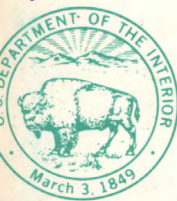
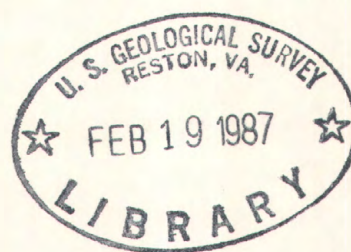


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Water Resources Data Nebraska Water Year 1985



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-85-1
Prepared in cooperation with the Nebraska Department of Water
Resources, the Conservation and Survey Division of the University
of Nebraska, the Nebraska Department of Environmental Control,
and with other State and Federal agencies

CALENDAR FOR WATER YEAR 1985

1984

O C T O B E R							N O V E M B E R							D E C E M B E R						
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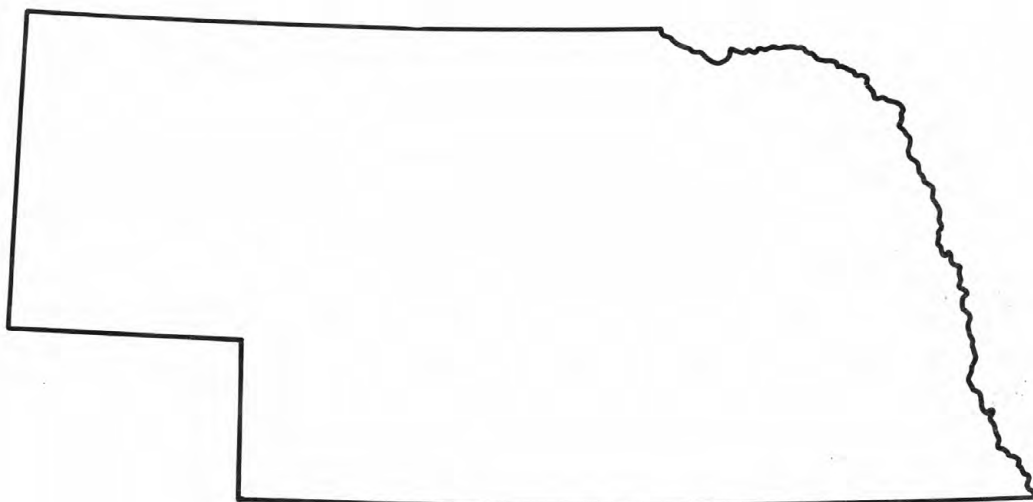
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Water Resources Data Nebraska

Water Year 1985

by G.B. Engel, R.A. Engberg, and M.J. Ellis



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-85-1
Prepared in Cooperation with the Nebraska Department of Water
Resources, the Conservation and Survey Division of the University
of Nebraska, the Nebraska Department of Environmental Control,
and with other State and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information of the water program in Nebraska, write to:

District Chief
Water Resources Division
U.S. Geological Survey
406 Federal Building
100 Centennial Mall, North
Lincoln, Nebraska 68508

PREFACE

This annual hydrologic data report of Nebraska is one of a series of annual reports that documents hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

J. A. Boohar, L. C. Blackburn, C. G. Hoy, N. R. Harmon, D. E. Schild, L. G. Loerch, J. C. Beard, and J. E. McKinney of the District Office.

M. Kubicek, S. H. Hull, D. M. Schwartz, and G. V. Steele of the Lincoln field office.

R. C. Beard, R. A. Drudik, and L. M. Sidak of the Ord field Office.

R. B. Swanson of the Cambridge field office.

This report was prepared in cooperation with the State of Nebraska and with other agencies under the general supervision of W. M. Kastner, District Chief, Nebraska.

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-87/212	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data - Nebraska, Water Year 1985			5. Report Date December 1986
7. Author(s) G. B. Engel, R. A. Engberg, and M. J. Ellis			6.
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division 406 Federal Building, 100 Centennial Mall, North Lincoln, Nebraska 68508			8. Performing Organization Rept. No. USGS-WDR-NE-85-1
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division 406 Federal Building, 100 Centennial Mall, North Lincoln, Nebraska 68508			10. Project/Task/Work Unit No.
			11. Contract(C) or Grant(G) No. (C) (G)
			13. Type of Report & Period Covered Annual - Oct. 1, 1984, to Sept. 30, 1985
15. Supplementary Notes Prepared in cooperation with the State of Nebraska and other agencies.			14.
16. Abstract (Limit: 200 words) Water resources data for the 1985 water year for Nebraska consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality in wells. This report contains discharge records for 159 streamflow gaging stations, 11 partial-record or miscellaneous streamflow stations, and 5 crest-stage, partial-record streamflow stations; stage and content records for 10 lakes and reservoirs; water-quality records for 43 streamflow stations, 8 ungaged streamsites, and 131 wells; and water-level records for 57 observation wells. These data represent that part of the National Water-Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Nebraska.			
17. Document Analysis a. Descriptors *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperature, Sampling sites, Water levels, Water analyses. b. Identifiers/Open-Ended Terms *Nebraska c. COSATI Field/Group			
18. Availability Statement No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 340
		20. Security Class (This Page) UNCLASSIFIED	22. Price

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INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Nebraska each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Nebraska."

This report includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 159 streamflow-gaging stations, for 11 partial-record or miscellaneous streamflow stations, and for 5 crest-stage, partial-record streamflow stations; (2) stage and contents for 10 lakes and reservoirs; (3) water-quality records for 43 streamflow-gaging stations, for 8 ungaged streamsites, and for 131 wells; and (4) water-level records for 57 observation wells. Records included for stream stages and for ground-water levels are only a small fraction of those obtained during the water year. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Nebraska.

This series of annual reports for Nebraska began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Nebraska were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 6A and 6B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Bldg. 41, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NE-85-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the Office Chief at the address given on the back of the title page or by telephone (402) 471-5082.

COOPERATION

The U.S. Geological Survey and agencies of the State of Nebraska have had cooperative agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are: Nebraska Department of Water Resources, J. Michael Jess, Director; Conservation and Survey Division, University of Nebraska-Lincoln, Vincent H. Dreeszen, Director; Nebraska Department of Environmental Control, Dennis Grams, Director; Big Blue River Compact Administration; Central Platte Natural Resources District; Little Blue Natural Resources District; and City of Lincoln.

Nebraska Department of Water Resources (NDWR) personnel in Bridgeport, Cambridge, Lincoln, Norfolk and Ord contributed significantly in the collection and computation of records under a USGS-NDWR cooperative agreement.

Assistance with funds or services was given by the U.S. Army Corps of Engineers in collecting records for 23 streamflow-gaging stations, 9 stage or partial-record stations, and 5 crest-stage gages, and by the U.S. Bureau of Reclamation in collecting records for 4 streamflow-gaging stations, 2 lake stations, and in providing elevations or capacity tables for 8 reservoir stations.

The following organizations aided in collecting records: Central Nebraska Public Power and Irrigation District, Nebraska Public Power District, and Loup River Public Power District.

OVERVIEW OF 1985 WATER YEAR

Precipitation data from published reports of the U.S. Department of Commerce, National Oceanic Atmospheric Administration, National Weather Service, for the eight National Weather Service Divisions in Nebraska are shown in table 1. Precipitation and departures from normal are shown for each quarter and for the entire 1985 water year, in order to emphasize the precipitation distribution during the year.

All divisions had greater-than-normal precipitation during the first 3 months of the water year. All divisions had less-than-normal precipitation during the second 3 months. During April through June, precipitation was slightly greater than normal again in four divisions, but continued to be less than normal in the Panhandle, North Central, Southwest, and Southeast Divisions. Precipitation was greater than normal in all divisions during the last 3 months of the water year. Only the Panhandle Division ended the water year with less-than-normal precipitation. The percentage of normal precipitation for each of the four quarters and for the entire water year are shown in figure 1 for the eight divisions.

Table 1.--Precipitation and departures from normal, in inches

National Weather Service Division	October-December		January-March		April-June		July-September		1985 water year October-September	
	Departure		Departure		Departure		Departure		Departure	
	Precipi- tation	from normal	Precipi- tation	from normal	Precipi- tation	from normal	Precipi- tation	from normal	Precipi- tation	from normal
Panhandle	1.94	0.23	0.85	-0.86	5.03	-2.88	5.89	0.61	13.71	-2.90
North Central	4.40	2.16	1.23	-.94	7.46	-1.70	9.69	2.44	22.78	1.96
Northeast	7.44	4.36	1.92	-1.09	12.47	1.94	9.48	.79	31.31	6.00
Central	6.62	4.08	1.49	-1.08	11.87	1.98	11.77	3.69	31.75	8.67
East Central	8.30	4.54	2.64	-.79	11.30	.19	12.91	2.97	35.15	6.91
Southwest	4.12	2.17	1.16	-.79	7.69	-.59	7.22	.53	20.19	1.32
South Central	5.40	2.77	1.71	-.89	11.30	1.45	10.25	1.70	28.66	5.03
Southeast	6.37	2.15	2.52	-1.23	9.40	-1.75	14.16	2.98	32.45	2.15

Streamflow

Monthly mean discharges during the 1985 water year and long-term monthly means at representative stations are plotted in figure 1. The period of record used for the long-term mean at some stations is from the completion of the last known storage structure or from the latest change in streamflow regulation upstream from the gage. The individual graphs demonstrate the varied conditions in the State during the year.

The graphs for stations 06454500, Niobrara River above Box Butte Reservoir, and 06841000, Medicine Creek above Harry Strunk Lake, reflect the usual pattern of streamflow but indicate that streamflow was less than normal throughout most of the water year in the Panhandle and southwestern part of the State. Streamflow was about normal at the end of the water year as a result of increased precipitation in the last 3 months. The mean discharge for the 1985 water year was the lowest for the period of record at Medicine Creek above Harry Strunk Lake and the second lowest on record at Niobrara River above Box Butte Reservoir. A small number of other gaging stations in the Panhandle and southwestern Nebraska had mean annual discharges that were minimums for period of record.

The graph for station 06461500, Niobrara River near Sparks, indicates that streamflow was near normal or greater than normal until March. Precipitation was less than normal from January through June in north-central Nebraska, and this resulted in less-than-normal streamflow beginning in March. Although precipitation was substantial during July through September, streamflow did not return to normal by the end of the water year.

Precipitation was greater than normal during most of the water year in the Central, Northeast, and East-Central Divisions. Streamflow was greater than normal during most of the water year in these areas, as indicated by the graphs for stations 06785000, Middle Loup River at St. Paul, and 06800500, Elkhorn River at Waterloo. These stations had substantially greater-than-normal streamflow in May, and a late, deep snowfall in April produced substantial runoff in northeastern Nebraska, which is indicated in the graph for the Elkhorn River. Streamflow was much greater than normal at the end of the water year in the Middle Loup River at St. Paul, as precipitation was substantial during July through September.

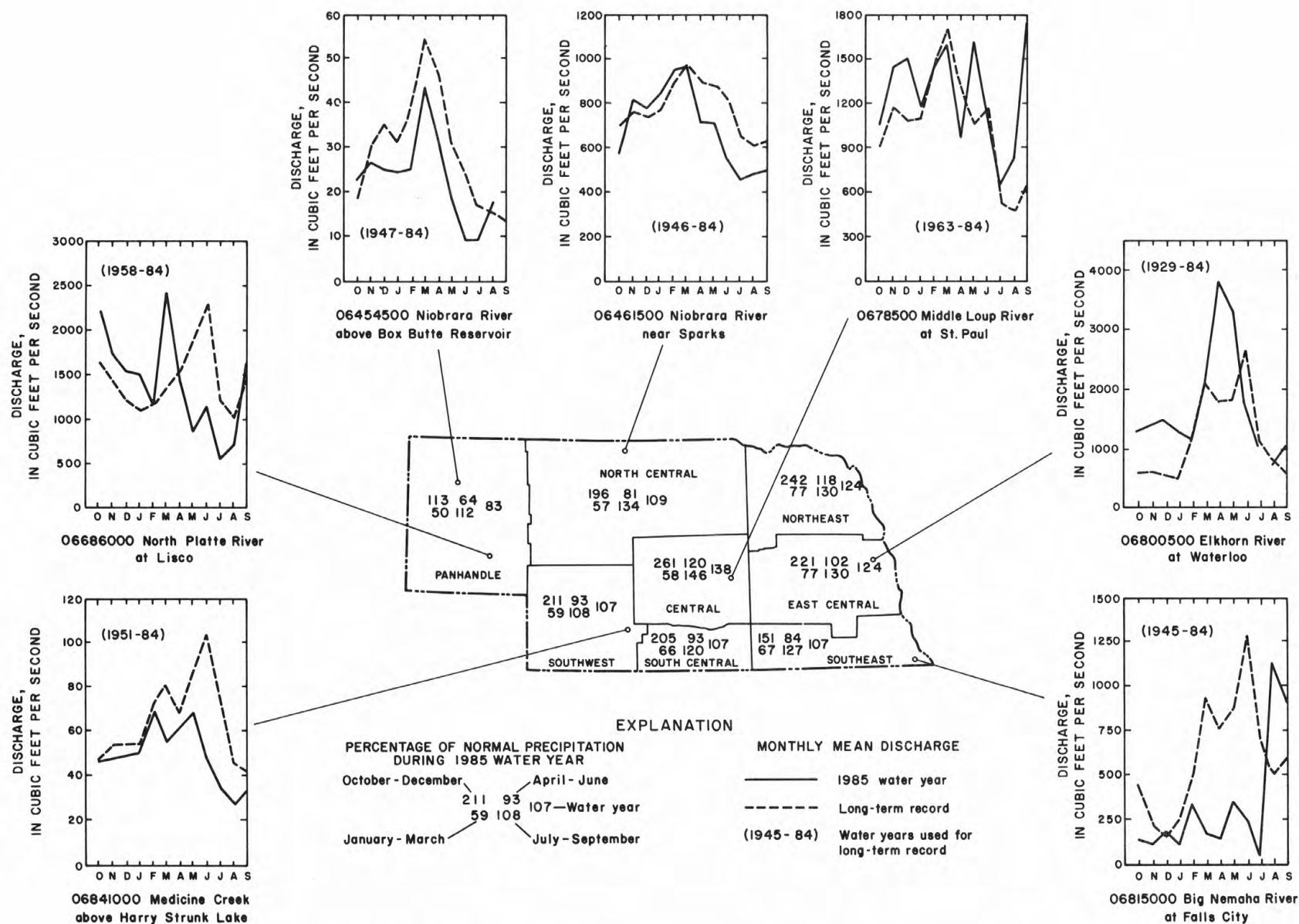


Figure 1.--Comparison of 1985 water-year precipitation and streamflow to long-term means.

Streamflow was less than normal in southeastern Nebraska during most of the water year as snowfall was less than normal and rainfall during the spring and early summer was less than normal. The graph for station 06815000, Big Nemaha River at Falls City, indicates this condition. The mean daily flow during July of 48.1 ft³/s was the second lowest of record for July at this site. Substantial rainfall in August and September produced greater-than-normal streamflow during those months.

Runoff at station 06686000, North Platte River at Lisco, is determined more by releases than by precipitation patterns. Reservoir releases greater than normal continued to be made during the first part of the water year because of substantial runoff during the 1984 water year. Releases were increased during March to provide storage in anticipation of the mountain snowmelt. Storage was sufficient during the snowmelt period so that large releases were not made from April through July. Runoff at the North Platte River at Lisco site was near normal at the end of the 1985 water year.

Chemical Quality of Streamflow

To determine whether significant changes are occurring in the chemical quality of streamflow leaving Nebraska, an analysis was made of specific-conductance records from sampling stations on five streams. Each station is located at or near the point at which the stream leaves Nebraska.

Specific conductance can be used to approximate the dissolved-solids concentration in water because it is related to the concentration and type of ions in water. To determine whether significant differences in specific conductance occurred between the 1985 water year and the period of record, a statistical technique called the ranked t-test was used.

The t-test technique requires proving or disproving a hypothesis that the mean specific conductance for the 1985 water year is equal to the mean for the period of record. The procedure for doing this requires ranking the conductance values, computing a "t" statistic, and comparing the statistic to a value taken from Student's "t" table.

If the absolute value of the computed "t" value (t_c) is less than the tabular "t" value (t_{tab}), the hypothesis that the means are equal is accepted. If the absolute value of t_c is greater than t_{tab} , the hypothesis is rejected and the means are considered to be not equal. In terms of specific conductance, a rejection of the hypothesis indicates there is a difference in water quality at a particular site between the 1985 water year and the period of record. A 95-percent level of significance ($\alpha=0.05$) was used for each t-test.

Results of the t-tests for the five stations are given in table 2. For four of the stations 06465500, Niobrara River near Verdel, 06805500 Platte River at Louisville, 06815000 Big Nemaha River at Falls City, and 06884025 Little Blue River at Hollenberg, comparisons of means for the 1984 water year to those for the period of record indicates that the means are not statistically different.

Table 2.--Results of ranked t-tests comparing mean specific conductance for the 1985 water year with mean for the period of record for streamflow leaving Nebraska

[Specific conductance, in micromhos per centimeter at 25° Celsius; R = rejected; A = accepted]

Station identification	Specific conductance				t-test			
	1985 water year		Period of record		Period used (water years)	T_{tab}	T_c	Hypothesis
	Number of values	Mean	Number of values	Mean				
06465500 Niobrara River near Verdel-----	12	276	148	270	1967-84	+1.98	-0.80	A
06805500 Platte River at Louisville-----	11	692	126	715	1972-84	+1.98	-0.09	A
06815000 Big Nemaha River at Falls City-----	11	580	144	632	1973-84	+1.98	+1.13	A
06853000 Republican River near Guide Rock-----	11	742	302	582	1962-84	+1.97	-17.2	R
06884025 Little Blue River at Hollenberg-----	10	492	157	473	1972-84	+1.97	-0.13	A

Streamflow during the 1985 water year was nearly 45 percent less than the 34-year average at station 06853000 Republican River near Guide Rock. Regression relations given in U.S. Geological Survey Water-Supply Paper 2179, "A statistical analysis of the quality of surface water in Nebraska," by R. A. Engberg, indicate that at this station, specific conductance tends to increase with decreasing streamflow. For the 1985 water year, mean specific conductance at the Guide Rock station was much greater than the mean specific conductance for the period of record. When streamflow is less than the mean for a period, this generally indicates that a greater percentage of streamflow is derived from ground-water seepage than from overland runoff. For the Republican River drainage area upstream from the Guide Rock station, ground water generally is more mineralized than water derived from overland runoff. This accounts for the inverse relationship between specific conductance and water discharge.

Ground-Water Levels

Water-level changes that occurred during the 1985 water year were determined from a statewide network of observation wells measured by 38 Federal, State, and local agencies. The network consists of more than 3,500 wells measured monthly, annually, or semiannually and 70 wells equipped with continuous recorders. Because of the importance of ground water as a source for irrigation and municipal supplies, most of the observation wells in Nebraska are located in those areas where large quantities of ground water are pumped. Water-level fluctuations in representative observation wells, located in different parts of the State, are shown in figure 2.

Probably the most significant changes in ground-water levels during the 1985 water year were the marked water-level rises in the central and east-central parts of the State. These water-level rises are a continuation of the rises that started in the 1983 water year. At the end of the 1985 water year, water levels in most observation wells were about 1.5 feet higher than at the end of the 1984 water year. Rising water levels probably have been the result of greater-than-normal precipitation during the growing season in these areas of the State during the past 3 years. Hydrographs for observation wells in Buffalo and Seward Counties were selected as representative of the water-level fluctuations in these areas of the State during the 1984 and 1985 water years.

The hydrograph for the observation well in Buffalo County shows that water levels rose 3.68 feet during the 1984 and 1985 water years. During the past 30 years, water levels were higher than those for the 1985 water year only three times (1969, 1970, and 1974 water years). Water levels at the end of the 1985 water year were 0.66 foot higher than they were at the end of the 1984 water year.

Water levels in the Seward County observation well were higher at the end of the 1985 water year than at the end of any of the past 23 water years. Water levels rose 6.62 feet during the past 3 water years. At the end of the 1985 water year, the water level was 2.72 feet higher than at the end of the 1984 water year.

In the southwestern and Panhandle areas of the State where precipitation during the water year was slightly less than normal, water levels generally declined during the 1985 water year. During the fall and winter months, water levels generally did not rise as high as the previous year, and declines during the irrigation season generally were greater than during the 1984 year. Most water levels were slightly less than a foot lower at the end of the 1985 water year than at the end of the 1984 water year. A representative example of water-level fluctuations in these areas during 1984 and 1985 water years is illustrated by the hydrograph for an observation well located in Chase County. The hydrograph shows that the water level was 2.40 feet lower at the end of the 1985 water year than at the end of the 1984 water year.

Precipitation in the north-central and northeastern parts of the State ranged from near normal to slightly less than normal, and most water levels declined in areas where ground water is used extensively for irrigation. The hydrograph for an observation well in Holt County is representative of water-level fluctuations in these areas during the 1984 and 1985 water years. Although water levels in the well at the end of the 1985 water year were 1.45 feet lower than at the end of the 1984 water year, they were the third highest recorded at the end of any water year during the past 18 years.

In areas of Nebraska where ground water is used only for domestic and stock supplies, most water-level fluctuations are caused by variations in natural recharge to and discharge from the aquifers. Commonly, water levels rise during the fall and winter months when recharge from precipitation exceeds discharge by seepage to streams and by evapotranspiration. They decline during the spring and summer months when discharge by seepage to streams and by evapotranspiration is greater than recharge from precipitation. The hydrograph for the observation well in Blaine County illustrates these annual fluctuations.

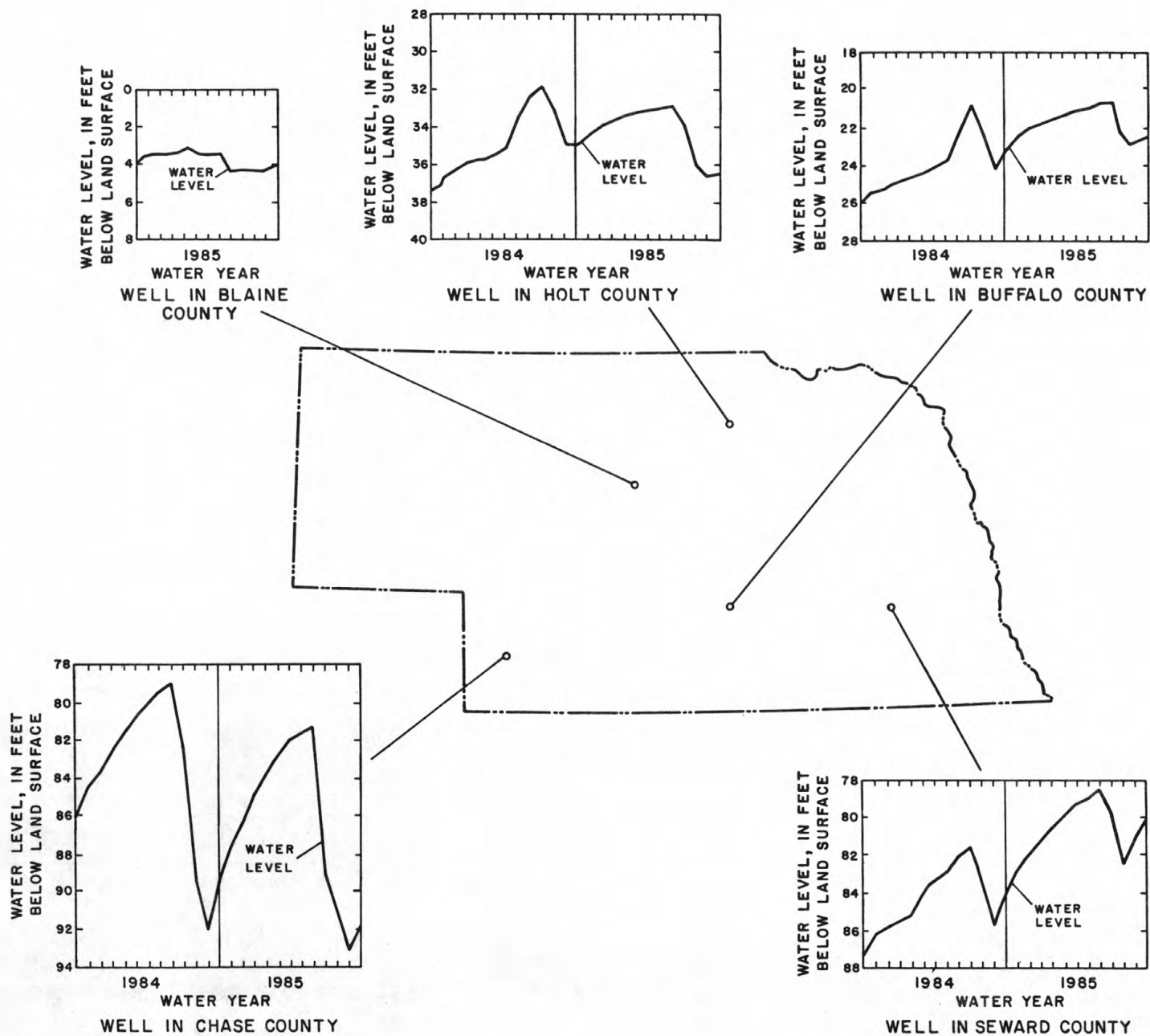


Figure 2.--Representative observation wells, 1984 and 1985.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream-Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1985 water year that began October 1, 1984, and ended September 30, 1985. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 3, 4, and 5. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for surface-water stations and the "latitude-longitude" system is used for wells.

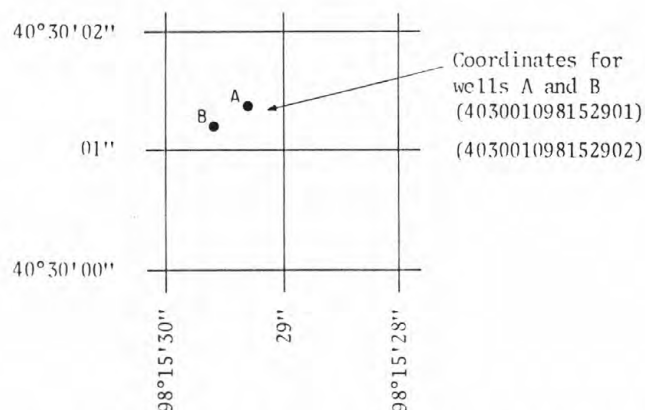
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06797000, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "797000." The Part number designates the major river basin; for example, Part "06" is the Missouri River basin.

Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)



System for numbering wells (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device, and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Discharge measurements at miscellaneous sites." Records of discharge measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately if made during the year. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figure 3.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

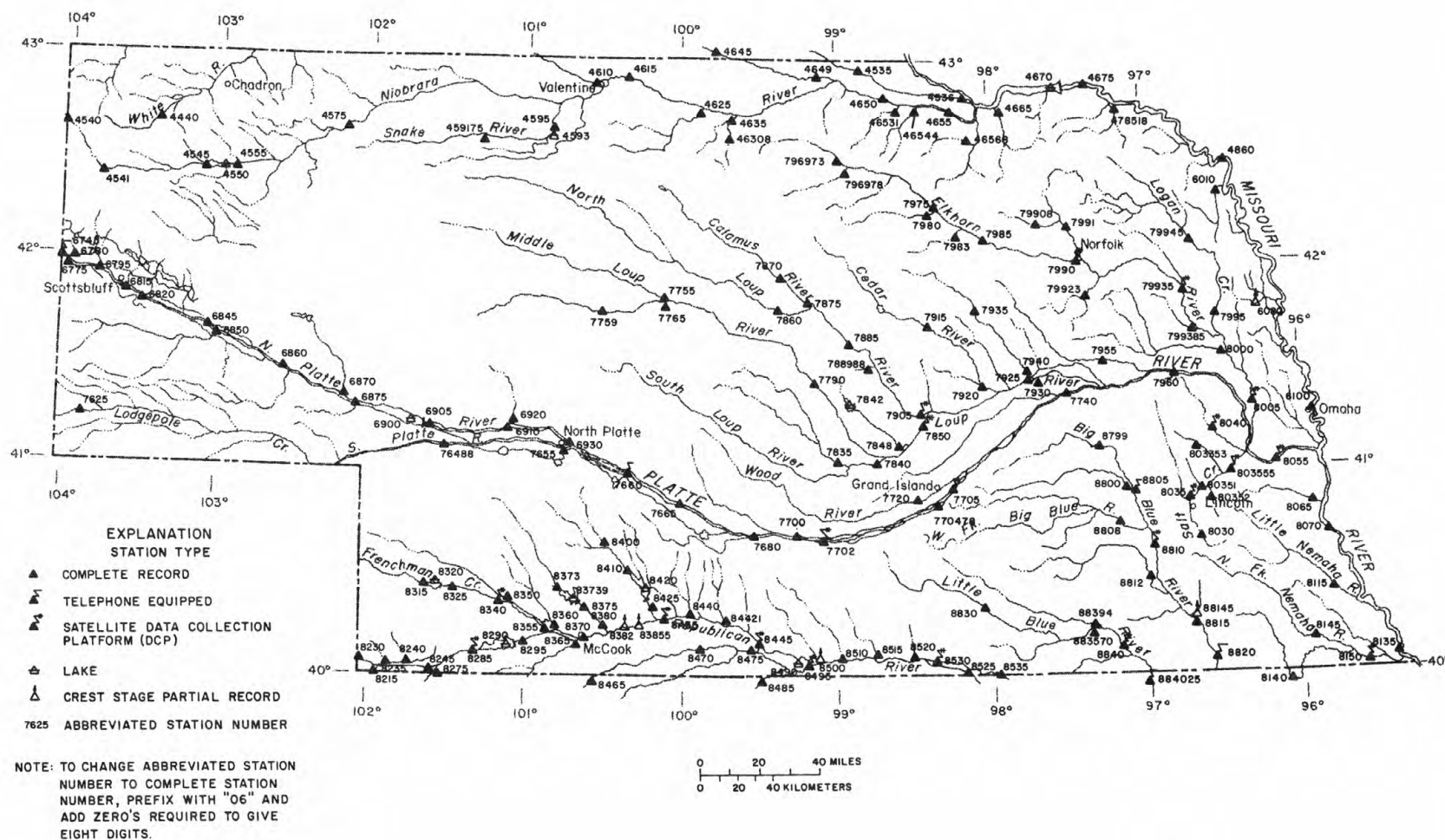


Figure 3.--Location of active surface-water gaging stations.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and equal to or greater than a selected base discharge are presented under this heading. The peaks equal to or greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in acre-feet (line headed "AC-FT"). In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at miscellaneous partial-record stations. The tables of partial-record stations may be followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. They also may be made in project areas to help define ground-water/surface-water relationships.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Nebraska District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of daily diversions of water from streams by canals are collected by and published in Hydrographic Reports of the Nebraska Department of Water Resources. Included are discharge records for streams and storage records for reservoirs not published in reports of the Geological Survey. Copies of the Hydrographic Reports may be obtained from the Nebraska Department of Water Resources, 301 Centennial Mall, South, P.O. Box 94676, Lincoln, NE 68509 (telephone number: 402-471-2363).

