077*	0.5
FLUORIDE, DISSOLVED	12	0.07	0.05	0.0	0.1	12	-0.0018	0.2179	-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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	20.20	1.38	2.22	80	0.57

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	4	0	0
CADMIUM (CD), UG/L	4	0	<10	4	0	2
CHROMIUM (CR), UG/L	4	0	20	4	0	10
COBALT (CO), UG/L	4	0	<50	4	0	0
COPPER (CU), UG/L	4	0	10	4	0	5
IRON (FE), UG/L	4	0	40	4	0	20
LEAD (PB), UG/L	4	0	<100	4	0	14
MANGANESE (MN), UG/L	4	0	20	4	0	10
MERCURY (HG), UG/L	4	0.0	0.0	4	0.0	0.1
SELENIUM (SE), UG/L	4	0	0	4	0	0
ZINC (ZN), UG/L	4	10	30	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	4	0.50	6.08			
BIOMASS, ASH WT., G/SQ M	4	0.30	4.46			
CHLOROPHYLL A, MG/SQ M	4	7.400	61.000			
CHLOROPHYLL B, MG/SQ M	4	0.100	15.000			
ORGANIC CARBON, MG/L	4	0.300	2.500			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

STATISTICAL SUMMARY OF SELECTED DISSOLVED CHEMICAL CONSTITUENTS AND
REGRESSION RELATIONSHIPS OF CONSTITUENT CONCENTRATIONS TU SPECIFIC CONDUCTANCE (MICROMHOS)

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN)					REGRESSION 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	18.50	1.30	16.0	20.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	14	33.6	6.6	20	42					
STREAMFLOW (CUBIC FT/SEC)	14	287.5	465.6	11	1650	14	-53.508	2087.648	-0.779	304.0
PH (STANDARD UNITS)	14	6.89	0.48	5.9	7.6	14	0.0163	6.3376	0.229*	0.49
PHOSPHORUS, TOTAL	12	0.008	0.008	0.00	0.02	12	-0.00083	0.03552	-0.681	0.006
NITRITE + NITRATE, TOTAL	12	0.078	0.036	0.02	0.14	12	0.00116	0.04053	0.219*	0.037
NITROGEN, KJELDAHL, TOTAL	12	0.142	0.103	0.01	0.35	12	0.00226	0.06859	0.150*	0.107
PHYTOPLANKTON, TOTAL (CELLS/ML)	11	358.2	490.9	53	1800	11	-9.460	659.166	-0.125*	513.4
SEDIMENT SUSPENDED	12	2.5	1.3	1	5					
SEDIMENT, CLAY-SILT (PERCENT)	12	100.0	0.0	100	100					
COLIFORM, FECAL (COL/100 ML)	12	89.7	73.9	<1	200					
STREPTOCOCCI, FECAL (COL/100 ML)	12	153.3	118.6	3	460					
SILICA, DISSOLVED	12	8.51	2.83	3.5	13.0	12	0.3980	-4.4925	0.960	0.63
CALCIUM, DISSOLVED	12	2.70	0.72	1.6	3.8	12	0.0940	-0.3713	0.893	0.34
MAGNESIUM, DISSOLVED	12	1.48	0.43	0.6	2.4	12	0.0401	0.1750	0.642	0.34
SODIUM, DISSOLVED	12	2.41	0.37	1.9	3.1	12	0.0482	0.8323	0.883	0.18
POTASSIUM, DISSOLVED	12	0.40	0.11	0.2	0.6	12	0.0119	0.0113	0.720	0.08
BICARBONATE, ION	12	14.6	5.8	5	24	12	0.757	-10.161	0.891	2.8
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	12	2.25	0.72	1.0	3.9	12	-0.0213	2.9445	-0.202*	0.74
CHLORIDE, DISSOLVED	12	2.97	0.46	2.2	3.8	12	-0.0204	3.6314	-0.305*	0.46
DISSOLVED SOLIDS, SUM OF CONST	12	27.9	6.8	15	38	12	0.940	-2.775	0.939	2.5
DISSOLVED SOLIDS, ROE 180 DEG C	12	31.7	7.6	12	39	12	0.791	5.818	0.715	5.5
HARDNESS, TOTAL	12	12.8	3.3	6	19	12	0.404	-0.378	0.844	1.8
HARDNESS, NONCARBONATE	12	1.5	1.3	0	3	12	-0.131	5.769	-0.679	1.0
TURBIDITY (JTU)	12	1.8	1.0	1	4	12	-0.122	5.826	-0.810	0.6
FLUORIDE, DISSOLVED	12	0.04	0.05	0.0	0.1	12	0.0060	-0.1537	0.793	0.03