Records of discharge, not published by the Geological Survey, are collected in Nebraska at several sites by the U.S. Army Corps of Engineers. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as sites where other agencies have collected water data.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records", as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 4.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Nebraska District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

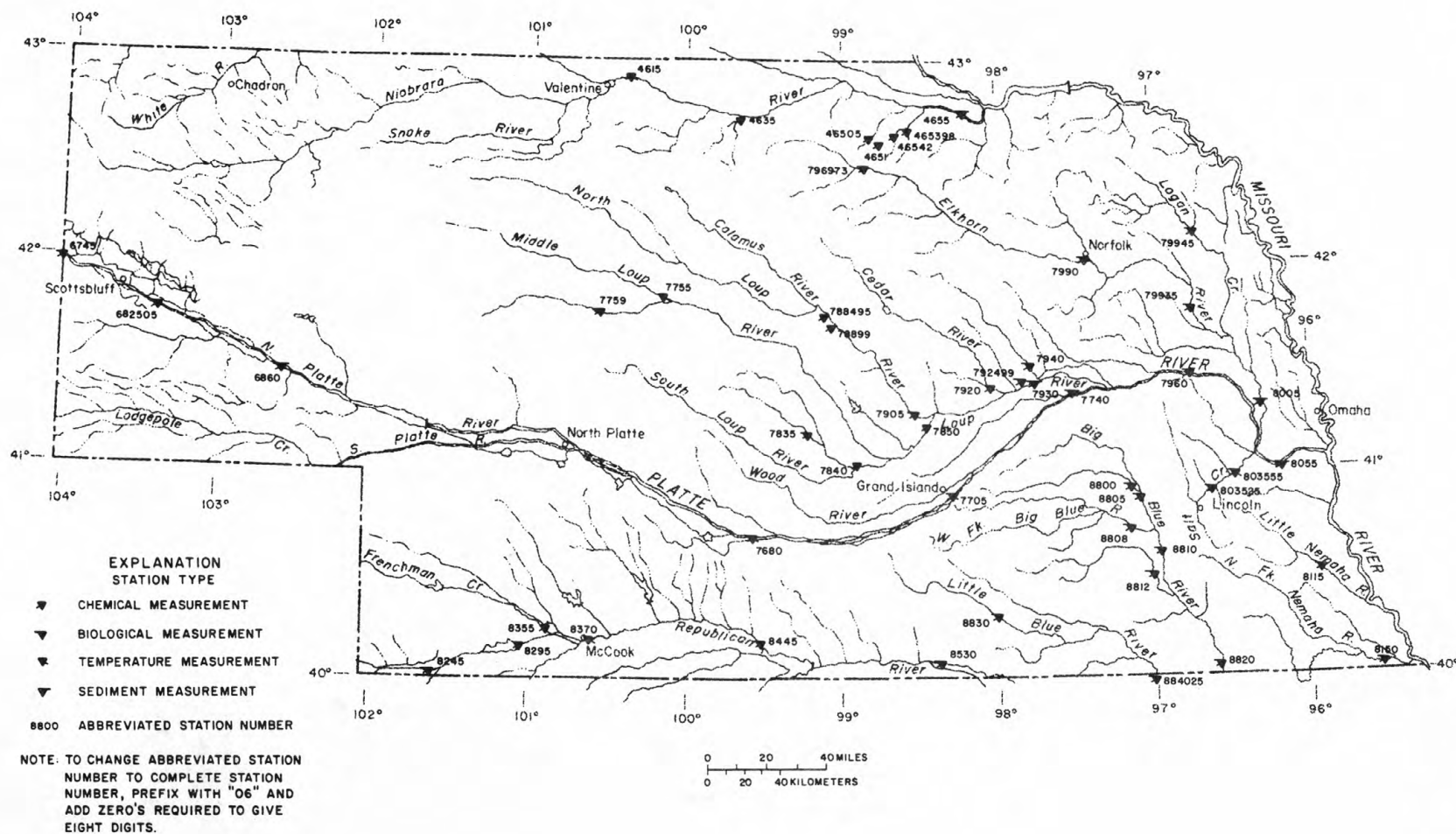


Figure 4.--Location of active surface-water-quality stations.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the Nebraska District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples are analyzed in Iowa City, Iowa; samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally; and all other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily, are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

Records of Ground-Water Levels

Only water-level data from a network of selected observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Nebraska are shown in figure 5.

Although, in this report, records of water levels are presented for only selected wells, records are obtained through cooperative efforts of many Federal, State, and local agencies for several thousand observation wells throughout Nebraska and are placed in computer storage. Each spring, the Nebraska District and the Conservation and Survey Division of the University of Nebraska publish a report for the previous calendar year entitled "Groundwater Levels in Nebraska, 19_." This report contains hydrographs of recorder wells, detailed maps showing changes in water levels from the previous year, and other useful items. Information about the availability of the data in the water-level file may be obtained from the District Chief, Nebraska District. (see address on back of front page.)

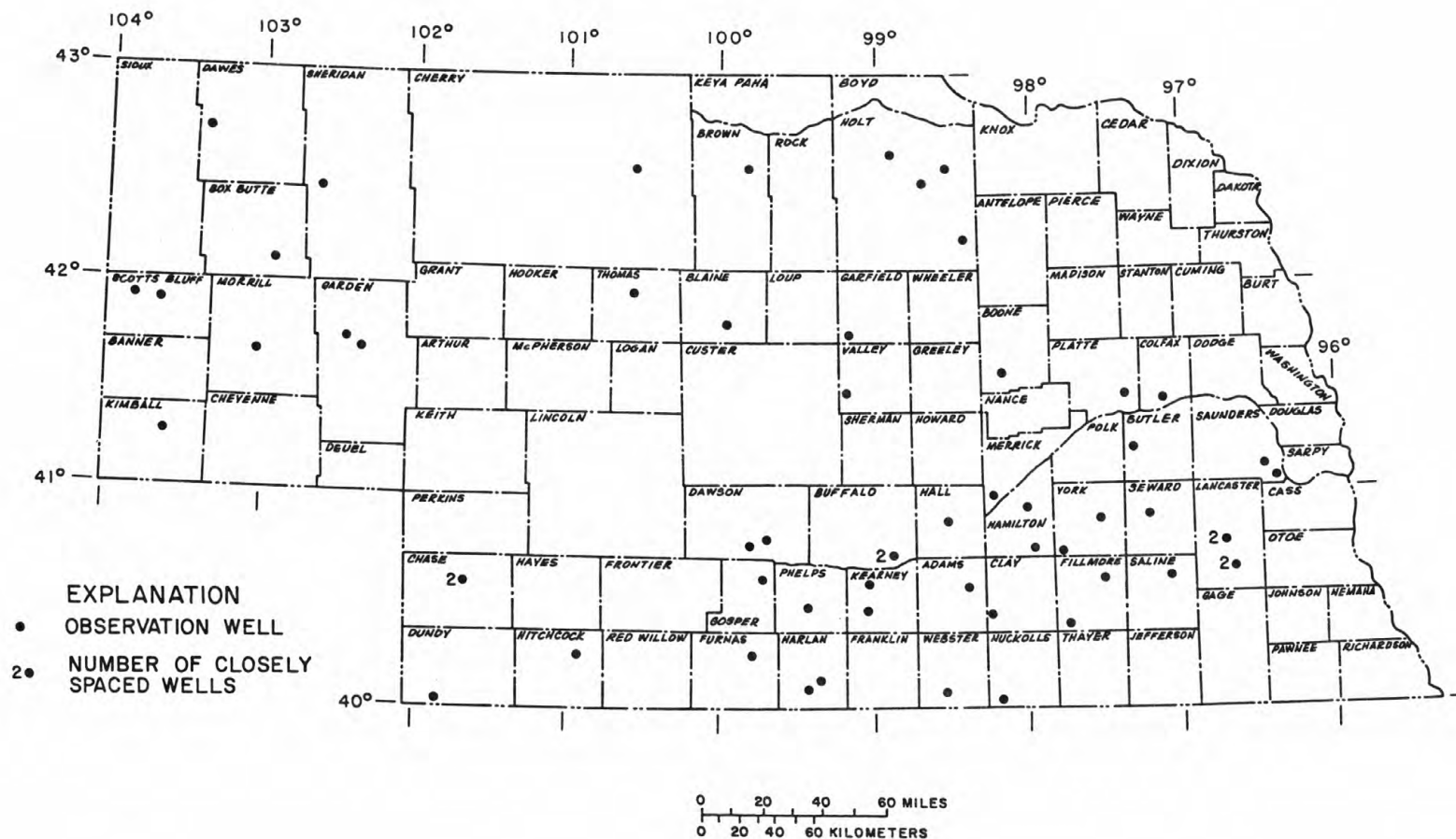


Figure 5.--Location of selected observation wells.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. Hydrographs also are presented for some wells. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed at the end of the introductory text. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO WATSTORE DATA

The National WATER Data STORAGE and RETRIEVAL System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the office whose address is given on the back of the title page.

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic-foot-per-second day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 μ m membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m²), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow (7 Q₁₀) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimeted. All areas shown are those for the stage when the planimeted map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insecta
Order.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	<u>Hexagenia</u>
Species.....	<u>Hexagenia limbata</u>

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1985, is called the "1985 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
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- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
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- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
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- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
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- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

- 3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*. by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
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- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
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- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
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- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*: by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*. by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
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- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*. by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
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- 7-C3. *A model for simulation of flow in singular and interconnected channels* by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
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- 8-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*. by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

STATION RECORDS, SURFACE WATER

29

WHITE RIVER BASIN

06444000 WHITE RIVER AT CRAWFORD, NE

LOCATION.--Lat 42°41'33", long 103°25'03", in W1/2 sec.3, T.31 N., R.52 W., Dawes County, Hydrologic Unit 10140201, on right bank 15 ft downstream from bridge in city park at Crawford.

DRAINAGE AREA.--313 mi².

PERIOD OF RECORD.--February 1931 to September 1943, October 1947 to current year.

REVISED RECORDS.--WSP 1309: 1931(M), 1942(M). WSP 1729: 1958-59(M). WSP 1917: 1958-59.

GAGE.--Water-stage recorder. Datum of gage is 3,659.85 ft above National Geodetic Vertical Datum of 1929. Feb. 25, 1931, to Oct. 2, 1933, nonrecording gage at old highway bridge 0.5 mi upstream at different datum and Oct. 3, 1933, to Sept. 30, 1943, 1 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 27-29, Dec. 2-7, 14-25, 29-31, Jan. 1-4, 7, 9-16, 19-25, Jan. 27 to Feb. 15, and Mar. 4-7. Records good except for periods of estimated record, which are fair. Some regulation at low flows by pumps for irrigation and diversion for water supply for town of Crawford.

AVERAGE DISCHARGE.--50 years, 20.1 ft³/s, 14,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft³/s Mar. 15, 1948, gage height, 6.88 ft; maximum gage height, 7.7 ft July 10, 1958, from floodmarks; minimum daily discharge, 2.7 ft³/s Aug. 13, 31, Sept. 1, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 20	0930	(a)	*2.86	Apr. 30	1600	*36	1.96

No other peak greater than base discharge.

a Backwater from ice

Minimum daily discharge, 9.9 ft³/s July 11, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	18	20	25	23	25	25	23	18	14	20	11
2	16	18	18	25	20	25	25	21	19	13	16	12
3	16	18	20	25	22	24	25	22	19	12	14	13
4	18	18	28	25	22	24	26	22	20	12	14	13
5	18	18	26	26	21	24	27	22	21	12	14	13
6	18	18	24	25	20	25	27	22	22	11	14	12
7	18	18	21	25	22	25	26	22	20	11	13	12
8	18	18	20	25	22	25	26	22	18	11	13	16
9	18	19	22	25	22	25	26	22	17	10	12	17
10	18	19	21	25	22	26	26	22	18	10	14	15
11	18	19	20	25	23	29	26	22	19	9.9	13	15
12	18	19	20	25	24	31	26	23	18	10	13	16
13	18	19	20	25	24	33	26	24	18	11	13	15
14	18	19	20	24	25	27	26	22	17	10	13	15
15	19	18	20	24	26	26	25	21	17	11	14	14
16	19	18	20	25	26	26	25	20	16	11	13	14
17	19	19	19	24	25	26	25	20	15	11	13	14
18	21	18	18	24	25	26	25	20	14	11	13	13
19	22	18	22	23	25	26	25	20	14	11	14	14
20	20	19	23	24	26	26	29	22	14	12	15	15
21	20	18	24	24	27	26	26	21	14	12	14	15
22	20	18	22	25	26	26	25	20	14	11	14	16
23	20	18	21	30	26	25	24	19	14	11	13	18
24	21	19	20	28	25	25	23	18	14	12	13	17
25	20	19	22	27	25	26	23	18	14	11	13	17
26	20	19	24	25	24	25	25	18	17	10	12	17
27	20	18	26	26	24	25	26	20	18	9.9	12	16
28	20	18	26	26	25	25	24	20	16	11	12	18
29	21	21	25	26	---	25	23	18	15	12	12	18
30	17	21	24	26	---	25	24	18	14	17	12	18
31	18	---	25	24	---	26	---	18	---	16	12	---
TOTAL	583	557	681	781	667	803	760	642	504	356.8	417	449
MEAN	18.8	18.6	22.0	25.2	23.8	25.9	25.3	20.7	16.8	11.5	13.5	15.0
MAX	22	21	28	30	27	33	29	24	22	17	20	18
MIN	16	18	18	23	20	24	23	18	14	9.9	12	11
AC-FT	1160	1100	1350	1550	1320	1590	1510	1270	1000	708	827	891
CAL YR 1984	TOTAL	7368		MEAN	20.1	MAX	32	MIN	11	AC-FT	14610	
WTR YR 1985	TOTAL	7200.8		MEAN	19.7	MAX	33	MIN	9.9	AC-FT	14280	

PONCA CREEK BASIN

06453500 PONCA CREEK AT ANOKA, NE

LOCATION.--Lat 42°56'34", long 98°50'25", in NE1/4 sec.9, T.34 N., R.13 W., Boyd County, Hydrologic Unit 10150001, on left downstream bank near left abutment (revised) of bridge on State Highway 11, 0.5 mi southwest of Anoka and 0.5 mi upstream from Dry Creek.

DRAINAGE AREA.--505 mi².

PERIOD OF RECORD.--March 1949 to current year.

REVISED RECORDS.--WSP 2117: Drainage area.

GAGE.--Water-stage recorder for stages above 0.4 ft and nonrecording gage read once daily. Elevation of gage is 1,630 ft from topographic map. Prior to Sept. 13, 1950, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 3 to Mar. 7. Records good except for period of estimated record, which is poor.

AVERAGE DISCHARGE.--36 years, 45.8 ft³/s, 33,180 acre-ft/yr; median of yearly mean discharge, 31 ft³/s, 22,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,810 ft³/s, Mar. 27, 1960, gage height, 16.86 ft; no flow at times in 1949-50, 1955-62, 1965-71, 1974-76, 1978-82.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 7	2200	*478	*4.57	No peaks greater than base discharge.			
Minimum daily discharge, 0.15 ft ³ /s July 12.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	19	33	9.0	5.0	45	45	36	10	3.1	2.1	1.2
2	12	16	14	9.0	5.0	45	45	32	9.7	4.0	2.0	2.1
3	12	22	15	9.0	4.5	60	44	30	10	2.7	1.9	2.2
4	12	23	14	10	4.5	80	49	28	9.9	2.2	1.7	1.7
5	12	22	14	10	4.0	100	61	26	9.3	1.6	.98	1.9
6	15	21	15	10	4.0	160	64	23	8.8	1.5	.61	1.7
7	17	22	16	10	3.5	240	58	22	8.4	1.2	.47	6.1
8	19	22	14	9.0	4.0	323	53	22	7.8	1.2	59	4.0
9	21	22	14	8.0	4.0	293	49	21	7.0	.82	8.5	3.2
10	21	22	15	7.0	4.5	299	45	21	8.0	.35	6.2	2.5
11	24	22	15	7.0	4.5	328	43	22	7.9	.62	4.1	4.2
12	22	22	13	6.0	5.0	222	41	22	7.2	.15	7.1	13
13	17	23	10	6.0	6.0	170	39	23	6.6	.23	18	28
14	16	25	8.0	6.0	7.0	152	38	24	6.2	2.4	25	45
15	23	24	9.0	6.0	8.0	133	36	22	5.7	2.4	13	31
16	32	19	15	6.0	10	135	36	22	5.3	2.1	46	21
17	36	23	15	6.0	15	131	34	19	4.5	1.7	23	16
18	34	22	13	6.0	25	120	33	18	4.1	2.4	17	12
19	52	14	12	6.0	40	104	32	17	3.9	2.5	11	9.2
20	60	21	11	6.0	50	92	32	16	4.0	2.0	8.7	7.5
21	43	26	11	6.0	60	80	39	18	3.2	1.7	7.2	7.0
22	36	26	11	6.0	70	76	42	17	2.8	1.3	6.9	7.5
23	30	25	11	7.0	75	73	58	16	2.4	.91	5.7	6.8
24	28	27	11	7.0	80	65	70	15	2.0	1.6	4.5	6.4
25	26	28	13	7.0	75	60	47	15	1.9	3.1	3.6	6.8
26	25	29	11	7.0	65	59	41	15	6.2	3.1	2.8	6.7
27	25	29	11	7.0	50	60	50	13	5.6	2.4	2.4	6.1
28	22	24	12	7.0	45	58	56	12	4.8	1.6	2.3	5.8
29	22	32	12	6.0	---	53	46	12	4.4	1.3	2.0	7.1
30	23	33	12	6.0	---	49	40	12	3.4	1.9	1.8	6.9
31	23	---	10	6.0	---	46	---	11	---	2.2	2.2	---
TOTAL	772	705	410.0	224.0	733.5	3911	1366	622	181.0	56.28	297.76	280.6
MEAN	24.9	23.5	13.2	7.23	26.2	126	45.5	20.1	6.03	1.82	9.61	9.35
MAX	60	33	33	10	80	328	70	36	10	4.0	59	45
MIN	12	14	8.0	6.0	3.5	45	32	11	1.9	.15	.47	1.2
AC-FT	1530	1400	813	444	1450	7760	2710	1230	359	112	591	557
CAL YR 1984	TOTAL	40136.1		MEAN	110	MAX	1920	MIN	8.0	AC-FT	79610	
WTR YR 1985	TOTAL	9559.14		MEAN	26.2	MAX	328	MIN	.15	AC-FT	18960	

06453600 PONCA CREEK AT VERDEL, NE

LOCATION.--Lat 42°48'40", long 98°10'35", in NE1/4NE1/4 sec.30, T.33 N., R.7 W., Knox County, Hydrologic Unit 10150001, near left bank at left downstream end of bridge on State Highway 12, 0.6 mi east of Verdel and 3.1 mi upstream from mouth.

DRAINAGE AREA.--812 mi².

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 2117: Drainage area.

GAGE.--Water-stage recorder and nonrecording gage read once daily. Datum of gage 1,232.9 ft above National Geodetic Vertical Datum of 1929 (Nebraska Department of Roads reference marks). See WSP 1917 for history of changes prior to Nov. 15, 1962.

REMARKS.--Estimated daily discharges: Dec. 1 and Dec. 3 to Feb. 25. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--28 years, 75.7 ft³/s, 54,840 acre-ft/yr; median of yearly mean discharges, 57 ft³/s, 41,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s Mar. 27, 1960, gage height, 15.10 ft, site and datum then in use; no flow for many days in 1957-60, 1965-72, 1974-77, 1979-81.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 5	unknown	*827	a*5.38	No other peaks greater than base discharge.			
a From floodmark.							
Minimum daily discharge, 4.9 ft ³ /s July 27, Aug. 8.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	57	70	35	20	242	93	122	31	14	11	11
2	39	54	60	35	20	161	90	103	28	14	10	9.9
3	36	57	65	35	15	190	85	90	31	12	11	9.3
4	37	59	55	35	15	300	93	83	39	12	9.4	9.5
5	39	57	55	35	15	397	105	74	37	11	7.0	10
6	47	56	60	35	15	75	114	65	34	9.9	6.8	8.8
7	52	60	70	35	10	193	121	59	32	9.3	6.2	8.4
8	51	59	55	30	15	448	112	53	30	8.6	4.9	8.3
9	54	61	55	30	15	474	101	50	25	7.2	11	9.3
10	59	67	55	25	20	434	94	48	28	7.1	30	11
11	58	66	60	25	20	440	90	107	36	6.8	15	13
12	52	63	50	25	20	376	85	166	31	7.1	34	22
13	50	66	30	30	20	277	82	84	28	6.3	21	48
14	53	68	30	30	20	259	80	88	27	7.3	13	74
15	67	64	40	30	25	240	79	102	25	8.6	19	61
16	82	59	50	30	35	229	74	85	22	9.2	26	55
17	77	59	45	30	50	218	69	70	19	9.8	53	41
18	91	59	40	30	70	213	66	62	18	9.0	56	31
19	147	56	35	25	90	199	65	56	18	8.1	32	24
20	145	55	35	25	100	186	69	52	18	9.3	26	22
21	116	56	40	25	200	171	87	47	17	9.9	21	18
22	89	63	35	25	240	155	85	45	16	8.4	19	20
23	76	60	35	25	300	153	179	48	15	7.5	25	21
24	71	60	35	30	330	142	208	43	14	7.6	18	19
25	69	65	35	30	340	123	179	41	14	6.5	15	18
26	67	80	35	30	331	119	148	42	41	5.5	13	18
27	67	82	35	30	279	118	181	43	36	4.9	12	17
28	63	72	40	30	265	117	162	40	24	5.0	12	16
29	63	69	40	25	---	111	148	38	19	5.1	12	18
30	61	69	40	25	---	101	133	37	15	8.9	12	19
31	60	---	35	20	---	96	---	32	---	10	12	---
TOTAL	2076	1878	1420	905	2895	6957	3277	2075	768	265.9	573.3	670.5
MEAN	67.0	62.6	45.8	29.2	103	224	109	66.9	25.6	8.58	18.5	22.3
MAX	147	82	70	35	340	474	208	166	41	14	56	74
MIN	36	54	30	20	10	75	65	32	14	4.9	4.9	8.3
AC-FT	4120	3730	2820	1800	5740	13800	6500	4120	1520	527	1140	1330
CAL YR 1984	TOTAL	80484		MEAN	220	MAX	1940	MIN	21	AC-FT	159600	
WTR YR 1985	TOTAL	23760.7		MEAN	65.1	MAX	474	MIN	4.9	AC-FT	47130	

NIOBRARA RIVER BASIN

06454000 NIOBRARA RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 42°39'33", long 104°03'54", in SE1/4SW1/4 sec.15, T.31 N., R.60 W., Niobrara County, Wyoming, Hydrologic Unit 10150002, on left bank 0.2 mi downstream from Van Tassel Creek, 0.3 mi upstream from Wyoming-Nebraska State line, and 3 mi east of Van Tassel, WY.

DRAINAGE AREA.--450 mi², approximately.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,687.70 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Jan. 19-20 and Mar. 3-5. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 4,700 acres above station.

AVERAGE DISCHARGE.--30 years, 3.81 ft³/s, 2,760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s Aug. 16, 1977, gage height, 8.28 ft in gage well, from rating curve extended above 800 ft³/s on basis of computation of peak flow from slope-area measurement; minimum daily, 0.54 ft³/s Aug. 9, 10, 12, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 4	1430	(a)	*4.51	Mar. 20	1545	*35	2.33

a Backwater from snow in channel.

Minimum daily discharge, 1.2 ft³/s Aug. 14-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.1	2.5	2.4	2.1	3.5	5.6	3.7	2.4	2.2	3.8	1.5
2	2.1	2.1	2.4	2.2	2.4	3.5	5.4	3.2	2.9	2.2	3.7	1.6
3	2.0	2.1	2.1	2.1	2.1	3.0	5.0	3.2	2.7	2.4	3.4	1.8
4	2.1	2.1	2.1	2.4	2.1	3.0	4.4	3.0	2.6	2.4	2.9	1.7
5	2.4	2.1	2.2	2.4	2.1	3.4	4.0	2.9	2.7	2.6	2.7	1.6
6	2.1	2.1	2.2	2.4	2.2	2.9	3.8	2.7	3.0	2.7	2.4	1.5
7	2.1	2.1	2.2	2.4	2.1	2.7	3.8	2.7	2.7	2.7	2.1	1.5
8	2.1	2.1	2.2	2.5	2.1	2.7	4.4	2.6	2.5	2.9	2.0	3.8
9	2.4	2.2	2.4	2.4	2.1	2.7	3.8	2.6	2.4	2.6	1.8	1.9
10	2.5	2.5	2.4	2.5	2.1	3.0	3.8	2.6	2.3	2.6	1.9	1.8
11	2.5	2.6	2.4	2.5	2.4	3.2	4.0	3.2	2.3	2.5	1.6	1.7
12	2.1	2.6	2.4	2.5	2.4	5.4	3.7	2.9	2.2	2.5	1.5	1.8
13	2.1	2.6	2.4	2.4	2.1	4.4	3.5	2.9	2.2	2.2	1.3	1.6
14	2.1	2.6	2.4	2.4	2.1	4.6	3.5	2.9	2.1	2.2	1.2	1.6
15	2.0	2.6	2.5	2.4	2.1	5.0	3.8	2.6	2.0	2.1	1.2	1.6
16	2.1	2.5	2.5	2.5	2.1	5.6	3.5	2.5	2.0	2.1	1.2	1.5
17	2.1	2.5	2.5	2.5	2.0	5.8	3.4	2.6	1.9	2.1	1.2	1.5
18	2.5	2.5	2.5	2.4	2.0	10	3.7	2.5	1.9	2.2	1.2	1.5
19	2.5	2.5	2.4	2.4	2.1	8.2	3.7	2.6	1.9	2.5	1.3	1.5
20	2.1	2.5	2.5	2.4	2.1	15	3.7	2.6	1.8	2.9	1.6	1.4
21	2.1	2.6	2.5	2.4	2.1	6.9	3.7	2.5	2.0	2.9	1.7	1.5
22	2.1	2.6	2.5	2.1	2.2	5.0	3.7	2.5	2.0	3.0	1.7	1.7
23	2.1	2.6	2.5	2.1	2.2	5.4	3.8	2.5	1.9	2.9	1.5	1.8
24	2.2	2.7	2.4	2.1	2.2	6.9	3.7	2.4	2.0	3.0	1.5	1.7
25	2.5	2.7	2.4	2.1	2.2	7.4	3.5	2.4	2.1	2.9	1.6	1.8
26	2.5	2.7	2.4	2.1	2.4	6.7	3.8	2.5	2.6	2.7	1.5	1.7
27	2.6	2.6	2.4	2.1	2.4	6.5	4.0	2.8	2.5	2.9	1.7	1.7
28	2.5	2.5	2.5	2.4	2.4	5.8	3.8	2.7	2.4	3.5	1.7	1.9
29	2.4	2.5	2.5	2.1	---	5.8	3.7	2.5	2.4	3.7	1.5	1.9
30	2.4	2.5	2.5	2.1	---	6.2	3.7	2.4	2.2	12	1.3	1.9
31	2.1	---	2.5	2.4	---	6.0	---	2.4	---	5.8	1.3	---
TOTAL	69.4	73.0	74.3	72.1	60.9	166.2	117.9	84.1	68.6	93.9	57.0	52.0
MEAN	2.24	2.43	2.40	2.33	2.17	5.36	3.93	2.71	2.29	3.03	1.84	1.73
MAX	2.6	2.7	2.5	2.5	2.4	15	5.6	3.7	3.0	12	3.8	3.8
MIN	2.0	2.1	2.1	2.1	2.0	2.7	3.4	2.4	1.8	2.1	1.2	1.4
AC-FT	138	145	147	143	121	330	234	167	136	186	113	103
CAL YR 1984	TOTAL	1088.8		MEAN	2.97	MAX	22	MIN	1.7	AC-FT	2160	
WTR YR 1985	TOTAL	989.4		MEAN	2.71	MAX	15	MIN	1.2	AC-FT	1960	

06454100 NIOBRARA RIVER AT AGATE, NE

LOCATION.--Lat 42°25'22", long 103°47'28", in SW1/4 sec.6, T.28 N., R.55 W., Sioux County, Hydrologic Unit 10150002, on right bank 10 ft upstream from timber farm-vehicle bridge, 300 ft upstream from bridge on State Highway 29, 0.2 mi northwest of Agate, and 14.5 mi upstream from Whistle Creek.

DRAINAGE AREA.--840 mi², approximately.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,405 ft, from topographic map. Prior to 1982 water year, elevation published as 4,440 ft. Prior to Nov. 3, 1960, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharge: Aug. 12. Records good. Diversions for irrigation of about 6,700 acres above station.

AVERAGE DISCHARGE.--28 years, 13.9 ft³/s, 10,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s June 23, 1959, gage height, 5.00 ft, from floodmark; minimum daily, 1.0 ft³/s Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 9	1745	*33	*3.24	No other peak greater than base discharge.			
Minimum daily discharge, 2.5 ft ³ /s Sept. 7.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	12	17	14	12	19	16	12	4.3	6.9	8.4	5.1
2	8.7	12	14	12	12	22	16	12	5.1	6.8	7.8	5.4
3	8.0	12	12	12	11	13	16	12	5.3	6.4	7.6	6.0
4	5.9	12	13	13	11	3.7	16	11	6.3	6.3	7.2	6.2
5	7.4	12	13	14	11	7.1	17	11	5.6	5.8	6.9	6.0
6	8.8	12	12	15	11	14	17	11	7.0	5.8	6.4	2.9
7	8.2	12	11	15	11	16	16	11	6.1	5.9	6.6	2.5
8	9.3	12	13	15	11	19	16	11	5.6	5.4	7.2	4.9
9	10	12	17	11	12	27	16	11	5.3	5.3	8.2	5.1
10	10	13	16	13	12	26	16	9.4	5.2	5.1	9.7	4.1
11	10	13	18	14	12	25	16	13	5.6	5.0	8.6	5.1
12	9.9	13	16	12	12	28	16	15	4.6	5.5	6.0	6.0
13	9.7	13	15	9.3	12	25	16	15	4.5	5.1	5.7	5.5
14	9.5	12	14	12	12	24	14	12	4.4	5.2	5.7	5.4
15	9.5	12	14	13	12	24	13	12	4.1	5.4	5.5	6.7
16	9.5	12	13	12	12	26	15	10	4.3	5.4	5.4	5.6
17	9.5	12	15	11	12	28	13	6.8	4.0	3.8	5.4	4.9
18	9.9	13	11	13	12	27	12	7.0	4.0	2.9	5.4	4.7
19	10	13	12	13	13	28	12	6.0	5.4	3.4	6.1	5.2
20	10	13	12	8.3	13	26	15	7.1	6.9	3.9	6.4	5.2
21	10	13	12	6.1	14	30	14	6.5	4.7	4.1	6.2	5.2
22	10	13	13	9.7	14	29	14	6.0	4.3	3.6	5.8	5.7
23	10	13	13	12	14	27	13	6.6	4.6	3.8	5.8	7.0
24	10	13	12	12	15	26	13	7.0	4.2	5.2	5.7	6.2
25	10	13	7.7	12	17	27	13	5.8	5.7	4.6	5.7	6.4
26	10	13	11	12	17	22	14	5.2	8.2	5.0	5.5	6.7
27	10	11	14	13	19	21	14	5.7	8.6	6.4	5.3	6.7
28	11	12	14	13	19	20	13	5.5	7.8	8.4	5.4	7.1
29	13	15	15	13	---	17	13	4.9	7.4	7.4	5.4	7.4
30	12	18	15	12	---	17	12	5.1	6.9	8.6	4.7	7.4
31	12	---	15	11	---	16	---	4.5	---	7.6	5.0	---
TOTAL	300.4	381	419.7	377.4	365	679.8	437	278.1	166.0	170.0	196.7	168.3
MEAN	9.69	12.7	13.5	12.2	13.0	21.9	14.6	8.97	5.53	5.48	6.35	5.61
MAX	13	18	18	15	19	30	17	15	8.6	8.6	9.7	7.4
MIN	5.9	11	7.7	6.1	11	3.7	12	4.5	4.0	2.9	4.7	2.5
AC-FT	596	756	832	749	724	1350	867	552	329	337	390	334
CAL YR 1984	TOTAL	4862.5		MEAN	13.3	MAX	54	MIN	4.5	AC-FT	9640	
WTR YR 1985	TOTAL	3939.4		MEAN	10.8	MAX	30	MIN	2.5	AC-FT	7810	

NIOBRARA RIVER BASIN

06454500 NIOBRARA RIVER ABOVE BOX BUTTE RESERVOIR, NE

LOCATION.--Lat 42°27'35", long 103°10'15", in NE1/4 sec.27, T.29 N., R.50 W., Dawes County, Hydrologic Unit 10150002, on right bank 1 mi upstream from high-water line of Box Butte Reservoir and 6 mi east of Marsland.

DRAINAGE AREA.--1,400 mi², approximately.

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1917: 1951, 1952(P), 1957(M).

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1953. Datum of gage is 4,012.47 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 27, 1949, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Nov. 26-28, Dec. 1-7, 14-15, 17-26, 29-31, Jan. 1-2, 9-23, 30-31, Feb. 1-11, 14, and Mar. 3-6. Records good. Diversions for irrigation of about 12,800 acres above station.

AVERAGE DISCHARGE.--39 years, 29.5 ft³/s, 21,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,950 ft³/s July 28, 1951, gage height, 10.30 ft, from rating curve extended above 230 ft³/s on basis of step-backwater analysis and slope-area measurement at gage height 9.22 ft; minimum daily, 1.6 ft³/s Sept. 26, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 1	0615	*456	*6.49	No other peak greater than base discharge.			
Minimum daily discharge, 5.9 ft ³ /s June 20.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	27	26	22	21	41	41	31	8.2	9.2	177	9.2
2	13	26	22	24	20	42	40	34	8.2	9.2	25	10
3	12	26	26	26	19	41	39	32	9.2	8.7	21	11
4	13	26	25	26	18	35	39	31	9.8	8.2	19	11
5	15	26	26	26	17	30	38	29	8.2	8.2	19	10
6	22	26	27	26	18	28	38	28	6.8	8.2	18	9.8
7	22	27	28	25	20	27	38	26	6.3	7.7	18	9.8
8	22	27	28	27	22	29	38	24	6.8	8.2	14	12
9	26	27	28	27	22	36	37	14	12	8.7	13	12
10	25	27	28	27	25	48	37	17	12	8.7	13	13
11	25	28	30	26	26	50	36	22	13	7.7	12	14
12	24	28	30	24	26	49	34	19	13	7.7	12	15
13	24	28	30	24	27	50	31	29	12	7.7	11	12
14	24	28	28	25	25	51	31	26	12	7.2	11	13
15	24	28	30	25	25	51	31	23	11	7.2	12	12
16	24	28	29	27	25	50	31	20	10	8.7	11	13
17	24	28	27	26	26	50	27	16	9.8	7.2	10	12
18	25	28	26	25	26	52	25	15	8.2	7.7	10	12
19	25	26	24	24	26	50	28	13	6.3	9.2	11	12
20	25	26	24	20	26	49	26	13	5.9	11	11	12
21	25	27	22	20	28	48	27	13	6.3	10	11	11
22	25	28	24	22	28	47	24	13	12	11	10	12
23	25	25	20	24	30	46	16	12	8.7	10	10	13
24	25	27	16	25	28	47	17	10	9.2	10	9.8	13
25	25	28	18	26	33	46	19	9.8	10	9.8	9.8	13
26	25	27	20	26	31	46	33	9.8	12	9.2	10	12
27	24	25	22	26	36	46	30	11	11	8.2	10	12
28	24	25	22	26	38	46	28	10	9.8	10	10	13
29	25	22	22	26	---	43	28	10	9.8	13	10	13
30	25	26	21	24	---	43	29	9.2	9.8	16	10	14
31	25	---	22	22	---	43	---	8.7	---	21	9.8	---
TOTAL	700	801	771	769	712	1360	936	578.5	287.3	294.5	558.4	360.8
MEAN	22.6	26.7	24.9	24.8	25.4	43.9	31.2	18.7	9.58	9.50	18.0	12.0
MAX	26	28	30	27	38	52	41	34	13	21	177	15
MIN	12	22	16	20	17	27	16	8.7	5.9	7.2	9.8	9.2
AC-FT	1390	1590	1530	1530	1410	2700	1860	1150	570	584	1110	716
CAL YR 1984	TOTAL	9523.5	MEAN	26.0	MAX	67	MIN	9.5	AC-FT	18890		
WTR YR 1985	TOTAL	8128.5	MEAN	22.3	MAX	177	MIN	5.9	AC-FT	16120		

06455000 BOX BUTTE RESERVOIR NEAR HEMINGFORD, NE

LOCATION.--Lat 42°27'30", long 103°04'03", in sec.28, T.29 N., R.49 W., Dawes County, Hydrologic Unit 10150002, in control tower on dam near left bank on Niobrara River, 9 mi north of Hemingford.

DRAINAGE AREA.--1,460 mi², approximately.

PERIOD OF RECORD.--October 1945 to current year.

GAGE.--Electric tape gage read three or more times a month. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; outlet gate first closed Oct. 3, 1945. Usable capacity, 30,420 acre-ft between elevations 3,969.00 ft, sill of outlet gate, and 4,007.00 ft, crest of spillway. Dead storage, 640 acre-ft. Figures given herein represent total contents. Water is used for irrigation of Mirage Flats project of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft Mar. 26, 1948, elevation, 4,007.70 ft; minimum observed since operation of reservoir began, 640 acre-ft Aug. 26, 1985, elevation, 3,969.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 15,420 acre-ft May 31, elevation, 3,995.28 ft; minimum observed, 640 acre-ft Aug. 26, elevation, 3,969.00 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date		Elevation (feet) ^a /	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	3,979.97	3,700	-
Oct.	31	3,983.43	5,540	+1,840
Nov.	30	3,986.40	7,430	+1,890
Dec.	31	3,988.46	8,970	+1,540
CAL YR 1984		-	-	-3,030
Jan.	31	3,990.24	10,480	+1,510
Feb.	28	3,991.57	11,700	+1,220
Mar.	31	3,993.90	13,970	+2,270
Apr.	30	3,994.81	14,910	+940
May	31	3,995.28	15,420	+510
June	30	3,991.13	11,290	-4,130
July	31	3,980.39	3,910	-7,380
Aug.	31	3,969.60	729	-3,181
Sept.	30	3,975.58	2,020	+1,291
WTR YR 1985		-	-	-1,680

^a Elevations read on or near last day of month.

NIOBRARA RIVER BASIN

06455500 NIOBRARA RIVER BELOW BOX BUTTE RESERVOIR, NE

LOCATION.--Lat 42°27'25", long 103°04'05", in SE1/4 sec.28, T.29 N., R.49 W., Dawes County, Hydrologic Unit 10150003, on left bank 0.2 mi downstream from Box Butte Reservoir and 9 mi north of Hemingford.

DRAINAGE AREA.--1,460 mi², approximately.

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Concrete control since Apr. 11, 1953. Datum of gage is 3,950.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 26 and 27. Records good. Flow completely regulated by Box Butte Reservoir (station 064555000).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 616 ft³/s July 2, 1968, gage height, 5.04 ft; minimum daily, 0.10 ft³/s for many days in 1947, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 169 ft³/s June 24, July 7-8, gage height, 4.28 ft; minimum daily, 0.66 ft³/s Sept. 5-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.86	.86	.80	.95	.92	1.0	.98	1.0	148	59	.68
2	.77	.86	.86	.80	.95	.92	1.0	.98	1.0	156	55	.68
3	.77	.83	.83	.83	.95	.95	1.0	.95	1.0	158	50	.68
4	.80	.80	.83	.86	.95	.98	1.0	.95	1.1	158	64	.68
5	.89	.80	.83	.86	.95	.98	1.0	.95	1.1	158	105	.66
6	.89	.83	.83	.83	.95	.98	.95	.95	1.0	161	131	.66
7	.86	.86	.83	.86	.95	.98	.95	.95	.98	164	129	.71
8	.86	.86	.83	.86	.95	.98	.98	.89	.98	164	123	.80
9	.86	.92	.83	.86	.95	.98	1.0	.89	.98	156	112	.77
10	.86	.92	.83	.86	.95	1.0	1.0	.92	.98	156	103	.77
11	.86	.92	.83	.86	.95	.98	.95	.98	.98	143	104	.77
12	.86	.92	.83	.89	.95	1.0	.92	.95	.98	143	108	.86
13	.86	.89	.83	.89	.95	1.0	.95	1.1	.98	143	110	.80
14	.86	.86	.83	.89	.95	1.0	.95	.95	.95	143	110	.80
15	.86	.86	.83	.89	.98	1.0	.95	.92	.95	153	104	.80
16	.86	.89	.83	.89	1.0	1.0	.95	.95	.92	156	95	.80
17	.86	.89	.83	.92	1.0	1.0	.95	.95	.92	156	95	.74
18	1.2	.89	.83	.92	1.0	1.0	.95	.95	67	148	94	.74
19	1.0	.89	.83	.92	1.0	1.0	1.0	1.0	84	122	78	.77
20	.95	.89	.83	.92	.98	1.0	1.0	1.0	91	94	65	.77
21	.92	.89	.83	.92	.98	1.0	.98	.98	118	97	67	.77
22	.92	.89	.83	.92	.98	1.0	.95	.98	136	104	44	.80
23	.89	.89	.83	.92	.98	1.0	.95	.98	131	101	32	.80
24	.89	.89	.83	.92	.95	1.0	.95	.98	153	114	26	.80
25	.89	.89	.83	.92	.95	1.0	.95	.98	158	123	23	.80
26	.83	.88	.83	.92	.95	1.0	1.0	1.0	139	87	11	.80
27	.80	.95	.83	.92	.92	1.0	1.0	1.0	114	81	.80	.80
28	.80	.92	.83	.92	.92	.98	.98	1.0	104	103	.74	.83
29	.83	.92	.83	.92	---	.98	.98	1.0	118	108	.74	.86
30	.83	.89	.83	.95	---	.98	.98	1.0	134	90	.74	.86
31	.83	---	.83	.95	---	1.0	---	1.0	---	64	.68	---
TOTAL	26.93	26.45	25.79	27.59	26.89	30.59	29.17	30.06	1563.80	4052	2100.70	23.06
MEAN	.87	.88	.83	.89	.96	.99	.97	.97	52.1	131	67.8	.77
MAX	1.2	.95	.86	.95	1.0	1.0	1.0	1.1	158	164	131	.86
MIN	.77	.80	.83	.80	.92	.92	.92	.89	.92	64	.68	.66
AC-FT	53	52	51	55	53	61	58	60	3100	8040	4170	46
CAL YR 1984	TOTAL	10064.73		MEAN	27.5	MAX	217	MIN	.74	AC-FT	19960	
WTR YR 1985	TOTAL	7963.03		MEAN	21.8	MAX	164	MIN	.66	AC-FT	15790	

NIOBRARA RIVER BASIN

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06457500 NIOBRARA RIVER NEAR GORDON, NE

LOCATION.--Lat 42°38'00", long 102°12'40", in NE1/4 sec.26, T.31 N., R.42 W., Sheridan County, Hydrologic Unit 10150003, on left bank 250 ft upstream from bridge on State Highway 27, 4 mi downstream from Rush Creek, and 11 mi south of Gordon.

DRAINAGE AREA.--4,290 mi², approximately.

PERIOD OF RECORD.--August 1928 to September 1932, October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,432.49 ft above National Geodetic Vertical Datum of 1929. Aug. 24, 1928, to June 30, 1932, nonrecording gage at bridge 4 mi downstream at different datum. Dec. 3, 1945, to Mar. 24, 1970, water-stage recorder at datum 2.0 ft higher, Mar. 25, 1970, to July 28, 1982, at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Nov. 18-27, 29-30, Dec. 4-10, Dec. 13 to Feb. 27, Mar. 3-6 and June 5-9. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by storage in Box Butte Reservoir (station 06455000) for irrigation of Mirage Flats project and return flow from irrigated land.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,130 ft³/s May 21, 1962, gage height, 5.25 ft; minimum daily, 16 ft³/s Dec. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 210 ft³/s May 13, 14, gage height, 1.82 ft; minimum daily discharge, 40 ft³/s July 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	109	95	80	100	123	126	102	74	67	130	48
2	102	111	91	80	100	142	112	94	76	62	109	52
3	98	114	82	90	90	140	105	91	75	51	91	55
4	100	105	80	90	90	100	113	98	82	44	77	61
5	124	102	90	92	88	90	124	85	80	44	71	65
6	121	100	100	94	84	80	135	89	80	42	66	53
7	109	109	100	94	82	76	140	83	76	42	69	49
8	101	104	100	94	90	78	142	79	78	40	71	74
9	98	113	105	96	90	88	132	77	75	42	59	80
10	94	123	110	100	100	94	125	77	75	46	71	87
11	94	115	115	110	100	97	127	129	82	46	69	111
12	89	114	123	110	110	120	119	149	82	46	78	122
13	137	115	100	100	120	127	113	179	75	48	68	99
14	95	111	100	100	125	130	112	178	72	45	67	85
15	81	101	98	110	130	115	113	154	73	47	68	84
16	79	98	100	110	140	141	106	112	69	64	69	78
17	83	94	110	120	145	141	91	118	60	58	58	70
18	93	96	88	130	150	130	91	104	55	50	55	69
19	99	96	110	110	150	147	92	118	58	54	58	68
20	97	94	114	106	145	165	100	124	63	69	62	73
21	95	94	118	100	140	158	100	99	51	71	61	77
22	95	92	120	106	135	149	108	87	54	63	53	84
23	97	92	120	110	130	170	99	85	55	63	53	92
24	103	90	116	110	130	149	95	82	59	66	41	88
25	100	90	112	100	125	151	91	79	82	68	45	95
26	102	90	110	120	120	161	112	79	103	60	51	95
27	97	90	108	130	120	153	157	89	100	53	54	79
28	94	90	106	140	119	139	140	91	84	78	64	85
29	106	90	102	130	---	131	117	80	72	86	85	93
30	103	94	100	120	---	133	107	74	64	175	72	97
31	106	---	90	110	---	130	---	73	---	159	65	---
TOTAL	3101	3036	3213	3292	3248	3948	3444	3158	2184	1949	2110	2368
MEAN	100	101	104	106	116	127	115	102	72.8	62.9	68.1	78.9
MAX	137	123	123	140	150	170	157	179	103	175	130	122
MIN	79	90	80	80	82	76	91	73	51	40	41	48
AC-FT	6150	6020	6370	6530	6440	7830	6830	6260	4330	3870	4190	4700
CAL YR 1984	TOTAL	40383	MEAN	110	MAX	780	MIN	52	AC-FT	80100		
WTR YR 1985	TOTAL	35051	MEAN	96.0	MAX	179	MIN	40	AC-FT	69520		

NIOBRARA RIVER BASIN

06459175 SNAKE RIVER AT DOUGHBOY, NE

LOCATION.--Lat 42°36'51", long 101°16'38", in NE1/4NW1/4, sec.2, T.30 N., R.34 W., Cherry County, Hydrologic Unit 10150005, on left bank 21 ft downstream from centerline of Doughboy bridge, 24 mi southwest of Nenzel.

DRAINAGE AREA.--405 mi², approximately, of which about 26 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1981 to current year. Discharge measurements only, July 1963, April 1980, May-September 1981.

GAGE.--Water stage recorder. Datum of gage is 3,098.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 3, 13, 14, 18, 19, 25, Dec. 31 to Jan. 3, Jan. 11-14, 20-25, Feb. 1-11, and Feb. 15 to Mar. 11. Records good except for periods of estimated record, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358 ft³/s Aug. 18, 1982, gage height, 1.84 ft; maximum gage height, 2.90 ft Jan. 7, 1982, backwater from ice; minimum daily discharge, 116 ft³/s Feb. 9, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 299 ft³/s Aug. 15, gage height, 1.36 ft; maximum gage height, 2.59 ft Jan. 24, backwater from ice; minimum daily discharge, 125 ft³/s Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	152	175	160	125	190	163	162	144	146	188	159
2	165	159	167	160	130	190	166	159	145	160	175	172
3	166	165	160	165	135	215	169	155	149	156	172	175
4	167	160	155	169	140	190	173	153	151	147	165	181
5	171	160	161	168	155	180	176	153	152	143	160	175
6	173	158	162	172	150	190	173	146	150	142	164	168
7	169	161	165	168	150	200	168	147	147	143	163	166
8	164	160	166	167	155	200	161	145	141	141	163	183
9	163	186	168	166	165	200	168	146	138	141	163	181
10	162	157	170	166	160	200	169	146	138	139	163	171
11	164	159	170	170	160	190	176	157	140	139	163	182
12	164	171	164	170	163	184	177	147	143	141	174	181
13	163	179	163	165	160	190	170	159	147	141	167	171
14	159	184	165	170	159	198	168	166	146	140	163	157
15	155	169	172	175	154	194	171	157	146	143	179	154
16	157	165	182	175	154	199	171	151	148	148	190	152
17	155	164	171	171	157	200	169	149	139	152	186	142
18	160	162	168	173	160	195	165	148	135	153	179	144
19	159	160	160	167	160	191	167	149	137	153	176	149
20	162	164	157	138	165	191	167	155	140	161	182	148
21	159	168	166	150	165	187	170	152	139	162	183	149
22	156	166	166	160	165	182	170	150	138	157	181	158
23	159	171	162	160	165	181	168	146	138	153	188	158
24	160	179	147	160	165	180	164	145	137	155	184	160
25	164	182	157	150	180	176	159	143	142	158	174	160
26	164	175	161	154	190	179	171	144	151	154	170	160
27	160	162	166	152	185	181	176	147	154	147	172	160
28	150	165	180	153	190	177	183	153	148	168	175	166
29	157	178	173	150	---	175	179	154	146	205	174	169
30	154	176	166	139	---	161	166	149	144	220	170	176
31	157	---	163	128	---	163	---	142	---	203	166	---
TOTAL	5003	5017	5128	4991	4462	5829	5093	4675	4313	4811	5372	4927
MEAN	161	167	165	161	159	188	170	151	144	155	173	164
MAX	173	186	182	175	190	215	183	166	154	220	190	183
MIN	150	152	147	128	125	161	159	142	135	139	160	142
AC-FT	9920	9950	10170	9900	8850	11560	10100	9270	8550	9540	10660	9770
CAL YR 1984	TOTAL	61317	MEAN	168	MAX	244	MIN	138	AC-FT	121600		
WTR YR 1985	TOTAL	59621	MEAN	163	MAX	220	MIN	125	AC-FT	118300		

06459300 MERRITT RESERVOIR NEAR BURGE, NE

LOCATION.--Lat 42°38'06", long 100°52'18", in SW1/4NW1/4 sec.29, T.31 N., R.30 W., Cherry County, Hydrologic Unit 10150005, in control house of outlet works of Merritt Dam, 8.1 mi southwest of Burge and 23 mi southwest of Valentine.

DRAINAGE AREA.--640 mi², approximately, of which about 44 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1964 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Direct reading, single vertical column, mercury-well type manometer read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 19, 1964. Usable capacity, 72,872 acre-ft between elevations 2,875.0 ft, sill of canal outlet works, and 2,946.0 ft, crest of spillway. Dead and inactive storage, 1,614 acre-ft below elevation 2,875.0 ft. Figures given herein represent total contents. Water is used for irrigation of Ainsworth Unit of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 78,040 acre-ft May 21, 1982, elevation 2,947.2 ft; minimum since appreciable storage was attained, 20,060 acre-ft Oct. 1, 1968, elevation, 2,916.1 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 76,550 acre-ft Apr. 29-30, May 1-3, elevation, 2,946.7 ft; minimum observed, 46,010 acre-ft Aug. 28-31, elevation, 2,934.4 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,938.2	54,140	-
Oct. 31	2,943.3	66,930	+12,790
Nov. 30	2,944.1	69,110	+2,180
Dec. 31	2,944.0	68,830	-280
CAL YR 1984	-	-	0
Jan. 31	2,944.0	68,830	0
Feb. 28	2,944.2	69,390	+560
Mar. 31	2,944.2	69,390	0
Apr. 30	2,946.7	76,550	+7,160
May 31	2,945.4	72,770	-3,780
June 30	2,944.2	69,390	-3,380
July 31	2,935.9	49,070	-20,320
Aug. 31	2,936.7	50,790	+1,720
Sept. 30	2,939.2	56,490	+5,700
WTR YR 1985	-	-	+2,350

NIOBRARA RIVER BASIN

06459500 SNAKE RIVER NEAR BURGE, NE

LOCATION.--Lat 42°39'15", long 100°51'28". in NE1/4 sec.20. T.31 N., R.30 W., Cherry County, Hydrologic Unit 10150005, on right bank 150 ft downstream from Nebraska National Forest boundary, 2.1 mi downstream from Merritt Dam, 6.5 mi southwest of Burge, and 22 mi southwest of Valentine.

DRAINAGE AREA.--660 mi². approximately, of which about 44 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1947 to current year.

REVISED RECORDS.--WSP 1279: 1950(M). 1951(P). WDR NE-67.72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.805.36 ft above National Geodetic Vertical Datum of 1929. (levels by Bureau of Reclamation).

REMARKS.--No estimated daily discharges. Records good. Natural flow affected since February 1964 by storage in Merritt Reservoir (station 06459300) 2.1 mi upstream.

AVERAGE DISCHARGE.--22 years (1963-85). 152 ft³/s. 110.100 acre-ft/yr. since storage and diversion began.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3.170 ft³/s Feb. 7, 1963. gage height, 6.96 ft. release of storage behind temporary construction dike, from rating curve extended above 520 ft³/s on basis of slope-area measurement at gage height, 5.39 ft; minimum daily, 5.8 ft³/s May 24-27, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 362 ft³/s May 3. gage height, 2.30 ft; minimum daily, 13 ft³/s Apr.5-7, Sept. 27-30.