*NOT SIGNIFICANT AT THE 95 PERCENT CONFIDENCE LEVEL

DURATION TABLE OF DAILY SPECIFIC CONDUCTANCE SAMPLE SIZE = 214

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%
	61	53	46	43	41	35	30	19	15	15

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

SAMPLE SIZE	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
221	18.50	1.90	2.09	74	0.65

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	0	0	4	0	0
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	10	4	0	1
IRON (FE), UG/L	4	220	620	4	90	130
LEAD (PB), UG/L	4	<100	<100	4	2	11
MANGANESE (MN), UG/L	4	0	10	4	0	10
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	0	100	4	0	0
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	5	1.08	7.20			
BIOMASS, ASH WT., G/SQ M	5	0.15	6.20			
CHLOROPHYLL A, MG/SQ M	5	2.000	8.000			
CHLOROPHYLL B, MG/SQ M	5	0.300	1.500			
ORGANIC CARBON, MG/L	4	1.600	8.300			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 50038100   NAME: RIO GRANDE DE MANATI AT HWY 2 NR MANATI, PR

LAT 18025M52S LONG 066031M37S
DRAINAGE AREA: 0 SQ MI (0 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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

CONSTITUENT	CONSTITUENT (MG/L OR UNIT SHOWN) SAMPLE SIZE	MEAN	STANDARD DEVIATION	RANGE		REGRESSION SUMMARY SAMPLE SIZE	REGRESSION COEFICIENT, B	CONSTANT, B	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	12	25.88	2.22	22.0	29.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	270.9	21.9	230	310					
STREAMFLOW (CUBIC FT/SEC)	12	189.0	85.2	97	360	12	-2.412	842.566	-0.671	70.0
PH (STANDARD UNITS)	12	7.58	0.25	7.1	7.9	12	-0.0047	8.8626	-0.411*	0.24
PHOSPHORUS, TOTAL	12	0.143	0.052	0.07	0.29	12	0.00070	-0.04516	0.293*	0.052
NITRITE + NITRATE, TOTAL	12	0.628	0.291	0.25	1.20	12	-0.00421	1.76772	-0.317*	0.290
NITROGEN, KJELDAHL, TOTAL	12	0.392	0.158	0.13	0.65	12	-0.00179	0.87684	-0.247*	0.161
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	362.3	530.4	16	1900	12	-4.255	1514.974	-0.176*	547.6
SEDIMENT SUSPENDED	3	104.3	31.7	75	138					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	8325.0	7448.4	0	25000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	6011.7	10584.9	780	31000					
SILICA, DISSOLVED	7	20.57	1.13	19.0	22.0	7	-0.0332	29.6022	-0.612*	0.98
CALCIUM, DISSOLVED	4	35.75	4.65	31.0	42.0					
MAGNESIUM, DISSOLVED	4	7.82	0.84	6.8	8.8					
SODIUM, DISSOLVED	7	11.43	0.53	11.0	12.0	7	0.0157	7.1649	0.613*	0.46
POTASSIUM, DISSOLVED	7	1.86	0.10	1.7	2.0	7	-0.0010	2.1177	-0.205*	0.10
BICARBONATE, ION	12	144.2	15.0	115	164	12	0.392	58.027	0.573*	12.9
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	7	9.13	1.95	7.3	13.0	7	-0.0631	26.3167	-0.678*	1.57
CHLORIDE, DISSOLVED	7	14.86	2.85	13.0	21.0	7	0.0176	10.0605	0.129*	3.10
DISSOLVED SOLIDS, SUM OF CONST	4	169.0	14.8	156	189					
DISSOLVED SOLIDS, RDE 180 DEG C	4	164.8	12.0	149	176					
HARDNESS, TOTAL	4	120.0	14.1	110	140					
HARDNESS, NONCARBONATE	4	12.3	5.1	6	18					
TURBIDITY (JTU)	4	6.8	8.9	1	20					
FLUORIDE, DISSOLVED	7	0.21	0.07	0.1	0.3	7	0.0002	0.1551	0.066*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	25.84	2.42	2.78	66	1.43