DISCHARGE. IN CUBIC FEET PER SECOND. WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	15	279	250	250	308	246	279	117	29	29	27
2	41	45	279	221	250	310	248	275	107	29	28	28
3	39	89	279	199	250	314	250	311	97	29	28	27
4	39	89	279	216	250	314	112	315	106	28	28	28
5	41	156	262	227	250	314	13	293	122	28	28	28
6	41	196	250	227	250	314	13	289	122	27	27	27
7	40	196	250	233	250	314	13	302	120	27	26	27
8	41	196	250	250	250	314	19	296	119	27	26	29
9	40	201	250	252	250	314	44	301	119	27	26	28
10	40	223	250	254	250	314	45	311	119	27	26	27
11	40	279	250	254	250	316	44	303	104	27	27	29
12	40	279	250	254	250	314	45	293	84	27	27	29
13	40	279	250	254	250	314	46	309	77	27	27	29
14	40	279	250	253	251	314	50	311	77	27	27	29
15	41	279	250	252	250	294	64	319	77	27	27	29
16	41	279	250	251	250	279	84	317	77	32	27	29
17	64	279	234	250	250	278	109	319	62	28	27	29
18	84	279	202	251	250	253	124	308	46	27	27	28
19	84	279	202	254	250	238	151	283	45	27	27	27
20	85	279	202	254	251	238	172	247	45	28	27	27
21	87	279	202	254	254	239	178	214	39	27	26	27
22	88	279	227	254	254	242	186	223	30	27	27	28
23	89	251	250	254	254	242	194	203	30	27	28	28
24	47	279	250	254	254	242	201	194	29	27	27	27
25	15	281	250	254	287	173	197	156	30	27	27	28
26	14	283	250	252	310	170	237	128	29	26	27	21
27	15	280	250	250	310	246	304	129	29	26	27	13
28	15	279	250	250	310	243	293	128	29	27	27	13
29	15	279	250	250	---	242	287	131	29	29	27	13
30	15	279	250	250	---	242	282	130	29	29	27	13
31	15	---	250	250	---	243	---	125	---	29	27	---
TOTAL	1377	6965	7647	7628	7235	8492	4251	7742	2145	856	839	772
MEAN	44.4	232	247	246	258	274	142	250	71.5	27.6	27.1	25.7
MAX	89	283	279	254	310	316	304	319	122	32	29	29
MIN	14	15	202	199	250	170	13	125	29	26	26	13
AC-FT	2730	13820	15170	15130	14350	16840	8430	15360	4250	1700	1660	1530
CAL YR 1984	TOTAL	64772	MEAN	177	MAX	328	MIN	14	AC-FT	128500		
WTR YR 1985	TOTAL	55949	MEAN	153	MAX	319	MIN	13	AC-FT	111000		

06461000 MINNECHADUZA CREEK AT VALENTINE, NE

LOCATION.--Lat 42°53'10", long 100°33'10", in SW1/4 sec.30, T.34 N., R.27 W., Cherry County, Hydrologic Unit 10150004, on right bank 500 ft downstream from powerplant in city park at north edge of Valentine and 4 mi upstream from mouth.

DRAINAGE AREA.--390 mi², approximately, of which about 200 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--December 1947 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,470 ft, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by powerplant 500 ft above station.

AVERAGE DISCHARGE.--37 years (1948-85), 34.0 ft³/s, 24,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s Mar. 22, 1960, gage height, 8.0 ft; minimum daily, 2.3 ft³/s July 13, 14, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 140 ft³/s Mar. 2, gage height, 2.55 ft; minimum daily, 2.3 ft³/s July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	33	34	17	23	51	58	39	4.3	31	31	17
2	25	26	35	34	25	57	36	42	9.5	15	29	21
3	26	23	22	25	24	54	38	36	32	7.8	8.7	32
4	21	31	19	21	23	17	40	20	27	3.5	20	21
5	20	27	37	26	23	26	50	34	27	14	32	20
6	20	28	24	29	23	47	46	50	26	3.0	19	19
7	24	29	23	38	23	71	53	37	26	4.3	14	7.1
8	36	27	27	29	23	47	37	34	9.0	15	17	16
9	22	34	40	18	25	58	54	25	18	10	14	31
10	25	27	38	32	25	55	49	24	37	10	8.6	17
11	33	33	38	29	24	57	36	15	22	6.0	16	22
12	22	34	29	12	24	58	47	34	14	5.9	29	23
13	22	38	22	20	24	58	37	56	13	2.3	22	30
14	28	31	29	43	24	59	41	40	20	2.3	20	19
15	30	35	35	26	23	68	51	33	8.5	7.0	20	26
16	25	26	39	32	25	64	34	24	16	6.0	25	34
17	28	31	9.4	33	30	65	37	32	32	7.6	8.9	23
18	25	30	33	26	42	65	35	6.1	13	7.2	20	21
19	36	33	21	32	40	64	36	20	13	8.1	27	20
20	26	28	40	8.0	42	52	24	42	11	4.6	30	26
21	20	36	17	26	30	54	44	24	15	5.7	21	7.4
22	36	27	30	24	43	53	63	22	4.2	14	25	19
23	28	31	22	27	47	30	40	22	8.1	11	29	32
24	32	33	21	29	48	52	42	24	21	12	13	20
25	22	32	25	31	41	72	37	8.1	15	11	21	22
26	28	36	28	29	44	50	38	20	32	11	33	24
27	27	34	28	30	44	39	31	21	20	5.1	20	32
28	31	19	20	26	47	55	49	37	23	6.1	20	12
29	25	39	36	28	---	35	70	30	5.2	17	20	26
30	23	40	29	27	---	37	43	30	12	26	26	37
31	34	---	19	22	---	57	---	27	---	26	8.1	---
TOTAL	825	931	869.4	829.0	879	1627	1296	908.2	533.8	315.5	647.3	676.5
MEAN	26.6	31.0	28.0	26.7	31.4	52.5	43.2	29.3	17.8	10.2	20.9	22.6
MAX	36	40	40	43	48	72	70	56	37	31	33	37
MIN	20	19	9.4	8.0	23	17	24	6.1	4.2	2.3	8.1	7.1
AC-FT	1640	1850	1720	1640	1740	3230	2570	1800	1060	626	1280	1340
CAL YR 1984	TOTAL	14391.9		MEAN	39.3	MAX	149	MIN	4.5	AC-FT	28550	
WTR YR 1985	TOTAL	10337.7		MEAN	28.3	MAX	72	MIN	2.3	AC-FT	20500	

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE

LOCATION.--Lat 42°54'10", long 100°21'40", in SE1/4 sec.22. T.34 N., R.26 W., Cherry County, Hydrologic Unit 10150004, on left bank 18 ft downstream from highway bridge, 2.2 mi downstream from Big Beaver Creek, 5.5 mi downstream from Minnechadua Creek, and 6.5 mi southwest of Sparks.

DRAINAGE AREA.--8,090 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1209: 1947(M), 1948-50(P). WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,287.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 4, 5, Dec. 12 to Feb. 27, and June 8-11. Records poor. Natural flow of stream affected by irrigation and power developments, storage in Box Butte Reservoir (station 06455000), and since May 1964 by storage in Merritt Reservoir (station 06459300).

AVERAGE DISCHARGE.--40 years, 773 ft³/s, 560,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s Mar. 5, 1949, gage height, 6.73 ft, from rating curve extended above 3,800 ft³/s; maximum gage height recorded, 10.06 ft Feb. 7, 1973, ice jam; minimum daily discharge, 100 ft³/s Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,000 ft³/s Jan. 3, gage height, 4.18 ft, backwater from ice; minimum daily, 403 ft³/s June 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	500	588	888	1000	640	1030	816	855	535	500	610	454
2	503	627	853	1300	850	1050	776	800	535	493	572	505
3	536	660	849	1500	850	1100	807	761	562	544	519	496
4	524	715	780	1300	880	959	891	761	571	462	494	479
5	549	664	800	1300	900	851	663	755	589	449	499	451
6	536	764	782	1200	900	914	584	757	580	426	471	438
7	510	792	845	1000	1000	1030	598	732	589	420	451	423
8	539	807	868	900	970	1080	555	715	573	436	463	436
9	551	910	927	700	950	999	537	687	557	429	440	493
10	552	856	938	750	1020	1020	597	699	541	426	423	474
11	545	881	850	820	900	1050	568	736	525	415	418	533
12	573	889	840	650	900	1040	573	736	509	418	559	559
13	578	884	760	800	810	1010	583	738	489	410	458	567
14	580	924	650	850	900	1000	577	799	504	413	451	523
15	592	914	700	780	950	1010	598	770	503	431	462	523
16	578	853	610	700	850	1000	595	742	496	437	472	527
17	540	837	540	700	900	995	605	746	500	485	458	493
18	588	838	510	650	970	1000	619	718	443	447	456	476
19	606	843	590	600	900	988	677	708	435	444	469	467
20	606	814	640	500	1050	952	726	768	428	440	580	483
21	636	835	680	500	1050	960	775	694	437	446	558	450
22	641	825	730	600	1050	974	812	688	421	454	495	481
23	633	845	790	850	1100	920	813	679	403	470	498	527
24	660	836	580	800	1100	903	791	647	416	477	473	509
25	612	868	620	800	1050	903	791	625	473	477	479	516
26	603	920	850	840	1080	753	875	587	591	457	471	519
27	600	904	900	800	1100	860	974	590	519	426	447	508
28	595	863	850	800	1050	909	889	632	502	435	461	535
29	592	855	900	750	---	864	922	606	473	574	474	573
30	585	838	1000	700	---	831	914	585	473	753	505	574
31	614	---	960	650	---	835	---	580	---	652	450	---
TOTAL	17857	24649	24080	26090	26670	29790	21501	21896	15172	14546	15036	14992
MEAN	576	822	777	842	953	961	717	706	506	469	485	500
MAX	660	924	1000	1500	1100	1100	974	855	591	753	610	574
MIN	500	588	510	500	640	753	537	580	403	410	418	423
AC-FT	35420	48890	47760	51750	52900	59090	42650	43430	30090	28850	29820	29740
CAL YR 1984	TOTAL	308865		MEAN	844	MAX	5000	MIN	437	AC-FT	612600	
WTR YR 1985	TOTAL	252279		MEAN	691	MAX	1500	MIN	403	AC-FT	500400	

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1982 to current year.

WATER TEMPERATURES: October 1982 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 354 microsiemens Dec. 3, 1983; minimum daily, 185 microsiemens Aug. 21, 1985.

WATER TEMPERATURES: Maximum daily, 29.0°C June 19, 1983; minimum daily, 0.0°C on Dec. 1, Dec. 3, 1983.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 293 microsiemens June 13; minimum daily, 185 microsiemens Aug. 21.

WATER TEMPERATURES: Maximum daily, 27.0°C July 8, 13, and 18; minimum daily, 0.0°C on Feb. 2, 3, 4, and 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT									
10...	1605	573	232	8.3	13.0	25	98	0	32
NOV									
20...	1620	864	230	8.1	3.5	35	95	0	31
DEC									
13...	1120	798	223	8.0	.5	10	92	0	30
JAN									
10...	0850	773	225	7.8	.5	10	88	0	29
FEB									
13...	0920	806	213	7.7	.5	10	86	0	28
MAR									
12...	1650	1050	231	7.9	2.0	45	96	0	31
APR									
02...	1545	838	233	8.1	13.0	5	100	0	33
MAY									
30...	1610	640	225	8.3	22.0	10	95	0	31
JUN									
26...	1545	592	266	8.0	16.0	20	95	0	31
JUL									
24...	1555	456	215	8.3	27.0	10	79	0	25
AUG									
21...	1610	625	219	8.6	25.5	10	91	0	30
SEP									
17...	1515	552	235	8.1	23.0	5	94	0	31

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
OCT 10...	4.3	9.3	.4	6.5	108	7.2	1.5	.40	54
NOV 20...	4.2	9.1	.4	5.8	105	8.9	1.5	.40	50
DEC 13...	4.1	9.0	.4	5.9	100	7.7	1.4	.30	53
JAN 10...	3.9	8.7	.4	5.9	98	6.4	1.3	.30	52
FEB 13...	3.8	8.3	.4	5.6	94	7.3	1.2	.30	53
MAR 12...	4.4	9.6	.4	6.6	103	9.7	1.7	.40	52
APR 02...	4.5	10	.5	6.9	109	8.4	1.7	.40	52
MAY 30...	4.3	9.8	.5	7.0	104	7.9	1.3	.40	54
JUN 26...	4.2	8.9	.4	5.9	104	7.3	1.4	.30	53
JUL 24...	4.0	9.0	.5	6.6	102	6.1	1.2	.30	58
AUG 21...	3.8	8.5	.4	6.2	104	7.1	1.4	.30	52
SEP 17...	4.0	9.1	.4	6.5	107	12	1.4	.40	55

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 10...	180	.24	278	.42	.080	.060	20	7	2
NOV 20...	170	.24	406	.46	.120	.060	30	22	4
DEC 13...	170	.23	369	.54	.100	.100	30	23	4
JAN 10...	170	.23	347	.62	.100	.070	30	25	4
FEB 13...	160	.22	357	.61	.080	.070	20	18	<1
MAR 12...	180	.24	502	.46	.090	.080	20	50	6
APR 02...	180	.25	412	.35	.280	.080	20	26	5
MAY 30...	180	.24	308	<.10	.030	.060	30	17	<1
JUN 26...	170	.24	279	.25	.120	.050	30	13	<1
JUL 24...	170	.23	211	<.10	--	--	20	6	2
AUG 21...	170	.23	290	.14	--	.040	30	11	2
SEP 17...	180	.25	274	.21	.160	.050	30	11	2

NIOBRARA RIVER BASIN

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06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

 SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	227	222	234	230	232	243	227	228	227	187	226
2	235	229	221	238	230	227	230	225	229	224	193	222
3	230	260	234	220	231	220	228	229	226	224	187	226
4	228	223	230	213	233	---	225	223	223	228	197	223
5	226	222	225	208	228	230	240	228	227	253	198	225
6	227	217	233	210	230	222	248	227	227	224	202	227
7	---	214	222	208	230	221	252	225	222	222	205	226
8	240	217	212	206	222	227	255	222	222	222	205	234
9	232	218	---	210	220	220	253	220	225	223	197	222
10	229	229	220	209	221	222	256	223	228	218	197	256
11	228	---	216	211	214	226	249	217	228	223	206	228
12	230	---	218	228	210	222	248	227	235	222	187	224
13	227	215	214	216	211	227	251	224	293	217	194	225
14	---	207	215	208	207	228	---	225	225	224	195	227
15	230	210	213	210	210	234	257	222	233	218	203	---
16	233	216	229	207	---	243	263	219	---	224	194	236
17	234	218	228	204	---	232	250	223	225	218	193	233
18	227	219	241	203	---	230	249	220	227	222	196	232
19	234	214	237	242	204	231	243	221	236	218	207	236
20	230	217	239	---	203	237	240	227	227	225	194	232
21	229	215	225	223	200	235	250	226	225	225	185	232
22	228	---	226	221	207	228	244	220	228	234	188	232
23	230	216	222	219	207	227	245	219	228	263	188	236
24	225	217	231	213	213	236	241	218	223	224	193	228
25	230	213	242	210	210	233	242	220	226	226	196	232
26	238	222	229	209	212	241	240	227	217	217	205	235
27	234	219	216	211	223	238	243	---	230	225	193	232
28	235	218	218	207	220	229	240	222	228	222	206	---
29	240	217	222	208	---	231	237	221	233	217	188	---
30	237	209	---	213	---	234	243	220	224	214	193	---
31	234	---	234	224	---	230	---	221	---	218	187	---
MEAN	---	---	---	---	---	---	---	---	---	225	195	---

 TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.5	3.0	5.0	1.0	1.0	6.0	5.5	15.5	20.0	24.0	17.5	21.0
2	19.0	5.5	2.0	1.5	.0	5.0	12.0	18.0	22.0	24.0	20.0	23.0
3	14.0	10.0	2.0	3.0	.0	2.0	13.0	20.0	15.0	25.0	24.0	24.0
4	16.5	8.0	2.5	2.5	.0	---	9.0	20.0	18.0	22.0	23.0	25.0
5	16.5	7.0	1.5	2.0	1.0	1.5	6.0	18.0	21.0	23.0	24.0	24.5
6	16.0	5.5	3.0	1.5	.0	4.0	8.0	17.0	21.0	24.0	24.5	22.0
7	---	8.0	3.5	2.0	1.0	6.0	7.0	18.0	26.0	25.0	25.0	23.0
8	14.0	8.5	2.5	2.0	2.0	6.5	9.0	20.0	25.0	27.0	26.0	19.0
9	15.0	7.0	---	1.5	1.5	7.0	11.0	22.0	21.0	26.0	19.0	18.0
10	14.5	3.5	4.0	1.0	1.0	7.5	12.0	21.0	17.0	26.0	20.0	17.0
11	16.0	---	4.5	1.0	2.0	6.5	17.0	19.5	15.0	25.0	21.0	18.0
12	18.0	---	2.0	2.0	2.5	4.5	16.0	14.0	15.0	25.0	21.5	18.0
13	18.0	8.0	2.0	2.0	1.5	5.0	15.0	15.5	19.0	27.0	21.0	19.0
14	---	7.5	1.5	1.5	2.0	7.0	---	15.0	20.5	24.0	18.0	18.0
15	11.0	6.0	3.0	1.5	2.5	8.0	11.5	14.0	22.0	23.0	18.0	---
16	10.0	4.0	1.5	1.0	---	8.0	15.5	16.0	---	25.0	22.0	20.0
17	8.0	5.0	1.0	2.5	---	7.5	19.0	18.0	20.0	26.0	20.0	21.0
18	10.0	3.0	2.5	2.5	---	10.0	20.0	19.0	18.0	27.0	22.0	21.0
19	7.0	3.5	2.0	1.5	3.0	8.5	19.0	21.0	20.0	23.0	21.0	17.0
20	7.0	5.0	3.5	---	4.0	8.0	16.5	18.0	22.0	24.0	19.0	14.0
21	7.0	4.5	2.0	2.0	3.5	10.0	15.0	20.0	22.0	25.0	23.0	15.0
22	6.5	---	2.5	1.0	4.0	9.0	16.0	21.5	20.0	24.0	24.0	10.5
23	7.0	5.5	1.0	2.0	2.5	7.0	14.0	22.0	23.0	26.5	23.0	10.0
24	8.5	5.5	2.0	2.5	2.0	8.0	15.0	21.0	24.0	24.0	20.0	9.0
25	9.0	7.0	.5	1.0	4.0	10.0	13.0	22.0	22.0	25.0	19.5	10.0
26	10.0	5.0	2.0	1.5	2.0	12.0	9.0	20.0	17.0	25.0	22.0	10.0
27	9.5	3.0	3.5	2.5	2.5	11.0	10.5	---	18.0	23.0	23.0	12.0
28	5.0	2.0	2.0	1.5	4.5	10.0	15.0	22.0	20.0	22.0	25.0	---
29	8.5	3.5	1.5	1.0	---	5.0	19.0	23.0	21.0	19.0	24.0	---
30	6.0	4.5	---	---	---	6.0	18.0	22.5	26.0	18.0	25.0	---
31	7.0	---	1.5	---	---	1.0	---	18.0	---	18.0	25.5	---
MEAN	---	---	---	---	---	---	---	---	---	24.0	22.0	---

NIOBRARA RIVER BASIN

06462500 PLUM CREEK AT MEADVILLE, NE

LOCATION.--Lat 42°45'05", long 99°52'05", in NE1/4NW1/4 sec.14, T.32 N., R.22 W., Brown County, Hydrologic Unit 10150004, on left bank 0.4 mi upstream from county road bridge, 1 mi upstream from mouth, 1 mi southwest of Meadville, and 17 mi north of Ainsworth.

DRAINAGE AREA.--600 mi², approximately, of which about 340 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1947 to September 1975, October 1976 to current year. Prior to October 1962, published as "near Meadville."

REVISED RECORDS.--WSP 1729: 1953. WSP 1917: 1953.

GAGE.--Water-stage recorder. Elevation of gage is 2,032 ft, from topographic map. Prior to Nov. 25, 1962, at site 6.5 mi upstream at different datum. Nov. 25, 1962, to Nov. 14, 1966, at present site at datum 3.0 ft higher. Nov. 15, 1966 to Oct. 2, 1979, at present site at datum 2.0 ft higher. Oct. 3, 1979 to June 3, 1982, at present site at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Dec. 3-6 and Dec. 14 to Feb. 18. Records fair except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--36 years (1948-75, 1976-85), 113 ft³/s, 81,187 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft³/s Sept. 18, 1967, gage height, 5.98 ft present datum; maximum gage height observed, 8.54 ft Dec. 6, 1964, backwater from ice, present datum; minimum daily discharge, 15 ft³/s Feb. 19, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 12	1330	a	*5.46	Aug. 12	0230	*499	4.55

a Backwater from ice.

Minimum daily discharge, 99 ft³/s July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	148	160	140	105	187	143	192	119	109	128	110
2	127	150	149	160	110	194	146	177	118	108	117	116
3	129	153	140	180	115	196	148	169	129	109	115	130
4	129	154	140	190	115	176	149	160	126	105	113	132
5	135	157	135	180	110	161	147	152	123	101	103	136
6	154	163	135	150	105	164	147	143	121	103	109	124
7	152	167	125	140	110	180	147	139	119	103	107	126
8	143	170	124	125	120	192	143	136	116	102	112	119
9	143	177	127	125	130	203	143	136	111	104	106	117
10	148	184	136	120	135	213	145	136	112	107	108	117
11	151	168	141	110	140	215	145	142	117	101	124	129
12	155	167	139	120	145	196	145	138	119	101	349	140
13	160	171	125	140	150	187	143	132	117	99	178	135
14	166	186	125	160	155	182	140	144	117	99	166	121
15	171	190	130	180	175	196	139	143	116	103	124	122
16	162	188	130	170	200	195	140	137	114	105	120	128
17	152	186	120	150	220	187	139	132	109	114	127	135
18	148	180	120	130	200	185	137	131	104	130	124	126
19	147	174	125	120	159	181	139	132	107	114	124	121
20	139	158	130	100	161	180	155	131	107	110	142	116
21	134	160	135	120	161	182	168	128	104	108	138	115
22	137	160	135	140	158	177	166	127	102	104	123	118
23	134	161	130	160	163	175	157	128	102	105	121	119
24	138	156	120	160	167	167	147	124	108	105	123	120
25	141	168	125	155	169	169	142	126	106	109	117	117
26	141	176	135	150	175	174	154	125	156	107	113	113
27	142	166	150	140	176	169	180	130	155	102	112	113
28	151	155	150	130	182	164	202	133	124	100	113	112
29	148	160	110	125	---	154	215	133	110	111	118	114
30	148	159	115	110	---	149	209	126	109	148	114	113
31	150	---	130	100	---	144	---	120	---	170	114	---
TOTAL	4497	5012	4091	4380	4211	5594	4620	4302	3497	3396	4002	3654
MEAN	145	167	132	141	150	180	154	139	117	110	129	122
MAX	171	190	160	190	220	215	215	192	156	170	349	140
MIN	122	148	110	100	105	144	137	120	102	99	103	110
AC-FT	8920	9940	8110	8690	8350	11100	9160	8530	6940	6740	7940	7250
CAL YR 1984	TOTAL	71590	MEAN	196	MAX	972	MIN	105	AC-FT	142000		
WTR YR 1985	TOTAL	51256	MEAN	140	MAX	349	MIN	99	AC-FT	101700		

NIOBRARA RIVER BASIN

47

06463080 LONG PINE CREEK NEAR LONG PINE, NE

LOCATION.--Lat 42°37'55", long 99°40'46", in SE1/4NE1/4 sec.29, T.31 N., R.20 W., Brown County, Hydrologic Unit 10150004, on right bank 4.9 mi upstream from Bone Creek and 7 mi north of Long Pine.

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WRD NE-81-1: 1980(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,080 ft, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--6 years, 99.5 ft³/s, 72,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 507 ft³/s July 16, 1983, gage height, 5.27 ft; minimum daily, 77 ft³/s Sept. 5, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 172 ft³/s July 18, gage height, 1.92 ft; minimum daily, 89 ft³/s July 22-25, July 9-11, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	101	100	92	93	105	96	101	94	94	96	93
2	96	101	98	93	93	105	103	99	94	93	97	95
3	95	103	97	93	92	108	104	100	96	94	97	94
4	97	101	98	94	92	105	106	98	97	91	96	94
5	98	101	98	94	93	105	107	97	98	90	94	99
6	99	101	97	95	93	106	106	97	98	90	91	96
7	99	102	99	94	94	113	105	97	98	90	91	93
8	100	101	99	92	94	111	105	98	96	90	90	94
9	101	105	99	91	96	109	106	98	95	89	91	97
10	100	107	99	92	95	108	106	99	98	89	93	97
11	99	104	98	91	94	105	106	118	99	89	91	102
12	101	103	95	91	93	98	105	109	96	91	130	104
13	101	104	93	92	94	100	104	104	94	91	105	102
14	102	102	95	92	94	100	105	105	91	89	99	97
15	110	100	94	93	94	100	106	102	92	90	98	96
16	105	99	95	94	94	100	108	98	95	90	98	97
17	103	100	93	94	94	100	108	97	93	94	101	96
18	107	98	94	93	96	101	107	98	94	109	98	96
19	108	99	95	92	100	100	108	98	95	96	98	96
20	106	99	96	96	104	100	108	94	92	95	106	95
21	105	98	94	93	104	101	107	91	92	94	101	96
22	104	99	94	93	104	104	107	93	89	90	99	96
23	104	99	93	93	105	104	108	95	89	91	101	97
24	104	99	93	94	103	97	106	94	89	91	98	96
25	104	99	93	93	104	104	107	95	89	91	97	97
26	104	100	95	95	103	104	116	94	101	91	96	97
27	103	100	93	95	103	103	124	95	96	91	95	96
28	102	99	94	94	105	103	113	94	95	90	96	97
29	103	99	92	95	---	101	108	95	94	97	95	97
30	102	99	92	93	---	102	105	96	95	112	95	98
31	102	---	91	92	---	102	---	96	---	99	93	---
TOTAL	3158	3022	2956	2888	2723	3204	3210	3045	2834	2881	3026	2900
MEAN	102	101	95.4	93.2	97.3	103	107	98.2	94.5	92.9	97.6	96.7
MAX	110	107	100	96	105	113	124	118	101	112	130	104
MIN	94	98	91	91	92	97	96	91	89	89	90	93
AC-FT	6260	5990	5860	5730	5400	6360	6370	6040	5620	5710	6000	5750
CAL YR 1984	TOTAL	40296	MEAN	110	MAX	331	MIN	87	AC-FT	79930		
WTR YR 1985	TOTAL	35847	MEAN	98.2	MAX	130	MIN	89	AC-FT	71100		

NIOBRARA RIVER BASIN

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE

LOCATION.--Lat 42°41'21", long 99°40'43", in SE1/4NE1/4 sec.5, T.31 N., R.20 W., Brown County, Hydrologic Unit 10150004, on right bank 10 ft downstream from county road bridge, 1 mi downstream from Bone Creek, and 5.5 mi southwest of Riverview.

DRAINAGE AREA.--460 mi², approximately (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1948 to January 1954, September 1954 to current year.

REVISED RECORDS.--WSP 1729; 1952(M).

GAGE.--Water-stage recorder. Datum of gage is 1,983.34 ft above National Geodetic Vertical Datum of 1929, (levels by Bureau of Reclamation). Prior to Dec. 7, 1962, at site 100 ft upstream at present datum. Dec. 7, 1962, to Sept. 20, 1978, at site 3 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 6, 24, 25, Jan. 1, 12, 20, 21, Jan. 31 to Feb. 8. Records good except for periods of estimated record and those above 250 ft³/s, which are poor. Flow includes return water from Ainsworth Irrigation District since 1965.

AVERAGE DISCHARGE.--36 years (1948-53, 1954-85), 142 ft³/s, 102,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,650 ft³/s July 1, 1962, gage height, 15.68 ft, backwater from fallen bridge, from rating curve extended above 3,600 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 44 ft³/s Jan. 10, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 12	0915	*344	*4.01	No peaks greater than base discharge.			

a Observed

Minimum daily discharge, 128 ft³/s July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	156	160	147	140	166	160	156	144	153	161	158
2	168	167	152	154	146	165	163	152	145	153	152	163
3	158	169	152	157	145	173	163	151	153	153	152	178
4	160	162	153	165	146	154	167	151	163	153	151	181
5	164	166	149	162	145	158	163	149	168	148	146	173
6	171	162	150	166	145	167	160	146	167	140	145	153
7	165	172	153	165	145	186	158	151	162	138	140	146
8	164	171	151	163	155	201	155	153	156	142	139	143
9	168	180	152	163	163	202	156	159	152	130	131	145
10	167	175	153	162	156	190	158	169	157	128	135	148
11	165	169	158	161	159	179	158	263	157	136	144	163
12	164	169	152	160	166	170	157	257	154	153	285	197
13	160	180	146	165	171	172	154	215	146	140	214	196
14	151	185	151	161	169	172	153	199	141	140	182	167
15	172	173	153	162	169	174	155	180	145	144	156	164
16	173	164	155	165	172	172	156	169	153	144	153	169
17	155	164	144	167	172	171	155	158	146	164	156	174
18	163	159	143	167	169	174	154	164	146	200	148	166
19	165	158	148	148	169	174	156	166	153	177	151	172
20	159	160	150	134	173	174	156	161	158	175	185	166
21	166	158	152	153	171	175	152	156	156	179	189	163
22	157	157	152	155	167	174	151	158	162	175	179	163
23	158	158	153	154	169	174	152	160	153	170	175	167
24	172	160	140	158	164	171	148	168	149	164	178	173
25	163	161	144	148	164	171	147	165	159	151	168	173
26	165	165	154	152	165	173	171	162	198	136	167	168
27	164	159	160	153	161	168	192	168	168	135	162	148
28	156	156	164	152	164	168	183	167	161	138	158	146
29	163	161	154	154	---	162	170	172	168	151	156	146
30	157	159	151	147	---	160	161	165	153	240	156	146
31	177	---	150	140	---	161	---	156	---	194	161	---
TOTAL	5076	4955	4699	4860	4500	5351	4784	5266	4693	4844	5075	4915
MEAN	164	165	152	157	161	173	159	170	156	156	164	164
MAX	177	185	164	167	173	202	192	263	198	240	285	197
MIN	151	156	140	134	140	154	147	146	141	128	131	143
AC-FT	10070	9830	9320	9640	8930	10610	9490	10450	9310	9610	10070	9750
CAL YR 1984	TOTAL	73622		MEAN	201	MAX	970	MIN	129	AC-FT	146000	
WTR YR 1985	TOTAL	59018		MEAN	162	MAX	285	MIN	128	AC-FT	117100	

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT									
11...	1040	162	196	7.9	13.5	25	77	0	25
NOV									
21...	1100	161	195	7.9	5.0	25	77	0	25
DEC									
11...	1600	162	197	8.1	6.5	10	77	0	25
JAN									
10...	1050	164	192	7.5	2.5	10	74	0	24
FEB									
13...	1140	170	191	7.6	2.5	25	76	0	25
MAR									
13...	1020	176	195	7.7	4.5	45	78	0	25
APR									
03...	1100	164	196	7.9	11.5	4	80	0	26
MAY									
31...	1050	146	188	7.7	14.5	5	77	0	25
JUN									
27...	1050	177	193	7.7	14.0	30	75	0	24
JUL									
25...	1110	148	192	7.8	18.0	8	76	0	24
AUG									
22...	1030	180	195	7.9	17.5	20	75	0	24
SEP									
19...	1050	180	193	7.5	18.0	5	71	0	23

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
OCT									
11...	3.6	7.7	.4	6.1	82	5.3	2.6	.30	55
NOV									
21...	3.5	7.8	.4	5.2	81	6.3	2.5	.30	53
DEC									
11...	3.5	7.8	.4	5.4	80	5.6	2.5	.20	54
JAN									
10...	3.4	7.4	.4	5.2	78	9.1	1.9	.20	54
FEB									
13...	3.4	7.6	.4	5.0	78	5.5	2.3	.20	56
MAR									
13...	3.7	8.4	.4	5.5	80	7.0	2.8	.30	54
APR									
03...	3.6	8.0	.4	5.4	81	6.2	2.5	.30	54
MAY									
31...	3.5	7.3	.4	5.4	79	5.2	2.0	.20	56
JUN									
27...	3.6	7.9	.4	5.8	79	6.9	2.7	.20	54
JUL									
25...	4.0	7.5	.4	5.6	80	5.8	2.0	.20	55
AUG									
22...	3.6	7.7	.4	6.2	82	6.9	2.4	.30	51
SEP									
19...	3.4	7.5	.4	5.9	80	9.6	2.2	.30	53

NIOBRARA RIVER BASIN

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE --Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT									
11...	150	.21	68	1.7	.210	.160	30	18	2
NOV									
21...	150	.21	66	1.8	.190	.150	20	20	4
DEC									
11...	150	.21	66	1.9	.190	.170	20	19	4
JAN									
10...	150	.21	67	2.1	.200	.150	20	24	4
FEB									
13...	150	.21	70	2.1	.180	.140	20	16	<1
MAR									
13...	150	.21	74	1.8	.210	.150	20	37	4
APR									
03...	150	.21	68	1.7	.220	.170	20	22	5
MAY									
31...	150	.21	60	1.4	.040	.160	20	21	<1
JUN									
27...	150	.21	73	1.4	.280	.190	30	36	<1
JUL									
25...	150	.21	61	1.2	--	--	20	17	2
AUG									
22...	150	.21	74	1.3	--	.240	20	34	3
SEP									
19...	150	.21	74	1.4	.310	.190	20	21	2

06463720 NIOBRARA RIVER AT MARIAVILLE, NE

LOCATION.--Lat 42°46'56", long 99°20'04", in NE1/4NW1/4 sec.5, T.32 N., R.17 W., Keya Paha County, Hydrologic Unit 10150004, on left bank 15 ft upstream from bridge on State Highway 137, 13 mi north of Newport and 20.5 mi upstream from mouth of Keya Paha River.

DRAINAGE AREA.--9,840 mi², approximately.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1985.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	
SEP 23...	1300	1120	219	8.2	14.5	724	9.7	94	0	31	4.0	8.0	
DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, NO2+NO3 (MG/L AS N) (00630)	NITRO- GEN, AMMONIA (MG/L AS N) (00610)	NITRO- GEN, ORGANIC (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)
SEP 23...	.4	5.3	108	7.4	1.5	.60	.050	.45	.50	1.1	.200	200	
DATE	TIME	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	
SEP 23...	<10	1	<10	12	5	6	<.1	<1	110	6.0	1.3		
DATE	TIME	PRO- PAZINE TOTAL (UG/L) (39024)	PER- THANE TOTAL (UG/L) (39034)	METHO- MYL TOTAL (UG/L) (39051)	PROPHAM TOTAL (UG/L) (39052)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)		
SEP 23...	1300	<.10	<.1	<2.0	<2.0	<.1	<.10	<.1	<.1	<.10	<.010		
DATE	TIME	LINDANE TOTAL (UG/L) (39340)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	TOX- APHENE, TOTAL (UG/L) (39400)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	
SEP 23...	<.010	<.1	<.010	<.010	<.010	<.010	<.010	<.010	<.01	<1	<.010		

NIOBRARA RIVER BASIN

06463720 NIOBRARA RIVER AT MARIAVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	PCB, TOTAL (UG/L) (39516)	MALA- THION, TOTAL (UG/L) (39530)	PARA- THION, TOTAL (UG/L) (39540)	DI- AZINON, TOTAL (UG/L) (39570)	METHYL PARA- THION, TOTAL (UG/L) (39600)	ATRA- ZINE, TOTAL (UG/L) (39630)	PICLO- RAM (TOR- DON) (AMDON) TOTAL (UG/L) (39720)	2,4-D, TOTAL (UG/L) (39730)
SEP 23...	<.010	<.01	<.1	<.01	<.01	<.01	<.01	<.10	<.010	<.01

DATE	2,4,5-T TOTAL (UG/L) (39740)	SEVIN, TOTAL (UG/L) (39750)	MIREX, TOTAL (UG/L) (39755)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRI- THION (UG/L) (39786)	METHYL TRI- THION, TOTAL (UG/L) (39790)	CYAN- AZINE TOTAL (UG/L) (81757)	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L) (82052)	2, 4-DP TOTAL (UG/L) (82183)	AME- TRYNE TOTAL (UG/L) (82184)
SEP 23...	<.01	<2.0	<.01	<.01	<.01	<.01	<.10	<.010	<.01	<.10

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. TOTAL, SIEVE DIAM. % FINER THAN .062 MM (80203)	SED. TOTAL, SIEVE DIAM. % FINER THAN .125 MM (80204)	
SEP 23...	1300	1120	14.5	520	1570	.00	2	
DATE		SED. TOTAL, SIEVE DIAM. % FINER THAN .250 MM (80205)	SED. TOTAL, SIEVE DIAM. % FINER THAN .500 MM (80206)	SED. TOTAL, SIEVE DIAM. % FINER THAN 1.00 MM (80207)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
SEP 23...	29	96	100	20	47	93	100	

06464500 KEYA PAHA RIVER AT WEWELA, SD

LOCATION.--Lat 43°01'42", long 99°46'45", in SE1/4 sec.24, T.95 N., R.76 W., Tripp County, Hydrologic Unit 10150006, on right bank at downstream side of bridge on U.S. Highway 183, 1.0 mi north of Wewela, 4.5 mi upstream from Holt Creek, and 11.5 mi downstream from Lost Creek.

DRAINAGE AREA.--1,070 mi², approximately.

PERIOD OF RECORD.--November 1937 to September 1940, October 1947 to current year. Monthly discharge only for October 1947, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 2,049.78 ft above National Geodetic Vertical Datum of 1929. Prior to June 21, 1957, nonrecording gage at site 13 ft upstream at same datum. Prior to Aug. 23, 1984, recording gage on left bank 13 ft downstream from bridge at same datum.

REMARKS.--Records good except those for winter period, Nov. 29 to Mar. 15, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years (water years 1939-40, 1948-85), 69.5 ft³/s (50,350 acre-ft/yr); median of yearly mean discharges, 58 ft³/s (42,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s Mar. 31, 1952 (gage height, 13.08 ft); maximum gage height, 13.5 ft Mar. 25, 1950, from floodmark (backwater from ice); no flow Jan. 10 to Feb. 15, 1949, Aug. 19 to Sept. 14, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 12	1700	ice jam	a*3.87	b	--	*230	--

a Observed.

b Sometime during period Mar. 15, 16.

Minimum daily discharge, 13 ft³/s July 12-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	41	43	30	22	40	95	95	29	27	44	29
2	37	38	40	31	23	40	95	86	29	29	43	30
3	37	42	33	33	23	38	97	79	30	27	41	31
4	37	41	32	35	23	36	123	74	33	25	38	32
5	36	39	30	37	24	36	134	71	34	22	36	37
6	36	38	30	37	25	40	132	69	33	21	34	36
7	36	37	35	35	25	42	132	68	31	20	33	33
8	36	37	45	33	26	45	137	65	28	20	33	30
9	41	36	45	32	27	50	138	62	26	18	33	29
10	42	34	44	32	27	55	138	59	25	17	33	30
11	42	34	42	29	28	52	126	61	26	14	35	35
12	44	36	40	31	29	55	123	57	25	13	62	43
13	42	38	38	33	30	100	105	53	25	13	47	46
14	40	60	37	33	30	180	97	50	24	13	45	46
15	41	64	38	33	31	210	99	49	23	14	39	41
16	42	58	36	33	32	220	94	48	23	17	37	38
17	42	60	33	32	33	204	94	47	23	32	38	34
18	44	58	33	30	34	191	84	45	25	40	38	31
19	47	56	34	29	35	170	85	45	28	43	38	30
20	47	57	35	27	36	157	89	42	27	29	40	30
21	47	56	35	28	38	147	99	41	26	25	42	31
22	45	51	34	29	38	142	111	39	25	23	42	33
23	45	51	32	30	36	134	105	37	25	23	40	34
24	43	52	30	31	36	126	97	35	23	52	37	34
25	42	52	30	32	37	121	87	33	24	46	37	35
26	41	52	32	32	36	117	85	33	39	105	34	36
27	41	52	34	31	35	113	102	34	37	62	32	35
28	41	46	35	30	37	112	121	34	33	43	35	37
29	41	45	33	29	---	109	112	33	31	36	33	41
30	40	47	31	28	---	99	102	31	29	39	32	45
31	41	---	30	22	---	97	---	30	---	42	31	---
TOTAL	1273	1408	1099	967	856	3278	3238	1605	839	950	1182	1052
MEAN	41.1	46.9	35.5	31.2	30.6	106	108	51.8	28.0	30.6	38.1	35.1
MAX	47	64	45	37	38	220	138	95	39	105	62	46
MIN	36	34	30	22	22	36	84	30	23	13	31	29
AC-FT	252	2790	2180	1920	1700	6500	6420	3180	1660	1880	2340	2090
CAL YR 1984	TOTAL	41133	MEAN	112	MAX	1020	MIN	23	AC-FT	81590		
WTR YR 1985	TOTAL	17747	MEAN	48.6	MAX	220	MIN	13	AC-FT	35200		

NIOBRARA RIVER BASIN

06464900 KEYA PAHA RIVER NEAR NAPER, NE

LOCATION.--Lat 42°55'00", long 99°05'50", in SE1/4SE1/4 sec.17, T.34 N., R.15 W., Boyd County, Hydrologic Unit 10150006, on left bank 70 ft upstream from highway bridge, 3.3 mi south of Naper, and 8.6 mi upstream from mouth.

DRAINAGE AREA.--1,630 mi², approximately.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 1709: 1959(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,680 ft, from topographic map. Prior to May 2, 1958, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 4 to Apr. 1. Records good except for period of estimated record, which is poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years, 134 ft³/s, 97,080 acre-ft/yr; median of yearly mean discharges, 116 ft³/s, 84,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,280 ft³/s July 1, 1962, gage height, 10.91 ft; maximum gage height, 13.34 ft Mar. 23, 1960, backwater from ice; no flow July 22-30, Aug. 10, 11, 1976, Aug. 3, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
(a)	----	*450	unknown	No peaks greater than base discharge.			
Feb. 26	1700	(b)	*7.69				

a Sometime during period Mar. 10-20.

b Backwater from ice.

Minimum daily discharge, 19 ft³/s July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	106	119	75	55	70	190	200	67	48	68	51
2	80	106	110	70	55	70	182	183	66	48	67	53
3	75	105	59	65	55	65	184	175	74	47	64	57
4	75	107	55	65	55	60	212	162	80	44	60	57
5	76	109	55	70	55	55	229	147	77	38	53	63
6	86	113	60	75	55	60	255	138	76	35	47	63
7	83	114	75	80	55	70	259	133	72	32	44	61
8	82	113	90	80	60	80	229	126	65	27	53	58
9	86	107	90	80	60	90	229	120	59	28	44	58
10	92	105	85	80	60	100	228	117	58	25	44	51
11	94	108	85	75	60	100	224	179	58	21	44	56
12	89	110	85	75	60	150	214	151	58	20	96	93
13	96	116	85	70	60	200	198	129	55	19	186	118
14	100	122	80	70	60	300	186	132	54	19	163	104
15	123	122	80	70	65	350	184	118	52	21	116	98
16	122	120	80	70	65	400	168	109	49	20	97	93
17	113	117	75	70	65	350	157	99	44	25	87	81
18	143	114	75	75	65	320	149	94	41	45	72	69
19	168	114	75	75	70	300	144	88	43	52	68	59
20	143	112	75	70	70	280	152	96	43	52	69	54
21	127	116	75	65	70	270	189	96	40	50	70	53
22	122	112	75	65	70	260	216	96	39	40	69	56
23	121	117	75	65	65	250	238	103	38	33	66	60
24	114	123	75	65	65	240	201	93	36	32	63	57
25	112	123	70	65	65	230	174	82	34	60	60	57
26	111	122	70	65	65	220	183	78	51	74	58	62
27	108	118	75	65	65	220	227	75	66	66	57	62
28	106	110	80	65	65	210	258	74	62	89	63	61
29	106	115	85	65	---	210	271	74	58	68	66	70
30	103	114	80	60	---	200	235	74	51	64	62	74
31	108	---	80	60	---	190	---	73	---	67	56	---
TOTAL	3241	3410	2433	2165	1735	5970	6165	3614	1666	1309	2232	2009
MEAN	105	114	78.5	69.8	62.0	193	206	117	55.5	42.2	72.0	67.0
MAX	168	123	119	80	70	400	271	200	80	89	186	118
MIN	75	105	55	60	55	55	144	73	34	19	44	51
AC-FT	6430	6760	4830	4290	3440	11840	12230	7170	3300	2600	4430	3980
CAL YR 1984	TOTAL	90266		MEAN	247	MAX	2390	MIN	55	AC-FT	179000	
WTR YR 1985	TOTAL	35949		MEAN	98.5	MAX	400	MIN	19	AC-FT	71300	

06465000 NIOBRARA RIVER NEAR SPENCER, NE

LOCATION.--Lat 42°48'33", long 98°39'22", in SE1/4NW1/4 sec.30, T.33 N., R.11 W., Boyd County, Hydrologic Unit 10150007, at Spencer powerplant dam 5 mi southeast of Spencer.

DRAINAGE AREA.--12,100 mi², approximately.

PERIOD OF RECORD.--May to December 1908 (gage heights only); August 1913 to September 1914; October to December 1914, April to September 1915 (gage heights only); August 1927 to September 1936, June 1940 to current year. Published as "near Lynch" 1913-15. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder and hourly log and powerplant operation. Datum of gage is 1,473.67 ft above National Geodetic Vertical Datum of 1929. Elevation of taintor gate sill, 1,491.12 ft above National Geodetic Vertical Datum of 1929. Prior to December 1908, nonrecording gage on former highway bridge 275 ft downstream and Aug. 1, 1913, to Sept. 30, 1915, nonrecording gage at highway bridge 10 mi downstream at different datums. Aug. 1, 1927, to Sept. 30, 1936, and June 14, 1940, to Sept. 30, 1944, discharge computed as powerhouse and over dam. Oct. 1, 1944, to Nov. 10, 1954, water-stage recorder at site 275 ft downstream at flow through datum 4.98 ft higher, and Nov. 11, 1954, to Sept. 30, 1957, at site 0.3 mi downstream at datum 9.78 ft lower. Oct. 1, 1957 to Oct. 21, 1958, discharge computed as flow through powerhouse and over dam. Oct. 28, 1958, to Aug. 13, 1963, water-stage recorder at site 225 ft downstream at present datum. Aug. 14, 1963, gage moved to present site with discharge computed as flow through powerhouse and over dam.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by irrigation and power developments. Daily discharge determined from flow through turbines and taintor gates, computed from relation between head, and gage openings.

COOPERATION.--Powerplant log furnished by Nebraska Public Power District.

AVERAGE DISCHARGE.--55 years (1913-14, 1927-36, 1940-85), 1,414 ft³/s, 1,024,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s Mar. 12, 1955, gage height, 12.16 ft, site and datum then in use; minimum daily, 5 ft³/s Nov. 14, Dec. 18, 19, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,360 ft³/s Mar. 10; minimum daily, 594 ft³/s July 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	1270	1780	1060	1040	2600	1910	2130	1040	950	1420	948
2	1140	1300	773	957	994	2600	1810	1940	1090	912	1200	951
3	1170	1370	867	907	953	2450	1630	1770	1250	880	1060	980
4	1180	1360	965	1010	1040	1750	1840	1690	1420	918	948	1020
5	1230	1400	1020	1200	1020	1810	2150	1610	1280	882	884	1130
6	1460	1420	835	1540	1050	1240	2050	1650	1160	786	817	1060
7	1490	1410	934	1790	1140	1750	1830	1560	1050	713	812	901
8	1420	1530	1390	1790	1230	2270	2160	1450	1030	698	930	925
9	1500	1600	1540	1750	1250	3650	2430	1500	1080	678	815	1070
10	1580	1850	2130	1750	1420	4360	1930	1420	1170	624	938	908
11	1370	1920	2590	1220	1440	3160	1770	2270	1240	594	797	1160
12	1240	1750	2190	1140	1350	2610	1510	2300	1190	599	1820	1750
13	1260	1800	1460	1200	1300	2570	1540	1870	1040	630	1800	2230
14	1330	1780	944	1170	1380	2560	1480	2110	1010	666	1440	1500
15	1840	1720	1310	1250	1420	2640	1450	1860	1090	682	1230	1380
16	2010	1870	1560	1480	1500	2590	1400	1640	979	664	1200	1260
17	1950	1970	1470	1710	1510	2460	1460	1610	1020	665	1300	1230
18	1880	2020	1100	1800	1520	2400	1390	1490	964	911	1090	1370
19	2020	1470	927	1800	1500	2280	1420	1550	952	1030	1010	1340
20	1760	1850	756	1600	1600	2180	1580	1530	854	940	1060	1270
21	1630	1770	910	1110	1820	2140	1780	1480	807	884	1280	1260
22	1470	1770	1160	898	1870	2180	1870	1470	914	808	1360	1300
23	1460	1740	1250	1060	2000	2260	2320	1520	784	769	1160	1220
24	1470	1790	1200	1190	1920	2120	2050	1400	775	751	1140	1180
25	1450	1800	1050	1400	1980	2030	1810	1270	730	747	1120	1240
26	1460	2000	954	1550	2200	1980	2020	1320	1220	839	935	1190
27	1390	1880	973	1440	2190	1960	2440	1340	1660	818	914	1110
28	1380	1650	1140	1480	2370	1930	2110	1140	1190	716	925	1150
29	1350	1770	1310	1480	---	2050	2090	1210	1010	775	947	1380
30	1360	1820	1500	1350	---	2020	2190	1160	969	981	905	1290
31	1370	---	1320	1190	---	1960	---	1210	---	1560	966	---
TOTAL	45790	50650	39308	42272	42007	72560	55420	49470	31968	25070	34223	36703
MEAN	1477	1688	1268	1364	1500	2341	1847	1596	1066	809	1104	1223
MAX	2020	2020	2590	1800	2370	4360	2440	2300	1660	1560	1820	2230
MIN	1140	1270	756	898	953	1240	1390	1140	730	594	797	901
AC-FT	90820	100500	77970	83850	83320	143900	109900	98120	63410	49730	67880	72800
CAL YR 1984	TOTAL	722830		MEAN	1975	MAX	7000	MIN	756	AC-FT	1434000	
WTR YR 1985	TOTAL	525441		MEAN	1440	MAX	4360	MIN	594	AC-FT	1042000	

NIOBRARA RIVER BASIN

06465310 EAGLE CREEK NEAR REDBIRD, NE

LOCATION.--Lat 42°45'51", long 98°34'13" in SE1/4NW1/4 sec.11, T.32 N., R.11 W., Holt County, Hydrologic Unit 10150007, on left bank 12 ft downstream from bridge on the county road, 7 mi west of Redbird.

DRAINAGE AREA.--206 mi².

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,463.90 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14 to Feb. 28. Records good except for period of estimated record, which is poor.

AVERAGE DISCHARGE.--7 years, 52.0 ft³/s, 36,670 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,330 ft³/s Aug. 5, 1981, gage height, 8.55 ft; minimum daily, 1.9 ft³/s Aug. 7, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 439 ft³/s May 11, gage height, 5.67 ft; maximum gage height, 5.82 ft Feb. 18, backwater from ice; minimum daily discharge, 15 ft³/s July 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	62	63	35	46	78	68	89	51	42	32	39
2	57	61	56	35	43	73	69	81	50	37	29	37
3	58	61	47	40	40	98	68	78	54	34	27	38
4	61	61	50	50	40	72	76	75	57	32	27	39
5	64	60	45	50	40	49	72	72	56	29	26	42
6	84	57	30	56	40	77	70	68	55	32	23	39
7	76	59	62	54	40	90	72	67	51	31	21	38
8	72	63	67	52	40	74	70	68	48	30	20	39
9	75	68	65	50	40	67	70	68	45	29	18	40
10	80	73	63	48	40	70	72	79	51	28	20	40
11	71	64	64	46	40	70	71	335	51	27	19	45
12	68	62	63	36	45	61	71	169	49	26	94	77
13	66	64	45	47	50	62	67	96	48	26	66	93
14	65	65	60	56	55	64	66	106	50	31	45	67
15	109	61	60	52	65	66	67	94	48	33	42	56
16	95	59	62	54	70	69	66	78	44	35	45	53
17	74	58	45	56	80	68	67	73	40	46	54	49
18	118	57	35	60	85	68	66	69	39	47	47	48
19	132	60	45	50	95	69	65	68	40	43	45	47
20	86	58	50	52	100	65	72	66	39	35	46	44
21	75	59	54	56	105	67	86	64	36	33	46	41
22	72	58	52	58	110	68	80	64	37	28	49	47
23	71	59	56	70	120	68	164	64	38	26	56	49
24	72	60	52	70	115	67	110	60	38	22	45	44
25	76	67	50	68	100	66	80	57	42	20	44	43
26	74	80	50	66	86	69	106	64	78	19	43	43
27	73	72	54	62	84	66	148	64	62	15	41	42
28	66	65	56	65	80	67	99	59	48	15	43	43
29	65	65	52	60	---	60	85	59	45	20	44	47
30	62	63	45	55	---	60	86	56	43	31	42	47
31	64	---	40	50	---	64	---	52	---	35	41	---
TOTAL	2335	1881	1638	1659	1894	2132	2429	2562	1433	937	1240	1416
MEAN	75.3	62.7	52.8	53.5	67.6	68.8	81.0	82.6	47.8	30.2	40.0	47.2
MAX	132	80	67	70	120	98	164	335	78	47	94	93
MIN	54	57	30	35	40	49	65	52	36	15	18	37
AC-FT	4630	3730	3250	3290	3760	4230	4820	5080	2840	1860	2460	2810
CAL YR 1984	TOTAL	28664		MEAN	78.3	MAX	283	MIN	20	AC-FT	56860	
WTR YR 1985	TOTAL	21556		MEAN	59.1	MAX	335	MIN	15	AC-FT	42760	

06465440 REDBIRD CREEK AT REDBIRD, NE

LOCATION.--Lat 42°45'43", long 98°26'32", in NE1/4 sec.11, T.32 N., R.10 W., Holt County, Hydrologic Unit 10150007, on right bank 10 ft downstream from county road bridge at Redbird, 0.9 mi upstream from mouth and 4.6 mi south-southeast of Lynch.

DRAINAGE AREA.--157 mi².

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,411.75 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1982 at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 18 to Feb. 28 and May 12-15. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--5 YEARS, 41.6 ft³/s, 30,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s May 11, 1985 on basis of slope-area measurement of peak flow, gage height, 6.49 ft, from floodmark; minimum daily, 3.8 ft³/s July 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,120 ft³/s May 11, gage height, 6.49 ft, from floodmark; on basis of slope-area measurement of peak flow; minimum daily, 14 ft³/s July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	44	50	27	26	67	54	68	39	30	29	26
2	35	42	48	26	25	62	55	59	39	29	29	24
3	35	44	38	30	25	80	52	53	39	28	31	24
4	36	44	40	33	25	82	56	50	41	21	28	22
5	40	42	41	36	25	58	57	46	40	19	22	21
6	55	42	32	36	25	62	55	43	39	18	20	22
7	57	44	52	35	25	62	54	45	38	19	21	26
8	54	45	60	31	23	60	52	41	37	20	19	24
9	58	48	49	29	23	60	50	40	33	19	16	26
10	69	53	46	27	23	61	49	42	34	19	17	27
11	68	50	48	26	25	63	49	681	36	19	16	32
12	57	48	50	25	27	56	48	658	34	18	53	43
13	51	49	44	25	30	56	45	190	33	16	70	75
14	49	50	51	28	32	56	45	117	34	19	57	64
15	76	46	54	33	35	57	45	102	33	22	49	50
16	88	44	53	38	40	57	44	100	33	23	46	45
17	71	44	45	35	50	56	43	88	29	24	55	41
18	81	44	35	33	60	56	42	79	27	30	53	40
19	124	44	38	32	65	56	43	72	29	28	46	36
20	97	44	38	30	70	54	46	73	30	23	45	32
21	77	45	40	30	78	54	61	63	28	22	43	31
22	61	46	38	32	80	55	56	57	24	21	45	35
23	55	46	39	35	82	59	119	54	25	18	50	35
24	53	48	34	40	82	54	113	50	26	20	42	32
25	52	49	28	40	80	52	77	48	26	20	38	32
26	53	68	30	40	77	54	80	46	49	21	36	31
27	52	65	34	37	74	53	111	46	48	14	33	30
28	49	59	35	35	71	53	87	45	38	18	32	28
29	49	54	33	32	---	49	70	45	35	20	32	30
30	46	52	32	29	---	49	66	44	32	25	30	31
31	45	---	30	27	---	51	---	40	---	29	31	---
TOTAL	1828	1443	1285	992	1303	1804	1824	3185	1028	672	1134	1015
MEAN	59.0	48.1	41.5	32.0	46.5	58.2	60.8	103	34.3	21.7	36.6	33.8
MAX	124	68	60	40	82	82	119	681	49	30	70	75
MIN	35	42	28	25	23	49	42	40	24	14	16	21
AC-FT	3630	2860	2550	1970	2580	3580	3620	6320	2040	1330	2250	2010
CAL YR 1984	TOTAL	22785		MEAN	62.3	MAX	260	MIN	20	AC-FT	45190	
WTR YR 1985	TOTAL	17513		MEAN	48.0	MAX	681	MIN	14	AC-FT	34740	

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE
National stream-quality accounting network station

LOCATION (REVISED).--Lat 42°44'23", long 98°13'26", in NW1/4NW1/4 sec.23, T.32 N., R.8 W., Knox County, Hydrologic Unit 10150007, on right bank at downstream side of county road bridge, 6.6 mi south of Verdel, and 7.5 mi upstream from Verdigre Creek.

DRAINAGE AREA.--12,600 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to May 1940, June 1958 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,312.12 ft above National Geodetic Vertical Datum of 1929. Apr. 25, 1938, to June 16, 1939, nonrecording gage at site 2600 ft downstream; June 17, 1939, to June 13, 1940, nonrecording gage 2850 ft downstream; and June 14, 1940 to July 24, 1985, water-stage recorder at site 2600 ft downstream, all at datum 4.00 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream affected by irrigation and power developments.