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	0	1	4	0	1
CADMIUM (CD), UG/L	4	0	2	4	0	2
CHROMIUM (CR), UG/L	4	<10	60	4	0	0
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	6	21	4	0	3
IRON (FE), UG/L	4	50	3200	4	10	260
LEAD (PB), UG/L	4	2	20	4	0	14
MANGANESE (MN), UG/L	7	10	160	4	0	40
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.0
SELENIUM (SE), UG/L	3	0	0	4	0	0
ZINC (ZN), UG/L	4	20	40	4	0	20
PERIPHYTON:						
BIOMASS, DRY WT., G/SQ M	1	22.00				
BIOMASS, ASH WT., G/SQ M	1	3.20				
CHLOROPHYLL A, MG/SQ M	0					
CHLOROPHYLL B, MG/SQ M	0					
ORGANIC CARBON, MG/L	6	2.800	9.300			

Table 12. Summary of measurements at each station--Continued

STATION NUMBER: 50046000 NAME: RIO DE LA PLATA AT TOA ALTA, PR

LAT 18023M50S LONG 066D15M17S
DRAINAGE AREA: 200 SQ MI (518 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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)	15	27.47	2.50	24.0	32.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	15	440.4	92.4	307	600					
STREAMFLOW (CUBIC FT/SEC)	15	74.3	77.8	14	300	15	-0.546	314.834	-0.648	61.5
PH (STANDARD UNITS)	15	7.51	0.27	6.9	7.8	15	0.0016	6.7891	0.553	0.24
PHOSPHORUS, TOTAL	15	0.100	0.059	0.05	0.26	15	0.00004	0.08311	0.060*	0.061
NITRITE + NITRATE, TOTAL	15	0.459	0.219	0.11	0.95	15	-0.00100	0.89965	-0.422*	0.206
NITROGEN, KJELDAHL, TOTAL	15	0.438	0.207	0.00	0.89	15	-0.00069	0.73998	-0.306*	0.205
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	4599.1	9611.2	39	34000	12	0.914	4208.086	0.009*	10079.8
SEDIMENT SUSPENDED	5	87.6	43.3	44	144					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	15	8377.4	15568.4	30	56000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	3320.6	8192.3	37	29000					
SILICA, DISSOLVED	7	17.43	1.40	16.0	19.0	7	0.0064	14.6032	0.505*	1.32
CALCIUM, DISSOLVED	4	54.50	15.78	41.0	71.0					
MAGNESIUM, DISSOLVED	4	12.25	3.10	8.0	15.0					
SODIUM, DISSOLVED	7	22.71	5.41	15.0	30.0	7	0.0425	3.8227	0.873	2.89
POTASSIUM, DISSOLVED	7	1.77	0.78	0.7	3.2	7	-0.0043	3.6870	-0.617*	0.67
BICARBONATE, ION	12	195.5	43.7	139	256	12	0.375	35.048	0.818	26.4
CARBONATE, ION	12	0.0	0.0	0	0	12	0.000	0.000	0.000*	0.0
SULFATE, DISSOLVED	10	15.50	1.27	14.0	17.0	10	-0.0010	15.9460	-0.076*	1.34
CHLORIDE, DISSOLVED	10	37.70	12.08	22.0	59.0	10	0.1049	-10.3425	0.860	6.55
DISSOLVED SOLIDS, SUM OF CONST	4	256.8	63.4	192	316					
DISSOLVED SOLIDS, ROE 180 DEG C	7	278.7	60.6	184	340	7	0.644	-22.504	0.882	31.3
HARDNESS, TOTAL	4	187.5	49.9	140	240					
HARDNESS, NONCARBONATE	4	28.5	9.9	21	42					
TURBIDITY (JTU)	4	21.8	27.9	1	60					
FLUORIDE, DISSOLVED	7	0.21	0.04	0.2	0.3	7	0.0000	0.1940	0.134*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
15	27.00	2.94	3.01	73	1.41

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	2	2	4	1	2
CADMIUM (CD), UG/L	4	0	3	4	0	3
CHROMIUM (CR), UG/L	4	<10	10	4	0	1
COBALT (CO), UG/L	4	0	0	4	0	0
COPPER (CU), UG/L	4	7	18	4	1	3
IRON (FE), UG/L	4	60	3800	4	10	140
LEAD (PB), UG/L	4	2	25	4	0	18
MANGANESE (MN), UG/L	7	20	220	4	20	220
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	3	0	1	4	0	0
ZINC (ZN), UG/L	4	20	50	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	5	3.600	7.300			

Table 12. Summary of measurements at each station--Continued.

STATION NUMBER: 50092000 NAME: RIO GRANDE DE PATILLAS NR PATILLAS PR

LAT 18D02M04S LONG 066D01M58S
DRAINAGE AREA: 18 SQ MI (47 SQ KM)
PERIOD OF RECORD: 10/01/75 - 09/30/76

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, B	CONSTANT, A	CORRELATION COEFICIENT	STANDARD ERROR OF ESTIMATE
TEMPERATURE, WATER (DEG C)	13	25.77	2.67	22.5	31.0					
SPECIFIC CONDUCTANCE (MICROMHOS)	13	143.2	32.4	90	222					
STREAMFLOW (CUBIC FT/SEC)	12	53.8	52.2	16	199	12	-1.144	219.820	-0.725	37.7
PH (STANDARD UNITS)	13	7.68	0.52	6.9	8.4	13	0.0068	6.7052	0.427*	0.49
PHOSPHORUS, TOTAL	12	0.047	0.036	0.00	0.11	12	-0.00046	0.11296	-0.422*	0.034
NITRITE + NITRATE, TOTAL	12	0.119	0.104	0.02	0.32	12	-0.00117	0.28868	-0.369*	0.102
NITROGEN, KJELDAHL, TOTAL	12	0.222	0.269	0.01	0.93	12	-0.00513	0.96698	-0.630	0.219
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	378.8	443.7	53	1700	12	-2.162	692.490	-0.161*	459.2
SEDIMENT SUSPENDED	4	16.3	25.3	0	54					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	2526.7	3051.7	160	8800					
STREPTOCOCCI, FECAL (COL/100 ML)	12	1215.0	1193.5	110	4000					
SILICA, DISSOLVED	7	19.70	7.31	4.9	24.0	7	0.1307	0.5185	0.769	5.11
CALCIUM, DISSOLVED	4	9.42	3.93	3.7	12.0					
MAGNESIUM, DISSOLVED	4	4.20	1.42	2.2	5.3					
SODIUM, DISSOLVED	7	12.20	3.43	5.7	15.0	7	0.0586	3.6060	0.734*	2.56
POTASSIUM, DISSOLVED	7	0.56	0.11	0.4	0.7	7	-0.0021	0.8691	-0.806	0.07
BICARBONATE, ION	12	56.0	16.8	13	72	12	0.338	6.942	0.665	13.1
CARBONATE, ION	12	0.3	0.9	0	3	12	0.001	0.072	0.047*	0.9
SULFATE, DISSOLVED	7	8.76	2.53	4.0	11.0	7	0.0383	3.1353	0.651*	2.10
CHLORIDE, DISSOLVED	7	10.79	1.28	9.1	12.0	7	0.0229	7.4223	0.769	0.90
DISSOLVED SOLIDS, SUM OF CONST	4	87.3	33.6	37	107					
DISSOLVED SOLIDS, ROE 180 DEG C	4	82.8	30.5	40	108					
HARDNESS, TOTAL	4	40.8	15.8	18	52					
HARDNESS, NONCARBONATE	4	3.8	3.5	0	8					
TURBIDITY (JTU)	4	17.0	32.0	1	65					
FLUORIDE, DISSOLVED	7	0.27	0.15	0.2	0.6	7	0.0002	0.2404	0.061*	0.16

*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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
13	25.75	1.80	2.56	23	2.56

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	0	1	3	0	1
CADMIUM (CD), UG/L	4	0	1	4	0	5
CHROMIUM (CR), UG/L	4	<10	10	4	0	0
COBALT (CO), UG/L	4	0	9	4	0	9
COPPER (CU), UG/L	4	6	22	4	0	19
IRON (FE), UG/L	4	80	3100	4	10	30
LEAD (PB), UG/L	4	2	16	4	0	15
MANGANESE (MN), UG/L	7	0	480	4	0	440
MERCURY (HG), UG/L	4	0.0	0.2	3	0.0	0.0
SELENIUM (SE), UG/L	3	0	0	3	0	0
ZINC (ZN), UG/L	4	10	40	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	5	1.000	12.000			

Table 12. Summary of measurements 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: 10/01/75 - 09/30/76