AVERAGE DISCHARGE.--28 years, 1,555 ft³/s, 1,127,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft³/s Mar. 27, 1960, gage height, 10.10 ft; maximum gage height, 10.62 ft Mar. 12, 1966, backwater from ice; minimum daily discharge, 104 ft³/s Nov. 30, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,570 ft³/s Mar. 10; maximum gage height, 7.22 ft Feb. 22, backwater from ice; minimum daily discharge, 647 ft³/s July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	1450	1980	1230	1150	1920	2070	2480	1220	1080	1570	1040
2	1290	1410	1250	1050	1120	2850	2020	2160	1140	983	1350	1040
3	1280	1510	894	1020	1030	2720	1880	2050	1300	976	1190	1040
4	1300	1510	1140	1070	1120	2240	1870	1850	1600	999	1040	1100
5	1330	1520	1080	1250	1100	1750	2290	1790	1440	933	993	1220
6	1550	1560	1030	1560	1130	1580	2280	1770	1320	918	884	1160
7	1690	1540	961	1840	1190	2060	2020	1760	1200	795	886	1030
8	1630	1650	1420	1940	1290	2240	2130	1650	1110	773	928	996
9	1650	1730	1680	1890	1350	3090	2640	1660	1190	751	916	1140
10	1770	1960	2070	1860	1410	4570	2330	1580	1240	705	948	1010
11	1660	2050	2630	1500	1590	3610	1970	3270	1370	673	891	1140
12	1440	1970	2570	1210	1460	3050	1730	3600	1340	647	1260	1630
13	1420	1930	1780	1290	1450	2620	1650	2290	1180	675	2520	2590
14	1430	1950	1200	1300	1450	2870	1660	2550	1120	723	1640	1820
15	1870	1880	1280	1330	1550	2710	1620	2400	1200	753	1390	1580
16	2310	1920	1710	1530	1620	2850	1580	2140	1090	756	1290	1430
17	2200	2110	1630	1770	1680	2670	1630	1850	1110	747	1470	1360
18	2050	2170	1320	1930	1750	2560	1500	1740	1090	843	1270	1460
19	2400	1700	1090	1920	1680	2520	1560	1740	1030	1200	1180	1470
20	2110	1980	925	1840	1810	2380	1700	1700	1000	1050	1130	1400
21	1860	1910	970	1380	1990	2330	1870	1690	885	981	1320	1360
22	1670	1910	1190	1020	2100	2290	2040	1650	981	898	1510	1400
23	1630	1890	1370	1160	2260	2470	2600	1620	926	843	1330	1360
24	1650	1920	1370	1290	2200	2350	2490	1630	851	808	1270	1300
25	1640	1950	1200	1470	2130	2210	2080	1440	829	802	1280	1320
26	1620	2150	1100	1720	2420	2170	2130	1440	1170	869	1060	1300
27	1600	2120	1060	1550	2390	2140	2730	1510	1810	859	1050	1250
28	1520	1860	1220	1660	2540	2100	2450	1350	1440	796	1020	1190
29	1540	1920	1350	1610	---	2160	2320	1340	1140	805	1060	1410
30	1510	1930	1590	1530	---	2160	2310	1270	1080	955	1000	1780
31	1500	---	1520	1370	---	2180	---	1330	---	1510	1040	---
TOTAL	51850	55060	43580	46090	45960	77420	61150	58300	35402	27106	37686	40326
MEAN	1673	1835	1406	1487	1641	2497	2038	1881	1180	874	1216	1344
MAX	2400	2170	2630	1940	2540	4570	2730	3600	1810	1510	2520	2590
MIN	1280	1410	894	1020	1030	1580	1500	1270	829	647	884	996
AC-FT	102800	109200	86440	91420	91160	153600	121300	115600	70220	53760	74750	79990
CAL YR 1984	TOTAL	794530		MEAN	2171	MAX	7790	MIN	894	AC-FT	1576000	
WTR YR 1985	TOTAL	579930		MEAN	1589	MAX	4570	MIN	647	AC-FT	1150000	

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-65, 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1975 to September 1980.

WATER TEMPERATURES: June 1958 to September 1965, October 1966 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1981.

INSTRUMENTATION.--Temperature recorder since June 14, 1958.

REMARKS.--Prior to July 1, 1971, sediment records were obtained by U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 470 microsiemens Dec. 22, 1976; minimum daily, 110 microsiemens Nov. 22, 1976.

WATER TEMPERATURES: Maximum, 38.0°C July 22, 1964, July 20, 1974; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 12,000 mg/L June 8, 1975; minimum daily, 50 mg/L Dec. 31, Jan. 1, 3, 5, 6, 1978.

SEDIMENT LOADS: Maximum daily, 423,000 tons Mar. 19, 1979; minimum daily, 60 tons Dec. 7, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 33.5°C June 22, July 22; minimum, 0.5°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT										
02...	1430	1250	268	8.1	19.0	722	--	8.6	70	<4
30...	1240	1460	277	8.1	6.5	730	--	11.6	--	K48
NOV										
28...	1135	1970	276	7.9	.5	713	60	13.1	25	K33
DEC										
18...	1320	1350	313	7.7	.5	726	--	13.8	--	K28
JAN										
22...	1300	1010	286	7.6	.5	731	--	13.0	--	K26
FEB										
20...	1100	2300	250	7.5	.5	714	23	15.2	<10	23
MAR										
21...	1040	2520	281	8.0	13.0	721	--	9.7	--	31
APR										
16...	1110	1640	304	8.1	19.5	721	--	8.8	--	36
MAY										
15...	1155	2360	289	8.1	13.0	721	120	9.8	42	K2900
JUN										
12...	1125	1470	257	8.3	19.0	730	--	9.4	--	140
JUL										
09...	1140	670	252	8.3	29.0	723	--	7.9	--	85
AUG										
21...	1340	1160	243	8.2	20.0	721	40	8.9	460	390
SEP										
04...	1300	1150	227	8.4	27.5	718	--	8.2	--	180

K Results based on colony count outside the acceptable range (non-ideal colony count).

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT										
02...	120	110	--	35	5.5	9.2	.4	--	--	18
30...	160	120	--	39	6.0	9.8	.4	--	--	22
NOV										
28...	240	120	0	39	5.8	10	.4	5.8	122	20
DEC										
18...	120	140	--	44	6.6	11	.4	--	--	22
JAN										
22...	100	140	--	45	6.7	11	.4	--	--	25
FEB										
20...	420	110	10	37	5.4	8.9	.4	5.4	105	25
MAR										
21...	200	130	--	41	5.9	11	.4	--	--	24
APR										
16...	84	140	--	45	6.4	13	.5	--	--	28
MAY										
15...	1400	130	1	42	6.3	11	.4	6.9	115	28
JUN										
12...	180	110	--	36	5.2	9.8	.4	--	--	19
JUL										
09...	210	110	--	34	5.0	10	.4	--	--	33
AUG										
21...	420	110	0	35	4.9	8.9	.4	6.6	109	16
SEP										
04...	320	98	--	32	4.4	9.3	.4	--	--	15
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT										
02...	2.2	--	--	--	--	--	--	181	1.1	--
30...	2.4	--	--	--	--	--	--	152	1.2	--
NOV										
28...	2.2	.30	45	206	200	.28	1100	39	1.1	1.1
DEC										
18...	2.7	--	--	--	--	--	--	70	1.3	--
JAN										
22...	2.2	--	--	--	--	--	--	9	1.2	--
FEB										
20...	2.1	.30	44	183	190	.25	1140	33	1.2	1.2
MAR										
21...	2.5	--	--	--	--	--	--	340	1.0	--
APR										
16...	2.6	--	--	--	--	--	--	192	.80	--
MAY										
15...	2.5	.30	42	214	220	.29	1360	328	.70	.67
JUN										
12...	2.0	--	--	--	--	--	--	90	<.10	--
JUL										
09...	--	--	--	--	--	--	--	22	<.10	--
AUG										
21...	1.9	.30	46	194	190	.26	608	112	.30	.30
SEP										
04...	1.8	--	--	--	--	--	--	106	<.10	--

NIOBARRA RIVER BASIN

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06465500 NIOBARRA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
02...	.040	--	4.9	4.9	6.0	.220	--	--	4.2
30...	<.010	--	--	.60	1.8	.220	--	--	3.8
NOV									
28...	.040	.020	1.2	1.2	2.3	.300	.080	.070	5.5
DEC									
18...	.060	--	.54	.60	1.9	.180	--	--	3.4
JAN									
22...	.060	--	.14	.20	1.4	.120	--	--	2.1
FEB									
20...	.070	.060	.63	.70	1.9	.130	.080	.090	2.5
MAR									
21...	.080	--	1.1	1.2	2.2	.390	--	--	9.2
APR									
16...	.050	--	1.1	1.1	1.9	.290	--	--	5.4
MAY									
15...	.060	.040	1.3	1.4	2.1	.400	.100	.060	11
JUN									
12...	.050	--	.95	1.0	--	.340	--	--	8.0
JUL									
09...	.040	--	.76	.80	--	.160	--	--	8.3
AUG									
21...	.050	.020	.75	.80	1.1	.070	.010	.010	5.1
SEP									
04...	.040	--	1.2	1.2	--	.070	--	--	8.9

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV										
28...	1135	30	5	4	100	<.5	<1	<1	16	<1
FEB										
20...	1100	50	3	3	93	1.5	<1	<1	3	<1
MAY										
15...	1155	110	6	4	96	2.7	8	<1	9	<1
AUG										
21...	1340	60	7	5	89	<.5	1	<1	8	1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
NOV										
28...	<3	8	2	31	3	3	14	12	<.1	<.1
FEB										
20...	3	4	2	41	5	<1	14	23	.2	<.1
MAY										
15...	<3	16	2	52	5	2	13	8	.3	.1
AUG										
21...	<3	6	1	18	3	<1	14	5	.5	<.1

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 28...	<10	1	--	1	<1	1	210	<6	40	11
FEB 20...	<10	5	--	2	<1	2	190	<6	<10	4
MAY 15...	<10	2	4	1	<1	<1	220	6	40	8
AUG 21...	<10	1	2	<1	<1	<1	210	10	20	11

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)
NOV 28...	1135	1970	.5	2330	12400	--	--	--
MAR 21...	1040	2520	13.0	1790	12200	10	12	15
MAY 15...	1155	2360	13.0	1540	9810	--	--	--
AUG 21...	1340	1160	20.0	578	1810	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 28...	--	12	30	80	99	100	99
MAR 21...	17	26	41	90	100	--	--
MAY 15...	--	--	--	--	--	--	25
AUG 21...	--	--	--	--	--	--	22

06465680 NORTH BRANCH VERDIGRE CREEK NEAR VERDIGRE, NE

LOCATION.--Lat 42°35'51", long 98°08'03", in SE1/4SE1/4 sec.4, T.30 N., R.7 W., Knox County, Hydrologic Unit 10150007, on right bank 15 ft downstream from bridge on paved county road 5 mi west of Verdigre.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,466.06 ft above National Geodetic Vertical Datum of 1929 (levels by Nebraska Natural Resources Commission).

REMARKS.--Estimated daily discharges: Dec. 3-8 and Dec. 19 to Feb. 24. Records good except for periods of estimated record, which are poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--6 years, 25.2 ft³/s, 18,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220 ft³/s June 14, 1981, gage height, 5.54 ft, from floodmark; minimum daily, 2.5 ft³/s Jan. 6, 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68 ft³/s Aug, 12, gage height, 2.23 ft; maximum gage height, 4.72 ft Feb. 17, backwater from ice; minimum daily discharge, 6.3 ft³/s July 12.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	31	33	21	33	33	32	32	28	25	20	20
2	31	31	32	19	32	31	31	32	28	23	17	20
3	31	33	30	26	35	40	31	32	29	17	18	17
4	31	32	31	28	35	41	31	31	29	12	14	15
5	31	32	35	32	35	33	31	31	28	11	9.3	16
6	43	32	35	32	34	34	31	30	28	17	13	19
7	35	33	37	31	25	34	31	29	28	18	12	20
8	34	33	35	30	23	34	29	30	27	16	9.8	22
9	37	35	33	30	25	34	30	30	26	17	13	22
10	37	37	34	25	25	34	30	29	27	15	14	22
11	34	34	34	27	27	34	30	51	28	11	11	24
12	32	34	32	33	23	32	29	38	27	6.3	48	29
13	32	34	34	32	30	33	29	34	25	16	33	40
14	35	34	33	34	34	33	30	42	25	16	27	32
15	46	33	39	35	35	33	30	40	25	11	25	28
16	42	33	33	36	36	32	29	36	22	7.8	25	27
17	37	34	33	36	40	32	29	34	22	14	30	26
18	39	34	30	35	38	33	30	32	22	15	26	25
19	47	33	27	32	37	32	31	32	21	17	25	24
20	38	33	30	18	39	31	32	37	20	18	25	25
21	36	33	34	32	40	31	33	34	20	14	25	25
22	34	34	35	35	45	31	33	31	21	13	26	26
23	34	34	32	34	50	32	49	31	16	11	30	26
24	33	34	32	34	40	31	42	30	17	11	27	25
25	33	35	30	33	36	31	35	30	19	13	25	25
26	34	35	35	33	35	31	39	29	37	11	25	25
27	33	34	33	34	33	31	42	30	33	10	25	25
28	32	33	29	33	34	31	38	29	28	8.7	25	24
29	33	34	27	34	---	30	34	30	26	13	22	26
30	32	34	26	30	---	30	32	29	25	15	22	26
31	31	---	25	25	---	31	---	28	---	21	21	---
TOTAL	1087	1005	998	949	954	1013	983	1013	757	443.8	688.1	726
MEAN	35.1	33.5	32.2	30.6	34.1	32.7	32.8	32.7	25.2	14.3	22.2	24.2
MAX	47	37	39	36	50	41	49	51	37	25	48	40
MIN	30	31	25	18	23	30	29	28	16	6.3	9.3	15
AC-FT	2160	1990	1980	1880	1890	2010	1950	2010	1500	880	1360	1440
CAL YR 1984	TOTAL	13277		MEAN	36.3	MAX	85	MIN	21	AC-FT	26330	
WTR YR 1985	TOTAL	10616.9		MEAN	29.1	MAX	51	MIN	6.3	AC-FT	21060	

BAZILE CREEK BASIN

06466500 BAZILE CREEK NEAR NIOBRARA, NE

LOCATION.--Lat 42°45'26", long 97°56'50", in SW1/4 sec.7, T.32 N., R.5 W., Knox County, Hydrologic Unit 10170101, on left bank 60 ft shoreward and 20 ft downstream from centerline of bridge on State Highway 12, 2.5 mi upstream from mouth and 4.5 mi east of Niobrara.

DRAINAGE AREA.--440 mi², approximately.

PERIOD OF RECORD.--May 1952 to current year. Records for October 1931 to September 1932, published in WSP 731, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1279: 1952. WSP 1729: 1958(M). WDR NE-81-1: 1977,1979-80. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and nonrecording gage read at least twice weekly. Datum of gage is 1,210.81 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 16, 1952, nonrecording gage only, and Dec. 16, 1952, to June 16, 1957, water-stage recorder at downstream end of right pier, above 4.2 ft, at present site at datum 4 ft higher. June 17, 1957, to Sept. 14, 1958, water-stage recorder above 8.2 ft at present datum. Sept. 15, 1958, to Oct. 17, 1978, water-stage recorder at downstream end of left pier, above 4.3 ft, at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 12 to Mar. 4. Records good except for period of estimated record, which is poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--33 years, 83.3 ft³/s, 60,420 acre-ft/yr; median of yearly mean discharges, 70.9 ft³/s, 51,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,600 ft³/s June 16, 1957, gage height, 19.96 ft, present datum, from high point on surge, from rating curve extended above 6,500 ft³/s on basis of contracted-opening measurements at gage heights 15.36 ft and 19.96 ft, present datum; maximum gage height, 20.25 ft Feb. 19, 1971, backwater from ice; no flow July 24, 25, Aug. 30, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 19, 1951, reached a stage of 15.36 ft, present datum, from floodmarks, discharge, 24,400 ft³/s on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 4	2000	ice jam	*17.31	Apr. 23	0430	*2450	16.67

Minimum daily discharge, 32 ft³/s Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	80	91	56	67	245	108	264	71	95	47	59
2	93	78	81	50	88	260	115	215	69	82	41	61
3	91	84	77	49	86	300	116	173	69	77	41	58
4	90	83	76	56	90	1100	115	145	71	73	40	57
5	93	80	79	64	90	997	118	131	73	63	38	57
6	119	80	80	74	76	920	121	122	70	56	37	55
7	121	82	84	74	67	690	115	114	72	50	36	55
8	120	84	86	70	62	214	110	105	69	46	33	54
9	110	89	93	70	59	140	106	98	63	44	34	55
10	110	101	95	61	64	120	103	95	64	39	35	57
11	107	98	96	63	64	109	100	848	68	36	32	63
12	99	94	80	66	60	91	101	260	65	35	446	73
13	94	91	81	80	70	86	99	142	62	35	538	93
14	101	97	81	80	89	88	97	216	61	37	256	90
15	144	91	82	86	112	85	100	291	59	38	133	84
16	161	87	82	91	122	91	97	198	57	69	86	78
17	145	91	68	94	138	89	94	148	50	71	117	73
18	130	87	66	90	138	94	92	125	49	58	119	71
19	143	85	64	84	134	98	95	116	52	51	99	65
20	145	86	66	39	140	95	97	113	49	45	79	65
21	121	86	69	44	146	97	96	107	44	44	85	63
22	108	89	72	80	160	99	431	96	41	44	80	66
23	102	86	74	89	170	112	1330	92	39	42	89	72
24	97	88	71	87	160	112	559	87	37	42	88	75
25	94	91	72	85	170	109	324	83	36	46	77	75
26	93	95	70	84	180	109	267	88	230	42	68	72
27	88	91	75	86	200	110	332	90	469	36	62	70
28	86	87	71	86	220	117	268	83	270	35	61	67
29	84	95	68	84	---	110	200	85	158	35	63	70
30	81	93	63	80	---	105	178	83	111	42	59	72
31	81	---	62	66	---	107	---	75	---	48	62	---
TOTAL	3341	2649	2375	2268	3222	7099	6084	4888	2698	1556	3081	2025
MEAN	108	88.3	76.6	73.2	115	229	203	158	89.9	50.2	99.4	67.5
MAX	161	101	96	94	220	1100	1330	848	469	95	538	93
MIN	81	78	62	39	59	85	92	75	36	35	32	54
AC-FT	6630	5250	4710	4500	6390	14080	12070	9700	5350	3090	6110	4020
CAL YR 1984	TOTAL	60154	MEAN	164	MAX	1160	MIN	45	AC-FT	119300		
WTR YR 1985	TOTAL	41286	MEAN	113	MAX	1330	MIN	32	AC-FT	81890		

06467000 LEWIS AND CLARK LAKE NEAR YANKTON, SD

LOCATION.--Lat 42°50'56", long 97°28'54", in SW1/4 sec.7, T.33 N., R.1 W., Cedar County, NE, Hydrologic Unit 10170101, in powerhouse of Gavins Point Dam on Missouri River, 3.75 mi southwest of Yankton, 13.6 mi upstream from James River, 32.5 mi downstream from Niobrara River, and at mile 811.0.

DRAINAGE AREA.--279,500 mi², approximately.

PERIOD OF RECORD.--July 1955 to current year (monthend contents only). Prior to October 1955, published as Gavins Point Reservoir near Yankton.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1955, recorder at temporary location on wall of intake structure unit 3.

REMARKS.--Reservoir is formed by earthfill dam; storage began in July 1955. Maximum capacity, 504,000 acre-ft below elevation 1,210.0 ft (top of spillway gates). Normal maximum, 442,600 acre-ft below elevation 1,208.0 ft. Inactive storage, 157,000 acre-ft below elevation 1,195.0 ft. Dead storage, 23,000 acre-ft below elevation 1,180.0 ft (crest of spillway). Figures given herein represent elevations at powerhouse and total contents adjusted for wind effect.

The spillway consists of 14 taintor gates, each 40 ft wide by 30 ft high; spillway capacity, 280,000 ft³/s at pool elevation 1,210.0 ft. Crest of spillway is at elevation 1,180.0 ft. Normal releases are through 3 power units, installation completed in January 1957; maximum release through power units is 35,000 ft³/s at pool elevation, 1,210.0 ft. Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Records of elevation and contents provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 565,000 acre-ft Apr. 1, 1960, affected by wind; minimum since initial filling, 61,950 acre-ft Apr. 23, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 463,000 acre-ft Aug. 14 and Sept. 14; minimum, 339,000 acre-ft Apr. 1.

MONTHEND ELEVATION, IN FEET NGVD, AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,208.05	444,000	-
Oct. 31	1,208.31	446,000	+2,000
Nov. 30	1,207.70	435,000	-11,000
Dec. 31	1,207.77	435,000	0
CAL YR 1984	-	-	-4,000
Jan. 31	1,208.09	445,000	+10,000
Feb. 28	1,205.15	363,000	-82,000
Mar. 31	1,204.40	345,000	-18,000
Apr. 30	1,205.88	383,000	+38,000
May 31	1,205.30	369,000	-14,000
June 30	1,206.00	387,000	+18,000
July 31	1,207.94	442,000	+55,000
Aug. 31	1,207.90	440,000	-2,000
Sept. 30	1,208.28	451,000	+11,000
WTR YR 1985	-	-	+7,000

NOTE.--Reservoir frozen over Dec. 17 to Mar. 22.

06467500 MISSOURI RIVER AT YANKTON, SD

LOCATION.--Lat 42°51'58", long 97°23'37", in SW1/4SW1/4 sec.18, T.93 N., R.55 W., Yankton County, Hydrologic Unit 10170101, near left bank in downstream end of left pier of Meridian Highway Bridge on U.S. Highway 81, 5.2 mi downstream from Gavins Point Dam, 6.0 mi upstream from James River, and at mile 805.8.

DRAINAGE AREA.--279,500 mi², approximately.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1309. Gage-height records collected at same site March 1873 to November 1886, March 1905 to May 1908 (fragmentary), August 1921 to September 1950 (except winter months prior to 1932), are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 1,139.68 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1932, nonrecording gage, and Sept. 20, 1932, to Mar. 9, 1967, water-stage recorder at present site and at datum 20.0 ft higher.

REMARKS.--Records good except those for winter period, Jan. 19 to Mar. 6, which are poor. Flow completely regulated by Gavins Point Dam 5.2 mi upstream since July 1955. Many diversions for irrigation and water supply above station. U.S. Army Corps of Engineers gage-height telemeter and satellite data-collection platform at station. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--55 years, 26,540 ft³/s (19,230,000 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480,000 ft³/s Apr. 13, 1952; maximum gage height, 35.5 ft Apr. 13, 14, 1952 (present datum); minimum daily discharge, 2,700 ft³/s Nov. 15, 16, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 50.5 ft Apr. 5, 1881 (ice jam), present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,000 ft³/s at 0730 hours, Oct. 25 (gage height, 18.93 ft); minimum daily discharge, 7,680 ft³/s Apr. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46900	47400	45400	20500	21000	21000	23200	22800	31800	32700	33400	33300
2	46400	47600	42100	20300	21000	21000	23100	24000	31800	32700	33400	33400
3	46000	47600	38200	20200	21000	21000	24000	24500	31100	32700	33500	33400
4	46200	47400	34200	20100	21000	21000	23800	25400	29400	32700	33400	33500
5	46200	47400	33100	20100	21000	21000	23400	26600	29500	32700	33400	33100
6	46200	47400	31100	20000	21000	21000	23300	27900	31000	32700	33400	32400
7	46000	47400	27500	20200	21000	21000	23800	28600	32000	32800	33500	32200
8	46000	47600	24400	20400	21000	20900	23900	29100	31800	32900	33500	31800
9	46200	47600	23600	20400	21000	21000	24500	30100	31900	32700	33300	31100
10	46200	47400	23300	20200	21000	20800	25500	30200	31900	32700	33400	31300
11	46200	47600	23000	20800	21000	20700	26200	30700	31700	32700	33500	31800
12	46100	47500	23100	21100	21000	20200	26100	30900	31600	32800	33300	32200
13	46100	47500	23300	20700	21000	20000	26500	30800	31900	32600	32800	31700
14	46000	47400	23400	20800	21000	20100	27300	29500	32400	32600	32800	30900
15	45900	47400	23300	20800	21000	20400	27800	27600	32700	32800	32800	31300
16	46000	47600	23100	20400	21000	20400	28700	26200	32300	33500	33000	30900
17	45900	47600	23200	20300	21000	20400	28600	27100	31600	34000	32600	30000
18	46300	47600	23300	20400	21000	20400	29200	28600	31900	34400	32600	30900
19	46600	47700	22600	21000	21000	20500	29600	28600	32100	34300	32700	31400
20	46600	47600	21600	21000	21000	20200	30200	29100	32700	32700	33000	31500
21	46600	47400	20500	21000	21000	20200	30500	29600	32600	32700	32900	31600
22	46600	47300	19900	21000	21000	20100	29200	29800	32700	33200	32800	31500
23	47600	47300	19600	21000	21000	19900	23100	30700	32900	33300	32900	31700
24	47600	47400	19900	21000	21000	19800	12000	31800	33000	33200	32800	31700
25	47700	47500	20100	21000	21000	20000	7740	31900	33000	33200	32900	31400
26	47700	47400	19900	21000	21000	19800	7710	31900	32800	33300	32900	31400
27	47600	47300	19800	21000	21000	19800	7680	32000	32600	33300	33100	31500
28	47700	47400	19700	21000	21000	20000	7860	32000	32700	33400	33100	31900
29	47600	47300	20400	21000	---	20600	12400	31800	32700	33400	32400	31900
30	47600	47400	20200	21000	---	21700	21300	31800	32700	33500	31200	31900
31	47800	---	20000	21000	---	22200	---	31600	---	33400	32200	---
TOTAL	1446100	1424000	772800	640700	588000	637100	678190	903200	960800	1025600	1022500	954600
MEAN	46650	47470	24930	20670	21000	20550	22610	29140	32030	33080	32980	31820
MAX	47800	47700	45400	21100	21000	22200	30500	32000	33000	34400	33500	33500
MIN	45900	47300	19600	20000	21000	19800	7680	22800	29400	32600	31200	30000
AC-FT	286800	2825000	1533000	1271000	1166000	1264000	1345000	1791000	1906000	2034000	2028000	1893000
CAL YR 1984	TOTAL	11049000		MEAN	30190	MAX	47800	MIN	10000	AC-FT	21916000	
WTR YR 1985	TOTAL	11053590		MEAN	30280	MAX	47800	MIN	7680	AC-FT	21925000	

06478518 BOW CREEK NEAR ST. JAMES, NE

LOCATION.--Lat 42°43'48", long 97°08'53", in SE1/4SW1/4 sec.24, T.32 N., R.2 E., Cedar County, Hydrologic Unit 10170101, on right downstream end of bridge on State Highway 12, 0.25 mi west of intersection of St. James road and State Highway 12, 0.7 mi south of St. James.

DRAINAGE AREA.--304 mi².

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,180.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 29 to Feb. 28. Records good except for period of estimated record, which is poor.

AVERAGE DISCHARGE.--7 years, 78.8 ft³/s, 57,090 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s June 21, 1984, gage height, 13.23 ft, from high-water mark; minimum daily, 7.4 ft³/s Jan. 15, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,790 ft³/s Apr. 23, gage height, 6.11 ft; minimum daily, 28 ft³/s Jan. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	85	76	43	30	80	85	186	68	89	48	61
2	72	77	72	46	30	82	91	184	72	84	45	61
3	75	79	70	50	31	93	107	151	75	78	49	59
4	77	82	72	55	30	305	121	135	80	69	51	55
5	79	83	73	58	29	103	117	139	81	63	47	56
6	96	82	60	60	30	109	110	134	84	66	44	57
7	95	81	70	58	31	136	102	118	89	65	43	56
8	82	79	80	58	31	127	91	118	93	63	40	55
9	82	92	77	56	32	116	91	124	77	59	41	55
10	81	106	73	54	35	113	89	117	76	55	45	53
11	76	95	65	50	34	110	89	120	76	54	44	56
12	78	95	55	45	34	107	89	116	69	54	240	59
13	76	92	50	50	37	102	89	101	68	53	179	97
14	76	93	57	48	42	104	91	139	63	56	80	112
15	99	94	60	47	46	105	102	140	65	57	64	77
16	93	86	53	49	50	100	94	129	68	51	60	68
17	91	86	50	50	48	101	104	108	70	50	82	63
18	98	84	50	42	50	109	99	99	68	51	77	58
19	172	84	53	34	54	122	104	89	67	46	67	57
20	112	86	56	33	58	105	124	104	65	45	64	57
21	93	88	58	36	56	108	157	110	63	47	93	59
22	88	88	54	38	60	102	256	102	64	47	83	60
23	82	85	47	40	64	99	1390	96	62	48	145	64
24	80	83	45	35	72	95	386	91	62	51	145	58
25	80	80	49	33	84	94	201	89	67	52	80	56
26	80	81	52	35	96	105	298	82	1270	46	74	57
27	82	79	54	33	110	136	239	84	590	41	74	58
28	78	78	52	31	90	108	193	84	185	40	77	59
29	82	78	49	30	---	87	157	86	114	44	83	65
30	85	76	47	29	---	82	148	76	94	46	78	68
31	86	---	45	28	---	88	---	68	---	49	68	---
TOTAL	2697	2557	1824	1354	1394	3433	5414	3519	4045	1719	2410	1876
MEAN	87.0	85.2	58.8	43.7	49.8	111	180	114	135	55.5	77.7	62.5
MAX	172	106	80	60	110	305	1390	186	1270	89	240	112
MIN	71	76	45	28	29	80	85	68	62	40	40	53
AC-FT	5350	5070	3620	2690	2760	6810	10740	6980	8020	3410	4780	3720
CAL YR 1984	TOTAL	70792		MEAN	193	MAX	5400	MIN	45	AC-FT	140400	
WTR YR 1985	TOTAL	32242		MEAN	88.3	MAX	1390	MIN	28	AC-FT	63950	

MISSOURI RIVER MAIN STEM

06486000 MISSOURI RIVER AT SIOUX CITY, IA
(National stream-quality accounting network station)

LOCATION.--Lat 42°29'09". long 96°24'49". in NW1/4SE1/4 sec.16 T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebraska, Hydrologic Unit 10230001. on right bank on upstream side of bridge on U.S. Highway 20 and 77 at South Sioux City, Nebraska, 1.9 mi downstream from Big Sioux River, and at mile 732.2

DRAINAGE.--314,600 mi². approximately.

PERIOD OF RECORD.--October 1897 to current year in reports of Geological Survey. Prior to October 1928 and October 1931 to September 1938. monthly discharges only, published in WSP 1310. January 1879 to December 1890 (monthly discharges only) in House Document 238, 73rd Congress, 2d session, Missouri River. Gage-height records collected in this vicinity September 1878 to December 1899 are contained in reports of Missouri River Commission and since July 1889 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 716: 1929-30. WSP 876: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,056.98 ft above NGVD. Sept. 2, 1878, to Dec. 31, 1905. nonrecording gages at various locations within 1.7 mi of present site and at various datums. Jan. 1, 1906 to Feb. 14, 1935, nonrecording gage, and Feb. 15, 1935 to Sept. 30, 1969, water-stage recorder at site 227 ft downstream at datum 19.98 ft higher, and Oct. 1, 1969 to Sept. 30, 1970 at datum 20.00 ft higher. Oct. 1, 1970 to Jan. 30, 1981, water-stage recorder at site 227 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 25, 30, Jan. 1, 2, 11, 12, 15, 16, 20-22, 25, Jan. 28 to Feb. 5 and Feb. 9, 10. Records good except for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. U.S. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers rain-gage and gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--88 years 32.050 ft³/s. 23,220,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441,000 ft³/s Apr. 14, 1952. gage height, 24.28 ft, datum then in use; minimum, 2,500 ft³/s Dec. 29, 1941; minimum gage height, 9.00 ft Jan. 8, 1980. based on gage readings at site 14 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharges, 56,600 ft³/s Apr. 23 gage height, 23.94 ft; minimum daily discharge, 17,000 ft³/s Jan. 31; minimum gage height not determined, occurred during period of no gage-height record Jan. 31.

DISCHARGE. IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46200	48700	45800	19600	18600	23200	32800	32100	33600	35000	32900	31900
2	46400	48000	44000	19000	20300	23300	32800	31800	35700	34500	32700	32900
3	46100	47800	40500	20600	20600	24000	33000	31800	36100	33900	33000	33000
4	45600	47800	36700	21900	20400	27900	33800	31200	35300	33700	32600	32600
5	46000	47800	33800	21700	20300	24400	33000	30800	33600	33300	32300	32800
6	46500	47800	31700	21200	20000	23400	32700	30800	32700	32500	32200	33000
7	47200	47700	31000	20800	20100	23900	32900	31400	34000	31700	32300	33500
8	46600	47600	29800	20700	20300	24300	33000	32400	34600	31000	32300	33000
9	46500	48000	27100	20600	20300	25200	32000	32800	34000	31200	32300	31400
10	46700	48200	26500	20800	20400	26800	31400	33300	33600	31200	32400	31800
11	46600	47300	26300	20500	19900	27800	31700	33100	33700	31500	32000	31800
12	46800	47000	26300	20300	20400	28900	31800	33500	33500	31600	33000	32000
13	46700	47100	24900	21100	20800	29200	31200	33100	33200	31800	32700	33700
14	46700	47500	25400	22200	20600	30200	30900	34400	33300	32000	32400	33600
15	47700	47600	26700	19800	20800	32200	30800	33400	33600	32200	32400	32200
16	47200	46900	27100	19900	21100	32200	30600	31800	33700	32400	32500	32900
17	46800	46500	25800	20900	21300	32100	30600	31100	33400	33500	33200	32800
18	47200	46400	24200	21500	21300	32400	30100	31300	32300	34300	32600	31600
19	49400	46300	25000	20500	21400	33000	30400	32500	32400	34500	32400	31900
20	49000	46300	24900	18500	21400	33700	30600	32200	32500	34000	32200	32200
21	48800	46200	24800	18400	22300	33600	31700	32200	32900	32400	32500	31900
22	49000	46100	22600	19700	22100	33500	37900	32100	33100	32000	32300	31800
23	48900	46000	21700	22000	22100	33500	49500	32100	32900	32200	32500	32100
24	49200	46300	21200	23500	22400	33300	43200	31900	32800	32500	32500	32000
25	49400	46500	19100	22900	23000	33600	30600	32600	33000	32700	32000	32000
26	49700	46600	21800	21900	23900	33900	31300	32700	35400	32600	31800	32000
27	50200	46300	22400	23500	23900	34600	33700	32400	39100	32600	31900	31800
28	50000	46000	23200	23500	23400	33600	31000	32100	36000	32600	31800	31800
29	49800	46000	21600	22600	---	33000	27400	32300	35500	32500	33400	32000
30	49300	46000	19500	23100	---	32600	26400	32700	35300	32600	34900	32200
31	48900	---	20700	17000	---	32800	---	33200	---	32800	31600	---
TOTAL	1481100	1410300	842100	650200	593400	926100	978800	1001100	1020800	1013300	1007600	970200
MEAN	47780	47010	27160	20970	21190	29870	32630	32290	34030	32690	32500	32340
MAX	50200	48700	45800	23500	23900	34600	49500	34400	39100	35000	34900	33700
MIN	45600	46000	19100	17000	18600	23200	26400	30800	32300	31000	31600	31400
AC-FT	2938000	2797000	1670000	1290000	1177000	1837000	1941000	1986000	2025000	2010000	1999000	1924000
CAL YR 1984	TOTAL	14184800	MEAN	38760	MAX	103000	MIN	16800	AC-FT	28136000		
WTR YR 1985	TOTAL	11895000	MEAN	32590	MAX	50200	MIN	17000	AC-FT	23594000		

06601000 OMAHA CREEK AT HOMER, NE

LOCATION.--Lat 42°19'29", long 96°29'43", in SW1/4SE1/4 sec.11, T.27 N., R.8 E., Dakota County, Hydrologic Unit 10230001, on left bank 80 ft downstream from bridge on main street of Homer.

DRAINAGE AREA.--168 mi².

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-72: Drainage area. WDR NE-75-1: 1971-73.

GAGE.--Water-stage recorder. Datum of gage is 1,082.45 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1952, at bridge 0.5 mi downstream at datum 8.03 ft lower. Aug. 4, 1952, to Nov. 3, 1966, at site 80 ft upstream at present datum. June 27, 1984 to Aug. 28, 1984 at temporary site 700 ft downstream at datum 2.00 ft lower.

REMARKS.--Estimated daily discharges: Oct. 15 to Nov. 7, Dec. 6, 7, Dec. 13 to Jan. 3, Jan. 8 to Mar. 2, and Apr. 21-30. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--40 years, 37.3 ft³/s, 27,020- acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,100 ft³/s Feb. 19, 1971, gage height, 26.47 ft, from floodmark, from rating curve extended above 3,700 ft³/s on basis of slope-area measurements at gage heights 16.38 ft and 23.62 ft; minimum daily, 0.1 ft³/s Sept. 16, 18, 19, 1948, Sept. 9, 13, 14, 1955, Oct. 7, 8, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood known occurred June 4, 1940, stage, about 32.5 ft, present site and datum, discharge estimated as 51,000 ft³/s at site 2.5 mi upstream from present site.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 23	unknown	*3810	*a14.96	(b)	unknown	1540	a8.16
Apr. 26	unknown	2700	a12.01				

a From floodmark

b Sometime during period Apr. 28-30.

Minimum daily discharge, 21 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	46	46	44	41	49	53	260	63	43	34	27
2	43	46	46	44	41	50	66	236	65	43	30	24
3	41	46	43	45	41	100	89	138	63	40	31	24
4	42	45	40	49	40	200	68	133	63	37	34	22
5	44	45	46	50	40	57	62	127	66	35	30	34
6	62	45	25	52	40	76	59	122	62	36	26	30
7	59	45	35	52	40	61	54	117	61	35	26	24
8	64	52	53	52	40	52	52	112	59	35	24	23
9	71	82	55	52	41	50	51	107	53	37	22	22
10	63	112	58	49	40	52	51	101	55	28	22	27
11	55	60	56	48	39	56	49	98	66	30	23	29
12	60	57	55	39	39	49	47	95	59	33	33	28
13	57	57	47	40	40	49	47	92	57	33	31	57
14	53	58	48	40	45	47	48	196	55	34	34	62
15	95	53	49	41	47	46	47	153	53	33	28	39
16	88	48	50	42	49	46	45	107	53	32	24	32
17	83	48	50	41	47	45	44	97	50	33	50	32
18	65	50	50	40	47	46	42	94	46	31	36	30
19	129	47	52	38	49	48	42	93	50	32	27	25
20	57	48	52	36	50	46	56	151	49	30	26	21
21	50	48	66	38	49	46	168	92	46	33	29	23
22	50	48	66	39	48	46	688	85	44	30	29	27
23	50	47	62	40	49	52	1240	88	43	28	37	33
24	48	48	52	40	49	48	2670	87	41	34	34	30
25	48	48	50	41	50	45	1620	79	42	33	27	26
26	50	48	49	41	49	46	1650	75	47	28	25	29
27	48	48	50	41	49	69	1190	72	61	28	25	30
28	48	46	48	41	50	57	1270	67	48	25	23	30
29	48	48	46	40	---	48	786	72	46	26	33	41
30	47	48	41	37	---	45	429	73	44	31	30	52
31	47	---	44	38	---	44	---	67	---	36	28	---
TOTAL	1808	1567	1530	1330	1249	1771	12783	3486	1610	1022	911	933
MEAN	58.3	52.2	49.4	42.9	44.6	57.1	426	112	53.7	33.0	29.4	31.1
MAX	129	112	66	52	50	200	2670	260	66	43	50	62
MIN	41	45	25	36	39	44	42	67	41	25	22	21
AC-FT	3590	3110	3030	2640	2480	3510	25360	6910	3190	2030	1810	1850
CAL YR 1984	TOTAL	43478		MEAN	119	MAX	1500	MIN	20	AC-FT	86240	
WTR YR 1985	TOTAL	30000		MEAN	82.2	MAX	2670	MIN	21	AC-FT	59510	

MISSOURI RIVER MAIN STEM

06610000 MISSOURI RIVER AT OMAHA, NE

LOCATION.--Lat 41°15'32", long 95°55'20", in SE1/4NW1/4 sec.23, T.15 N., R.13 E., Douglas County, Hydrologic Unit 10230006, on right bank on left side of concrete floodwall, at foot of Douglas Street, 275 ft downstream from Interstate 480 Highway bridge in Omaha, and at mile 615.9.

DRAINAGE AREA.--322,800 mi², approximately.

PERIOD OF RECORD.--September 1928 to current year. April 1872 to December 1899 (gage heights only) in reports of the Missouri River Commission and since January 1875, (gage heights only) in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 948.24 ft above NGVD. See WSP 1730 for history of changes prior to Sept. 30, 1936. Oct. 1, 1936 to Sept. 30, 1982 at datum 10.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 7-10, Jan. 11-14, 20, 21, 23-27, and Feb. 1-3. Records good except estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. U.S. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers rain-gage and gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--57 years, 30.560 ft³/s, 22.141.000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 396.000 ft³/s Apr. 18, 1952, gage height, 40.20 ft, present datum; minimum, about 2.200 ft³/s Jan. 6, 1937; minimum gage height observed, 7.23 ft, present datum, Jan. 10, 1957, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 70.700 ft³/s April 24, gage height, 22.98 ft; minimum daily discharge, 20.800 ft³/s Jan. 23; minimum gage height 10.00 ft Jan 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49600	56600	54000	24300	28500	28100	38400	40100	40900	39000	35900	36300
2	49700	55600	54200	24700	27000	27500	37100	44900	41200	38900	35600	34200
3	49000	54300	50900	24300	28000	27800	36400	45500	42600	38900	34800	35600
4	48500	54300	46100	24900	28000	35000	36800	43000	42600	38500	35000	35900
5	47800	54100	41700	27300	28000	41400	38100	41600	40900	38100	35500	36300
6	48300	54600	38300	28300	27400	31600	39100	41500	38300	37500	34800	36500
7	47700	55400	35800	27200	26600	29700	39600	40100	36900	37100	34400	36400
8	48800	54600	34000	26400	26000	29800	40000	40200	39200	36800	34500	37500
9	47500	55100	32000	25800	25800	30500	39800	40700	40700	36800	34600	38700
10	47500	57400	32200	25100	25300	33300	38500	39800	40000	37000	34500	38400
11	47800	57200	32600	27500	25400	34200	37700	39100	39400	36800	34500	36900
12	48600	55200	33400	25000	24900	34500	38200	38100	39100	36500	34500	35500
13	49100	54600	33500	24500	24100	35600	39800	37800	38500	36300	35200	35100
14	50100	55900	32300	24400	24200	36700	39100	38100	37400	36300	37200	37400
15	52200	57100	32100	26000	24600	36900	38100	43500	37200	36000	35600	39100
16	53800	56500	43000	23400	24500	37800	37000	45300	40800	35700	34400	36800
17	53300	54400	41700	23600	24900	37600	35700	41600	39600	35500	35200	36700
18	52700	52900	34500	24800	25200	36600	35900	39000	38500	35700	35200	38000
19	53300	52500	31100	25200	25600	36300	36500	39100	37000	39300	35200	36800
20	55400	52800	31200	24500	25700	37300	36200	42400	35900	38800	33800	37000
21	56100	53100	32800	23500	28800	38000	37000	43800	35800	38900	33400	38400
22	55700	52300	32800	21000	33300	38000	43500	42200	35500	36500	34400	38600
23	56300	52000	29500	20800	28800	37600	56100	41200	36300	35100	34300	38700
24	56700	53300	28000	25300	27200	37400	68800	40700	37500	35200	34100	37900
25	57700	54400	27300	27500	27000	37100	63200	40900	36000	35800	34200	37100
26	56800	54700	25000	30000	27200	37900	50400	41300	36000	35900	33700	36700
27	56900	56200	27000	29500	28400	39000	48800	42100	38100	35700	33500	36500
28	58900	55400	35000	27100	28800	40100	51000	42400	44500	35100	33200	36000
29	58000	55000	32000	29000	---	39800	45700	41600	43600	35400	33200	36600
30	57400	54300	29400	30200	---	38600	41000	40900	39700	36600	36200	37600
31	57100	---	25200	29700	---	38600	---	41400	---	36500	43500	---
TOTAL	1628300	1641800	1088600	800800	749200	1100300	1263500	1279900	1169700	1142200	1084100	1109200
MEAN	52530	54730	35120	25830	26760	35490	42120	41290	38990	36850	34970	36970
MAX	58900	57400	54200	30200	33300	41400	68800	45500	44500	39300	43500	39100
MIN	47500	52000	25000	20800	24100	27500	35700	37800	35500	35100	33200	34200
AC-FT	3230000	3257000	2159000	1588000	1486000	2182000	2506000	2539000	2320000	2266000	2150000	2200000
CAL YR 1984	TOTAL	17825200	MEAN	48700	MAX	114000	MIN	22200	AC-FT35356000			
WTR YR 1985	TOTAL	14057600	MEAN	38510	MAX	68800	MIN	20800	AC-FT27883000			

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'25", long 104°02'57", in SW1/4 NE1/4 SE1/4 sec.4, T.23 N., R.58 W., Scottsbluff County, NE, Hydrologic Unit 10180009, on right bank 650 ft upstream from bridge on NE State Highway 86, 700 ft downstream from Wyoming-Nebraska State line, and 0.5 mi south of Henry, NE.

DRAINAGE AREA.--22,218 mi², of which 1,929 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,021.35 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 6, 1929, nonrecording gage and Nov. 6, 1929, to Sept. 30, 1959, water-stage recorder at site 0.5 mi upstream at datum 4.42 ft higher. Oct. 7, 1959 to Feb. 22, 1972, water-stage recorder at site 0.5 mi upstream at datum 3.42 ft higher.

REMARKS.--Estimated daily discharges: Nov. 20-26, Dec. 18, 19, Jan. 20-22, Jan. 29 to Feb. 4, and Feb. 27 to Mar. 6. Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.8 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 17,900 ft³/s, June 2, 1929, gage height, 7.04 ft, site and datum then in use; minimum daily, 13 ft³/s, May 12, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,060 ft³/s, Mar. 11, gage height, 4.15 ft; minimum daily, 200 ft³/s, May 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	776	713	935	325	2530	1370	237	905	1790	1590	1250
2	1070	776	701	936	344	2790	1360	200	1040	1680	1530	1300
3	1030	773	687	966	340	2820	1320	216	1130	1500	1430	1330
4	1010	774	679	967	332	2830	1230	218	1230	1440	1350	1260
5	1020	767	682	977	321	2900	1020	233	1370	1420	1280	1210
6	1010	774	676	978	353	2910	943	240	1510	1410	1250	1150
7	986	774	677	971	356	2920	882	249	1450	1410	1260	1120
8	961	774	671	980	356	2940	858	350	1320	1400	1340	1280
9	938	794	680	988	356	2960	805	640	1180	1380	1410	1170
10	914	781	688	822	356	3010	811	920	1110	1420	1460	1200
11	913	787	735	692	355	3030	805	905	972	1430	1410	1370
12	926	787	793	648	352	2430	788	897	823	1510	1360	1490
13	1060	774	803	686	335	1770	752	892	762	1630	1310	1400
14	1090	767	810	737	332	1610	720	799	688	1630	1310	1300
15	1090	767	778	728	349	1550	710	787	620	1580	1310	1230
16	1020	767	756	682	339	1510	691	780	596	1580	1310	1180
17	903	767	714	673	333	1500	631	775	642	1580	1300	997
18	878	761	685	677	330	1490	530	750	896	1520	1280	808
19	865	754	720	614	340	1440	508	736	1250	1550	1310	745
20	861	740	766	490	346	1510	467	710	1610	1590	1300	673
21	843	735	799	438	346	1460	445	697	1720	1540	1260	621
22	840	735	768	404	341	1400	431	723	1730	1510	1220	619
23	842	730	770	400	338	1470	432	768	1750	1520	1190	620
24	837	745	769	392	329	1390	406	782	1760	1490	1190	597
25	829	755	779	385	327	1350	382	796	1770	1430	1210	581
26	831	750	785	380	318	1330	400	818	1910	1400	1250	751
27	825	722	772	369	900	1280	392	859	1910	1390	1250	832
28	805	715	771	359	1800	1290	374	858	1830	1400	1270	729
29	796	722	793	340	---	1280	348	855	1790	1420	1260	678
30	793	710	871	335	---	1330	359	860	1790	1500	1230	696
31	783	---	931	314	---	1430	---	865	---	1570	1240	---
TOTAL	28719	22753	23222	20263	11549	61460	21170	20415	39064	46620	40670	30187
MEAN	926	758	749	654	412	1983	706	659	1302	1504	1312	1006
MAX	1150	794	931	988	1800	3030	1370	920	1910	1790	1590	1490
MIN	783	710	671	314	318	1280	348	200	596	1380	1190	581
AC-FT	56960	45130	46060	40190	22910	121900	41990	40490	77480	92470	80670	59880
CAL YR 1984	TOTAL	1069864		MEAN	2923	MAX	8540	MIN	337	AC-FT	2122000	
WTR YR 1985	TOTAL	366092		MEAN	1003	MAX	3030	MIN	200	AC-FT	726100	

PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)
OCT 17...	0915	904	840	8.1	8.0	650	9.6
JAN 16...	1345	685	860	8.1	2.0	640	12.0
APR 25...	0815	382	860	8.0	11.0	650	14.0
JUL 24...	1550	1490	720	7.9	22.0	650	7.4

DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 17...	95	110	.90	.050	.45	.50	.140
JAN 16...	104	K24	.90	.190	.61	.80	.000
APR 25...	150	80	1.1	.160	.64	.80	.040
JUL 24...	100	140	.50	.040	.46	.50	.120

K-Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 17...	0915	904	805	8.0	290	75	24	70	2	4.6
DEC 05...	1445	670	819	1.0	290	76	25	72	2	6.1
JAN 16...	1345	685	805	2.0	300	75	28	67	2	5.0
MAR 07...	1300	2930	809	5.0	280	69	26	69	2	3.6
APR 25...	0815	382	832	11.0	290	76	24	87	2	5.1
MAY 23...	0845	776	742	17.0	280	73	23	61	2	4.0
JUN 21...	1045	1720	700	18.0	230	59	19	52	2	3.9
JUL 24...	1550	1490	695	22.0	240	63	20	59	2	4.5
AUG 23...	1040	1200	710	19.0	230	61	20	62	2	5.2
SEP 24...	1630	611	811	11.0	260	71	20	76	2	6.2

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
OCT 17...	220	200	7.7	.40	15	530	.72	1290	1.0	.140
DEC 05...	220	190	18	.60	13	530	.72	963	.90	.100
JAN 16...	220	180	18	.50	14	520	.71	961	1.1	.000
MAR 07...	170	220	15	.80	8.3	510	.70	4060	.40	.220
APR 25...	220	220	14	.70	16	570	.78	593	1.2	.040
MAY 23...	170	230	14	.20	10	520	.70	1080	.40	.140
JUN 21...	150	160	9.1	.50	6.9	400	.54	1860	.00	.150
JUL 24...	160	180	14	.30	9.4	450	.61	1790	.50	.210
AUG 23...	170	180	14	.10	12	460	.62	1480	.50	.440
SEP 24...	200	200	16	.20	19	530	.72	872	1.0	.150

PLATTE RIVER BASIN

06677500 HORSE CREEK NEAR LYMAN, NE

LOCATION.--Lat 41°56'21", long 103°59'13", in SE1/4NE1/4 sec.25, T.23 N., R.58 W., Scotts Bluff County, Hydrologic Unit 10180012, on right bank 10 ft upstream from county highway bridge, 1.8 mi upstream from mouth, 2.2 mi downstream from Owl Creek, and 3.2 mi northeast of Lyman.

DRAINAGE AREA.--1,570 mi², approximately, of which about 40 mi² is noncontributing.

PERIOD OF RECORD.--February 1931 to current year.

REVISED RECORDS.--WSP 926: 1940(M). WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,992.84 ft above National Geodetic Vertical Datum of 1929 (levels by private engineering firm). See WSP 2118 for history of changes prior to Apr. 17, 1967.

REMARKS.--Estimated daily discharges: Dec. 17-19, 26, Dec. 31 to Jan. 14, Feb. 5-10, 12-28, Mar. 13-18, 20-26, May 22-29, and May 31 to June 3. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--54 years, 73.4 ft³/s, 53,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,110 ft³/s June 6, 1967, gage height, 10.82 ft, from rating curve extended above 1,900 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.4 ft³/s Feb. 1, 2, 1949.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 384 ft³/s June 5, gage height, 4.78 ft; maximum gage height, 4.81 ft on Sept. 27; minimum daily discharge 18 ft³/s Apr. 18, and May 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	132	153	125	19	36	24	24	260	128	129	107
2	165	131	156	130	19	38	26	19	290	125	119	123
3	146	130	147	110	19	37	24	18	310	127	119	141
4	139	127	138	90	19	38	25	19	330	98	114	148
5	144	126	130	80	20	45	25	19	349	71	108	147
6	141	125	122	60	21	40	25	19	293	65	103	150
7	134	126	120	56	21	42	25	19	267	61	103	143
8	128	126	127	50	21	43	28	44	249	62	103	209
9	138	124	157	44	21	42	28	203	238	58	94	225
10	150	123	168	38	25	42	28	217	236	57	118	205
11	146	120	176	38	32	43	26	184	240	57	95	235
12	145	116	167	37	32	43	25	209	234	59	100	257
13	140	116	161	43	34	41	25	191	208	66	92	258
14	143	113	141	50	36	39	24	217	192	69	93	254
15	150	105	134	57	38	38	23	164	175	74	101	235
16	153	103	128	50	40	36	22	134	164	73	98	241
17	153	101	130	49	42	34	20	111	169	76	97	237
18	156	101	130	45	44	32	18	108	157	80	100	266
19	157	98	130	41	46	30	20	131	205	86	100	234
20	150	96	141	34	50	30	23	189	212	102	95	228
21	150	96	128	39	48	29	20	182	159	111	94	248
22	146	111	123	37	46	28	20	180	155	110	102	282
23	145	114	121	32	44	28	22	180	159	110	100	281
24	144	117	121	30	44	27	20	180	166	119	95	333
25	146	119	126	21	42	27	20	180	134	120	98	307
26	144	123	125	20	40	26	29	190	138	108	97	325
27	142	118	126	21	38	26	29	200	144	111	94	316
28	138	117	131	20	37	25	25	205	147	109	98	259
29	135	115	144	20	---	25	24	215	149	109	98	190
30	134	133	140	19	---	25	24	220	128	134	102	161
31	133	---	135	19	---	24	---	240	---	178	103	---
TOTAL	4534	3502	4276	1505	938	1059	717	4411	6257	2913	3162	6745
MEAN	146	117	138	48.5	33.5	34.2	23.9	142	209	94.0	102	225
MAX	199	133	176	130	50	45	29	240	349	178	129	333
MIN	128	96	120	19	19	24	18	18	128	57	92	107
AC-FT	8990	6950	8480	2990	1860	2100	1420	8750	12410	5780	6270	13380
CAL YR 1984	TOTAL	70863		MEAN	194	MAX	500	MIN	30	AC-FT	140600	
WTR YR 1985	TOTAL	40019		MEAN	110	MAX	349	MIN	18	AC-FT	79380	

06678000 SHEEP CREEK NEAR MORRILL, NE

LOCATION.--Lat 41°57'50", long 103°56'20", in NW1/4SW1/4 sec.16, T.23 N., R.57 W., Scotts Bluff County, Hydrologic Unit 10180009, on right bank 40 ft upstream from Burlington Northern Inc. bridge, 50 ft downstream from bridge on U.S. Highway 26 1 mi west of Morrill, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--362 mi², of which about 25 mi² is noncontributing.

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WDR NE-67: Drainage area. WSP 2118: 1936(M), 1946(M).