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)	12	25.21	2.56	20.5	29.5					
SPECIFIC CONDUCTANCE (MICROMHOS)	12	206.1	30.8	155	240					
STREAMFLOW (CUBIC FT/SEC)	10	204.8	153.3	72	530	10	-5.233	1321.592	-0.939	56.0
PH (STANDARD UNITS)	12	7.91	0.39	7.2	8.4	12	0.0060	6.6666	0.476*	0.36
PHOSPHORUS, TOTAL	12	0.138	0.094	0.02	0.33	12	-0.00242	0.63716	-0.797	0.059
NITRITE + NITRATE, TOTAL	12	0.646	0.348	0.01	1.20	12	-0.00880	2.45895	-0.778	0.229
NITROGEN, KJELDAHL, TOTAL	12	0.436	0.348	0.13	1.10	12	-0.00997	2.49048	-0.881	0.173
PHYTOPLANKTON, TOTAL (CELLS/ML)	12	968.6	806.1	66	2400	12	-0.371	1045.079	-0.014*	845.4
SEDIMENT SUSPENDED	6	228.0	328.1	9	767					
SEDIMENT, CLAY-SILT (PERCENT)	0									
COLIFORM, FECAL (COL/100 ML)	12	8089.7	14663.0	40	49000					
STREPTOCOCCI, FECAL (COL/100 ML)	12	7309.5	12387.2	30	40000					
SILICA, DISSOLVED	7	26.43	2.44	23.0	29.0	7	0.0673	12.1164	0.918	1.06
CALCIUM, DISSOLVED	4	22.50	5.26	18.0	28.0					
MAGNESIUM, DISSOLVED	4	8.72	1.28	7.3	10.0					
SODIUM, DISSOLVED	7	8.90	1.59	6.5	10.0	7	0.0459	-0.8655	0.963	0.47
POTASSIUM, DISSOLVED	7	1.33	0.43	0.4	1.7	7	-0.0034	2.0506	-0.262*	0.46
BICARBONATE, ION	12	109.4	27.8	44	136	12	0.805	-56.391	0.891	13.2
CARBONATE, ION	12	0..	0.6	0	2	12	0.006	-0.976	0.296*	0.6
SULFATE, DISSOLVED	7	9.71	0.78	8.4	11.0	7	0.0137	6.8051	0.580*	0.70
CHLORIDE, DISSOLVED	7	6.63	1.05	5.3	8.0	7	0.0249	1.3327	0.791	0.70
DISSOLVED SOLIDS, SUM OF CONST	4	133.5	24.3	112	156					
DISSOLVED SOLIDS, ROE 180 DEG C	4	147.5	28.3	118	182					
HARDNESS, TOTAL	4	90.8	17.0	75	110					
HARDNESS, NONCARBONATE	4	6.8	2.5	3	8					
TURBIDITY (JTU)	4	104.3	118.0	2	250					
FLUORIDE, DISSOLVED	7	0.16	0.05	0.1	0.2	7	0.0002	0.1118	0.133*	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	MEAN - M (DEG C)	AMPLITUDE - A (DEG C)	PHASE ANGLE - C (RADIANS)	VARIATION EXPLAINED (%)	STANDARD ERROR OF ESTIMATE (DEG C)
12	25.17	3.09	2.96	81	1.23

SUMMARY OF MAXIMUM AND MINIMUM CONCENTRATIONS OF CONSTITUENTS
SAMPLED AT A FREQUENCY OF QUARTERLY (1976 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	2	0	1	4	0	0
CADMIUM (CD), UG/L	4	0	1	4	0	4
CHROMIUM (CR), UG/L	4	<10	60	4	0	3
COBALT (CO), UG/L	4	0	21	4	0	0
COPPER (CU), UG/L	4	6	50	4	0	2
IRON (FE), UG/L	4	70	24000	4	0	70
LEAD (PB), UG/L	4	4	8	4	0	7
MANGANESE (MN), UG/L	7	0	720	4	0	10
MERCURY (HG), UG/L	4	0.0	0.1	4	0.0	0.1
SELENIUM (SE), UG/L	2	0	0	3	0	0
ZINC (ZN), UG/L	4	20	60	4	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	6	1.400	7.400			

* U S. GOVERNMENT PRINTING OFFICE 1983 - 656-556


U S DEPARTMENT OF THE INTERIOR
March 3, 1849