GAGE.--Water-stage recorder. Datum of gage is 3,995.04 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1940, nonrecording gage at site 20 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--54 years, 55.1 ft³/s, 39,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 516 ft³/s July 21, 1978, gage height, 6.62 ft; maximum gage height, 6.75 ft Aug. 2, 1932, from floodmark, due to break in Interstate Canal (discharge not determined); minimum daily discharge, 0.1 ft³/s Dec. 16, 23, 1956, Jan. 18, Mar. 12, 1957, result of diversion for construction upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170 ft³/s Sept. 24, gage height, 3.05 ft; minimum daily, 3.5 ft³/s May 12, 14, 15, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	105	88	84	79	74	73	4.0	4.3	5.1	5.6	6.0
2	120	105	88	83	79	74	74	4.0	4.3	5.1	5.8	6.0
3	118	105	88	83	78	76	75	4.0	4.3	5.1	5.8	6.0
4	122	104	88	85	79	75	75	3.8	4.3	5.4	5.6	6.0
5	138	102	88	85	79	77	73	3.6	5.4	5.4	5.1	6.3
6	137	102	89	85	78	77	71	3.8	5.6	5.6	5.1	6.3
7	126	103	89	85	78	74	70	4.0	5.4	6.0	5.4	6.3
8	122	98	91	84	77	74	68	4.2	5.1	6.0	5.4	18
9	121	98	91	85	77	74	68	4.2	5.1	6.0	5.1	23
10	116	98	91	85	77	74	68	4.0	4.5	6.0	5.1	11
11	116	98	91	85	77	74	68	3.6	4.0	6.0	11	5.8
12	115	95	90	85	78	74	67	3.5	4.0	6.0	11	9.9
13	113	97	90	86	78	74	67	3.6	4.0	6.0	4.9	5.6
14	112	98	90	85	77	74	67	3.5	4.2	6.0	4.9	5.4
15	111	95	91	86	77	74	68	3.5	4.3	6.0	4.7	5.4
16	110	98	90	84	77	74	68	3.8	4.5	6.0	4.7	5.4
17	109	98	90	84	75	73	57	3.8	4.5	6.0	4.7	4.7
18	111	98	90	85	75	73	52	3.6	4.7	5.8	4.9	4.7
19	111	96	90	83	75	72	53	3.6	4.9	5.8	4.9	4.7
20	109	96	90	82	75	72	52	3.6	4.9	5.8	4.9	4.7
21	110	94	90	83	75	73	49	3.6	4.5	5.6	5.1	4.7
22	110	93	90	83	75	72	48	3.5	4.2	5.6	5.1	4.7
23	110	92	90	83	75	73	31	3.6	4.2	5.6	4.9	4.5
24	110	92	89	83	75	73	4.2	3.8	4.2	5.6	4.9	76
25	110	92	89	83	75	73	4.0	3.8	4.5	5.6	4.9	130
26	111	88	88	83	74	74	4.0	3.8	4.5	5.6	5.1	127
27	109	88	88	82	74	74	4.0	3.8	4.2	5.6	5.6	126
28	107	88	88	81	74	74	3.8	3.8	4.3	5.1	6.0	129
29	108	88	85	80	---	74	4.0	3.8	4.5	5.1	6.0	128
30	109	88	85	79	---	74	4.0	4.3	4.5	5.6	6.0	127
31	108	---	85	79	---	73	---	4.3	---	5.4	6.0	---
TOTAL	3561	2892	2760	2588	2142	2290	1490.0	117.8	135.9	175.5	174.2	1008.1
MEAN	115	96.4	89.0	83.5	76.5	73.9	49.7	3.80	4.53	5.66	5.62	33.6
MAX	138	105	91	86	79	77	75	4.3	5.6	6.0	11	130
MIN	107	88	85	79	74	72	3.8	3.5	4.0	5.1	4.7	4.5
AC-FT	7060	5740	5470	5130	4250	4540	2960	234	270	348	346	2000
CAL YR 1984	TOTAL	21349.8		MEAN	58.3	MAX	138	MIN	4.7	AC-FT	42350	
WTR YR 1985	TOTAL	19334.5		MEAN	53.0	MAX	138	MIN	3.5	AC-FT	38350	

PLATTE RIVER BASIN

06679500 NORTH PLATTE RIVER AT MITCHELL- NE

LOCATION.--Lat 41°55'38", long 103°48'48", in NE1/4NE1/4 sec.33, T.23 N., R.56 W., Scotts Bluff County, Hydrologic Unit 10180009, on right bank of main channel 10 ft downstream from bridge on State Highway 29, 0.5 mi south of Mitchell.

DRAINAGE AREA.--24,300 mi², approximately, of which about 22,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1901 to September 1910, May to December 1911, February 1912 to July 1913 (gage heights only), May 1916 to October 1918 (irrigation seasons only), May 1920 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,929.3 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to May 27, 1960. May 27, 1960, to Aug. 24, 1971, at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Jan. 12-16, 24. Records good except for periods of estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE (since Glendo project).--28 years (water years 1958-85), 858 ft³/s, 621,600 acre-ft/yr; median of yearly mean discharges, 540 ft³/s, 391,200 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,500 ft³/s June 3, 1909, gage height, 6.45 ft, datum then in use, from graph based on gage readings, from rating curve extended above 17,000 ft³/s; maximum gage height, 7.80 ft May 29, 1984; minimum daily discharge observed, 25 ft³/s Sept. 25-29, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,520 ft³/s Mar. 11, gage height, 5.03 ft; minimum daily, 176 ft³/s May 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1870	1350	1230	1460	540	1380	1740	265	580	735	575	253
2	1730	1340	1220	1430	523	2110	1740	314	664	718	556	285
3	1650	1330	1210	1460	512	2710	1690	313	814	534	504	441
4	1640	1280	1200	1470	495	2850	1610	294	1000	431	442	488
5	1700	1260	1200	1450	431	3120	1360	282	1270	344	366	450
6	1690	1240	1170	1450	415	3220	1210	265	1500	295	314	444
7	1620	1240	1180	1450	490	3260	1080	212	1520	276	292	415
8	1580	1230	1190	1450	568	3340	1030	176	1340	253	281	534
9	1570	1240	1210	1450	598	3420	976	232	1060	228	315	656
10	1570	1230	1220	1350	568	3450	976	410	871	216	376	657
11	1560	1240	1260	1170	551	3490	947	495	729	232	399	853
12	1560	1250	1310	1120	540	3240	918	534	631	272	369	1090
13	1720	1250	1330	1120	540	2260	890	564	530	370	319	1250
14	1820	1250	1300	1120	512	1970	820	543	438	457	286	1260
15	1840	1260	1270	1140	529	1880	820	490	394	435	312	1180
16	1810	1260	1260	1100	546	1810	787	455	360	472	302	1160
17	1680	1270	1220	1070	551	1780	760	410	354	473	283	1120
18	1640	1260	1170	1060	551	1760	702	410	305	449	284	930
19	1630	1240	1170	990	574	1700	677	441	414	435	305	819
20	1580	1220	1200	807	586	1730	677	494	565	535	328	735
21	1560	1220	1260	780	592	1730	634	466	745	545	287	711
22	1520	1210	1240	760	580	1660	622	439	740	501	278	697
23	1480	1210	1260	702	580	1680	592	472	757	482	269	754
24	1480	1220	1250	680	557	1700	406	500	689	472	269	848
25	1460	1220	1230	634	563	1710	354	496	638	422	275	1060
26	1450	1220	1280	628	557	1710	334	490	739	363	280	1380
27	1430	1180	1300	622	563	1680	322	521	860	334	276	1570
28	1400	1190	1310	610	800	1680	306	570	808	324	271	1560
29	1390	1210	1310	604	---	1640	290	546	756	314	291	1440
30	1370	1220	1370	568	---	1670	269	530	731	424	269	1330
31	1360	---	1450	540	---	1670	---	557	---	517	259	---
TOTAL	49360	37340	38780	32245	15412	69010	25539	13186	22802	12858	10232	26370
MEAN	1592	1245	1251	1040	550	2226	851	425	760	415	330	879
MAX	1870	1350	1450	1470	800	3490	1740	570	1520	735	575	1570
MIN	1360	1180	1170	540	415	1380	269	176	305	216	259	253
AC-FT	97910	74060	76920	63960	30570	136900	50660	26150	45230	25500	20300	52300
CAL YR 1984	TOTAL	1148774		MEAN	3139	MAX	8730	MIN	660	AC-FT	2279000	
WTR YR 1985	TOTAL	353134		MEAN	967	MAX	3490	MIN	176	AC-FT	700400	

PLATTE RIVER BASIN

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06681500 GERING DRAIN NEAR GERING, NE

LOCATION.--Lat 41°49'22", long 103°37'02", in SE1/4NE1/4 sec.6, T.21 N., R.54 W., Scotts Bluff County, Hydrologic Unit 10180009, on right bank 200 ft downstream from county road bridge, 0.2 mi downstream from bridge on State Highway 92, 1 mi upstream from mouth, and 2 mi east of Gering.

PERIOD OF RECORD.--February 1931 to September 1945, October 1948 to current year.

REVISED RECORDS.--WSP 896: 1935(M). WDR NE-79-1: 1977, 1978 (M).

GAGE.--Water-stage recorder. Datum of gage is 3,852.62 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1918 for history of changes prior to June 27, 1958. June 27, 1958, to Oct. 27, 1970, at datum 4.0 ft higher, Oct. 28, 1970, to Dec. 8, 1975, at datum 2.0 ft higher, Dec. 9, 1975, to Sept. 30, 1980, at datum 1.0 ft higher, all at site 200 ft upstream.

REMARKS.--No estimated daily discharges. Records good. Base flow is mainly return water from land irrigated by Fort Laramie Canal.

AVERAGE DISCHARGE.--51 years, 48.6 ft³/s, 35,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,560 ft³/s June 8, 1958, gage height, 16.0 ft, present datum, from floodmarks, from rating curve extended above 2,200 ft³/s on basis of slope-area measurements at gage heights 14.67 ft and 16.0 ft present datum; minimum daily, 5 ft³/s Aug. 13, 16, 19, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,950 ft³/s June 3, gage height, 8.45 ft; minimum daily, 21 ft³/s Apr. 11, 13, 24, 25, 29, May 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	34	32	28	25	25	24	21	131	178	149	89
2	39	34	31	28	24	25	24	22	149	112	130	96
3	38	34	31	28	24	25	24	33	413	88	123	95
4	39	33	31	28	24	25	24	54	253	76	116	95
5	41	33	31	28	24	25	24	43	160	80	108	100
6	38	33	31	28	25	25	24	41	156	75	91	122
7	37	33	31	28	25	25	24	40	152	74	85	126
8	37	33	31	28	25	25	23	39	144	70	87	160
9	36	33	32	28	25	25	22	32	142	67	88	152
10	36	33	32	27	25	25	22	72	141	67	97	170
11	35	33	32	26	25	25	21	108	160	67	97	178
12	35	33	31	26	25	25	22	102	144	67	93	194
13	35	33	31	27	26	25	21	121	153	72	93	199
14	34	33	29	26	25	25	22	116	151	73	102	198
15	34	33	29	27	25	25	22	106	141	73	99	201
16	34	32	29	27	25	25	22	99	131	72	94	205
17	34	32	28	27	25	25	22	109	118	67	95	186
18	35	32	28	27	25	25	22	105	85	71	103	174
19	35	33	28	27	25	25	32	237	103	84	105	171
20	34	32	28	26	25	26	26	160	100	93	102	169
21	34	32	29	26	25	25	22	109	93	84	88	149
22	34	32	29	26	25	25	22	108	96	81	87	176
23	34	32	29	26	25	25	22	102	77	83	88	208
24	36	33	28	26	25	25	21	88	69	84	89	228
25	34	33	28	26	25	25	21	93	94	76	90	233
26	34	32	28	26	25	25	24	106	126	73	90	237
27	34	31	28	26	25	25	22	111	113	73	87	173
28	34	32	28	26	25	25	22	116	104	72	83	113
29	34	32	28	25	---	25	21	122	117	80	81	88
30	34	32	28	25	---	25	22	116	95	154	84	59
31	34	---	28	25	---	25	---	120	---	219	86	---
TOTAL	1105	980	917	828	697	776	686	2851	4111	2705	3010	4744
MEAN	35.6	32.7	29.6	26.7	24.9	25.0	22.9	92.0	137	87.3	97.1	158
MAX	43	34	32	28	26	26	32	237	413	219	149	237
MIN	34	31	28	25	24	25	21	21	69	67	81	59
AC-FT	2190	1940	1820	1640	1380	1540	1360	5650	8150	5370	5970	9410
CAL YR 1984	TOTAL	26010		MEAN	71.1	MAX	249	MIN	23	AC-FT	51590	
WTR YR 1985	TOTAL	23410		MEAN	64.1	MAX	413	MIN	21	AC-FT	46430	

PLATTE RIVER BASIN

06682000 NORTH PLATTE RIVER NEAR MINATARE, NE

LOCATION.--Main channel gage: Lat 41°47'26", long 103°31'11", in NE1/4SE1/4 sec.13, T.21 N., R.54 W., Scotts Bluff County, Hydrologic Unit 10180009, on left bank 220 ft upstream from bridge on State Highway 326 and 1.8 mi southwest of Minatare. Nine Mile channel gage: Lat 41°47'32", long 103°31'08", in NE1/4SE1/4 sec.13, T.21 N., R.54 W., Scotts Bluff County, Hydrologic Unit 10180009, on left bank 50 ft upstream from bridge on State Highway 326 and 750 ft north of main channel bridge.

DRAINAGE AREA.--24,700 mi², approximately, of which about 22,700 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May to August 1916, May 1917 to September 1918, May to October 1919, April to September 1922, June 1923 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1710, WDR NE-76-1: Drainage area.

GAGE.--Main channel: Water-stage recorder. Datum of gage is 3,810.7 ft above National Geodetic Vertical Datum of 1929. Nov. 2, 1966, to July 13, 1976, water-stage recorder at datum 1.00 ft higher. See WDR NE-72 for history of changes prior to Nov. 2, 1966.

Nine Mile channel: Water-stage recorder. Datum of gage is 3,812.3 ft above National Geodetic Vertical Datum of 1929. See WDR NE-72 for history of changes prior to Aug. 25, 1971.

REMARKS.--Main channel: No estimated daily discharges. Nine Mile channel: Estimated daily discharges: Dec. 15, 18, 19, 22, 25, 26, Dec. 31 to Jan. 2, Jan. 9-15, 20-24, Jan. 31 to Feb. 14, and July 7. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

AVERAGE DISCHARGE (since Glendo project).--28 years (water years 1958-85), 1,096 ft³/s, 794,100 acre-ft/yr; median of yearly mean discharges, 794 ft³/s, 575,300 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft³/s July 2, 1917, from graph based on mean daily discharge and discharge measurement published by State engineer of Nebraska; minimum daily, 11 ft³/s Aug. 16-18, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 18, 1921, may have been greater than flood of July 2, 1917.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,850 ft³/s Mar. 12; minimum daily, 244 ft³/s July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2240	1420	1280	1430	816	1230	1710	451	740	900	886	428
2	1980	1420	1270	1440	815	1910	1680	445	809	848	856	459
3	1840	1420	1260	1450	822	2800	1660	479	1210	733	846	525
4	1800	1390	1260	1460	831	3100	1630	477	1520	591	751	632
5	1890	1370	1240	1450	784	3370	1500	468	1390	507	638	647
6	1870	1390	1240	1450	762	3480	1370	419	1560	437	539	653
7	1760	1400	1240	1440	795	3550	1270	401	1730	405	476	663
8	1690	1390	1260	1450	817	3620	1230	383	1620	395	456	800
9	1660	1390	1280	1440	820	3690	1220	354	1390	337	458	928
10	1640	1380	1280	1410	804	3740	1180	413	1190	266	521	984
11	1590	1380	1290	1310	763	3800	1170	593	1080	248	564	1170
12	1570	1360	1340	1230	756	3810	1150	675	994	244	573	1400
13	1620	1360	1360	1190	768	2790	1150	783	888	314	538	1560
14	1760	1340	1370	1210	759	2310	1110	864	784	430	503	1570
15	1830	1330	1340	1220	761	2080	1090	824	710	499	509	1550
16	1840	1310	1310	1240	785	1980	1070	723	663	512	497	1590
17	1720	1310	1280	1230	786	1890	1060	654	609	505	480	1620
18	1670	1310	1240	1230	776	1870	997	624	550	500	481	1450
19	1640	1290	1220	1220	775	1810	933	631	550	504	506	1260
20	1600	1290	1230	1150	785	1780	946	813	674	599	513	1140
21	1570	1280	1280	1130	801	1810	890	688	835	655	492	1050
22	1560	1280	1290	1100	801	1770	859	629	899	623	470	1040
23	1530	1290	1280	1040	791	1710	826	629	888	591	461	1130
24	1540	1290	1290	974	781	1740	729	636	849	592	448	1290
25	1560	1290	1280	953	763	1730	591	646	797	549	446	1480
26	1560	1280	1290	945	764	1700	566	666	898	477	451	1750
27	1540	1260	1290	930	762	1660	544	680	992	419	438	2060
28	1490	1260	1290	930	830	1640	526	738	975	405	426	2040
29	1490	1270	1290	913	---	1610	499	742	925	430	426	1830
30	1440	1270	1330	889	---	1610	480	745	885	653	428	1700
31	1440	---	1390	817	---	1660	---	770	---	877	421	---
TOTAL	51930	40020	39890	37271	22073	73250	31636	19043	29604	16045	16498	36399
MEAN	1675	1334	1287	1202	788	2363	1055	614	987	518	532	1213
MAX	2240	1420	1390	1460	831	3810	1710	864	1730	900	886	2060
MIN	1440	1260	1220	817	756	1230	480	354	550	244	421	428
AC-FT	103000	79380	79120	73930	43780	145300	62750	37770	58720	31830	32720	72200
CAL YR 1984	TOTAL	1184961	MEAN	3238	MAX	9170	MIN	668	AC-FT	2350000		
WTR YR 1985	TOTAL	413659	MEAN	1133	MAX	3810	MIN	244	AC-FT	820500		

06682505 NORTH PLATTE RIVER AT MC GREW, NE

LOCATION.--Lat 41°45'42", long 103°25'02", in SW1/4 sec.25, T.21 N., R.53 W., Scotts Bluff County, Hydrologic Unit 10180009, at bridge on county road 1.2 mi north of State Highway 92, 0.3 mi downstream from Ninemile Creek and 0.9 mi north of McGrew.

PERIOD OF RECORD.--Chemical analyses: June 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
16...	1345	1970	830	8.1	10.0	10.2	--	160	230	270	73	22
NOV												
19...	1430	1400	890	8.5	6.0	11.1	15	28	230	290	81	22
DEC												
17...	1415	1400	882	8.4	4.0	12.0	--	39	580	300	82	22
JAN												
15...	1415	1290	840	8.1	3.0	11.8	--	80	800	300	81	23
FEB												
19...	1330	869	920	8.0	8.0	10.3	30	K7	640	320	92	22
MAR												
19...	0930	2060	820	8.4	9.0	9.9	--	23	170	300	80	24
APR												
15...	1330	1150	909	8.0	17.5	8.8	--	K4	120	300	81	24
MAY												
20...	1115	79	782	8.1	13.5	9.1	93	5100	77000	240	66	18
JUN												
10...	1400	1290	765	8.0	18.5	8.5	--	380	660	270	73	22
JUL												
15...	0915	565	810	8.4	17.5	8.8	--	870	2200	280	75	22
AUG												
12...	0945	740	953	7.6	18.5	8.4	29	2200	4100	270	73	21
SEP												
16...	1045	2040	825	8.0	18.0	8.3	--	430	3800	270	73	21

K Results based on colony count outside acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
16...	83	2	200	17	58	1.8	.050	.85	.90	2.7	.080	3.5
NOV												
19...	84	2	200	18	23	2.0	.130	1.2	1.3	3.3	.040	4.1
DEC												
17...	81	2	200	20	44	2.2	.140	.86	1.0	3.2	.090	4.8
JAN												
15...	83	2	200	19	56	2.3	.280	.82	1.1	3.4	.100	7.4
FEB												
19...	96	2	220	21	29	3.0	.120	1.4	1.5	4.5	.060	4.1
MAR												
19...	79	2	220	17	71	1.3	.060	.84	.90	2.2	.110	5.3
APR												
15...	87	2	230	18	44	1.8	.050	3.1	3.1	4.9	.060	5.1
MAY												
20...	75	2	190	19	1450	1.5	.110	1.1	1.2	2.7	.400	25
JUN												
10...	82	2	200	17	188	1.2	.070	1.9	2.0	3.2	.210	8.8
JUL												
15...	90	2	200	21	400	1.8	.160	.64	.80	2.6	.430	10
AUG												
12...	92	3	210	22	224	2.1	.070	.83	.90	3.0	.460	11
SEP												
16...	83	2	--	--	263	1.8	.030	.67	.70	2.5	.060	8.9

06684500 NORTH PLATTE RIVER AT BRIDGEPORT, NE

LOCATION.--Main channel gage: Lat 41°40'54", long 103°05'52", in NW1/4NW1/4 sec.28, T.20 N., R.50 W., Morrill County, Hydrologic Unit 10180009, on left bank 0.3 mi upstream from bridge on U.S. Highway 26, 0.8 mi north of Bridgeport. Browns Creek channel gage: Lat 41°40'55", long 103°05'53", in NW1/4NW1/4 sec.28, T.20 N., R.50 W., Morrill County, on right bank 0.2 mi upstream from culvert on U.S. Highway 26 and 0.8 mi north of Bridgeport.

DRAINAGE AREA.--25,300 mi², approximately, of which about 23,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June 1896 to October 1900 (no winter records most years), May 1902 to November 1906, June to August 1915, May 1916 to current year. Monthly discharge only for some years, published in WSP 1310. Published as "near Camp Clark" 1896-1900.

REVISED RECORDS.--WSP 1390: 1897, 1915. WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Main channel: Water-stage recorder. Datum of gage is 3,656.14 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Oct. 7, 1927. Oct. 7, 1927 to July 16, 1978 at downstream side of bridge on U.S. Highway 26, 0.3 mi downstream at same datum. Browns Creek channel: Water-stage recorder. Datum of gage is 3,663.51 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to June 1, 1943. June 1, 1943 to Nov. 17, 1983 on left bank at same location and datum.

REMARKS.--Main channel: Estimated daily discharges, Feb. 2-16. Browns Creek channel: Estimated daily discharges, Feb. 1-4, 15. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. River flows in two independently rated channels for which separate records are computed; figures herein represent combined discharge.

AVERAGE DISCHARGE (since Glendo project).--28 years (water years 1958-85), 1,382 ft³/s, 1,001,000 acre-ft/yr; median of yearly mean of discharges, 1,056 ft³/s, 765,100 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft³/s June 26, 1899, gage height, 5.39 ft, site and datum then in use, from graph based on gage readings; minimum daily, 55 ft³/s May 28, 1934, Aug. 15, 1940, but may have been less during periods of no record for Browns Creek channel.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,020 ft³/s Mar. 13; minimum daily, 321 ft³/s July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2860	1800	1560	1710	1010	1120	2120	789	1020	930	1080	733
2	2630	1790	1600	1630	720	1510	2120	721	1040	942	1120	817
3	2520	1800	1620	1520	785	2120	2090	700	1190	874	1120	841
4	2460	1750	1520	1610	825	2570	2030	573	2130	715	1080	979
5	2500	1750	1410	1640	885	2860	1910	536	1810	628	1010	1020
6	2440	1800	1370	1640	960	3300	1670	533	1790	590	827	1010
7	2330	1830	1430	1720	990	3400	1530	479	1800	494	708	1020
8	2220	1800	1460	1750	1030	3480	1500	455	1680	428	700	1160
9	2150	1690	1510	1720	1110	3630	1460	440	1500	377	671	1370
10	2150	1620	1540	1700	1190	3640	1440	462	1400	349	704	1530
11	2110	1600	1560	1530	1270	3640	1400	665	1410	327	738	1770
12	2070	1650	1600	1390	1380	3850	1380	930	1420	321	799	1970
13	2040	1680	1620	1340	1450	3590	1330	1180	1330	334	751	2100
14	2180	1630	1610	1360	1440	2960	1320	1260	1200	421	741	2210
15	2250	1630	1600	1380	1210	2700	1310	1200	1060	491	769	2120
16	2270	1630	1580	1290	1000	2550	1290	1020	931	482	793	2110
17	2250	1630	1570	1230	1010	2440	1260	879	788	491	789	2080
18	2260	1660	1540	1240	959	2410	1250	842	683	501	785	1970
19	2310	1610	1500	1310	920	2320	1200	830	641	548	846	1820
20	2250	1610	1520	1210	929	2260	1120	927	678	624	846	1750
21	2170	1620	1510	1160	959	2280	1070	860	796	680	798	1720
22	2110	1610	1570	1200	969	2220	1000	798	921	724	769	1710
23	2080	1670	1570	1180	969	2120	969	754	889	719	748	1820
24	2030	1730	1600	1130	969	2090	939	727	827	714	749	1950
25	2010	1730	1560	1060	959	2030	845	720	779	716	754	2170
26	1990	1710	1580	1080	969	1990	813	758	895	689	759	2320
27	1930	1660	1580	1080	969	1990	884	800	1070	619	743	2360
28	1890	1600	1610	1070	969	1950	886	877	1090	568	718	2290
29	1890	1560	1600	1030	---	1930	867	908	1040	597	728	2180
30	1880	1560	1600	1030	---	1960	834	914	961	735	730	2120
31	1850	---	1630	1030	---	2030	---	1020	---	940	720	---
TOTAL	68080	50410	48130	41970	28805	78940	39837	24557	34769	18568	25093	51020
MEAN	2196	1680	1553	1354	1029	2546	1328	792	1159	599	809	1701
MAX	2860	1830	1630	1750	1450	3850	2120	1260	2130	942	1120	2360
MIN	1850	1560	1370	1030	720	1120	813	440	641	321	671	733
AC-FT	135000	99990	95470	83250	57130	156600	79020	48710	68960	36830	49770	101200
CAL YR 1984	TOTAL	1272940		MEAN	3478	MAX	9330	MIN	1190	AC-FT	2525000	
WTR YR 1985	TOTAL	510179		MEAN	1398	MAX	3850	MIN	321	AC-FT	1012000	

06685000 PUMPKIN CREEK NEAR BRIDGEPORT, NE

LOCATION.--Lat 41°37'38", long 103°02'10", in SW1/4 sec.12, T.19 N., R.50 W., Morrill County, Hydrologic Unit 10180013, on right bank 250 ft downstream from bridge on U.S. Highway 385 and State Highway 92, 0.5 mi upstream from mouth, and 4 mi southeast of Bridgeport.

DRAINAGE AREA.--1,020 mi², approximately.

PERIOD OF RECORD.--February 1931 to current year.

REVISED RECORDS.--WSP 1390: 1932, 1934(M), 1935, 1936(M), 1938-39. WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Sheet piling control since December 1964. Datum of gage is 3,635.99 ft above National Geodetic Vertical Datum of 1929. Prior to June 25, 1934, nonrecording gage on downstream side of bridge 240 ft upstream and June 25, 1934, to May 18, 1936, water-stage recorder at upstream side of bridge 260 ft upstream, both at datum 0.29 ft higher. May 19, 1936, to June 8, 1965, water-stage recorder, June 9, 1965, to Sept. 1, 1965, non-recording gage, and Sept. 2, 1965, to Sept. 18, 1980, water-stage recorder, all on left bank 250 ft downstream from bridge at present datum.

REMARKS.--Estimated daily discharges: Nov. 26-28, Dec. 2-7, 14, 15, 17-22, 24-26, Dec. 31 to Jan. 3, Jan. 9-23, Jan. 30 to Feb. 19, and Mar. 4, 5. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--54 years, 27.8 ft³/s, 20,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,880 ft³/s June 9, 1965, gage height, 9.98 ft, from floodmark, from rating curve extended above 3,500 ft³/s on basis of rating extension for main channel and determination of flow over road; no flow for several days in 1975-77, 1981, 1982, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 61 ft³/s Apr. 20, gage height, 1.93 ft; maximum gage height, 2.60 ft Dec. 18, backwater from ice; no flow July 16-29, July 31 to Aug. 11, Aug. 17, 29-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	11	15	14	16	18	18	16	7.6	.05	.00	.02
2	28	11	14	14	14	20	17	19	7.7	.35	.00	.07
3	11	11	14	18	14	23	15	21	10	.15	.00	.12
4	5.8	11	14	18	16	20	18	14	23	.35	.00	.61
5	6.4	12	14	18	16	21	19	20	35	.69	.00	.97
6	5.9	12	13	18	16	20	19	29	35	.69	.00	.29
7	6.1	12	13	17	13	19	18	33	26	.69	.00	.16
8	7.3	12	13	18	13	23	20	32	27	.87	.00	.18
9	7.9	12	15	15	15	25	20	24	15	.47	.00	.18
10	8.0	12	15	15	17	23	19	17	15	.15	.00	.16
11	7.9	12	15	14	19	24	16	14	23	.10	.00	.21
12	6.5	12	16	14	21	23	15	24	24	.08	.31	.14
13	7.0	13	15	12	21	23	15	36	21	.08	.98	.14
14	7.5	13	14	13	20	21	16	35	22	.07	.92	.14
15	8.0	13	16	14	20	21	15	32	19	.01	.33	.35
16	8.4	13	17	15	20	20	15	30	20	.00	.01	.29
17	8.7	13	15	17	19	20	15	31	19	.00	.00	.78
18	9.1	13	13	17	19	19	15	32	17	.00	.01	1.3
19	9.1	13	15	15	19	18	16	29	9.5	.00	.05	1.1
20	9.7	13	16	12	19	18	24	27	.26	.00	.41	1.6
21	10	13	16	12	14	19	30	27	.09	.00	.05	1.8
22	9.8	14	16	12	14	19	19	25	.01	.00	.03	2.2
23	9.8	14	15	16	15	18	15	20	3.9	.00	.02	2.6
24	10	14	14	19	19	18	16	7.7	4.8	.00	.04	2.9
25	10	14	13	19	17	18	16	7.4	3.5	.00	.08	2.7
26	11	14	18	18	17	18	18	7.7	3.2	.00	.07	11
27	11	12	15	17	18	18	20	8.7	3.7	.00	.03	22
28	11	15	17	18	18	18	18	9.0	4.4	.00	.01	22
29	11	13	16	18	---	18	17	8.6	3.4	.00	.00	23
30	11	14	16	18	---	18	18	8.5	.14	.03	.00	22
31	11	---	14	18	---	18	---	8.9	---	.00	.00	---
TOTAL	312.9	381	462	493	479	619	532	653.5	403.20	4.83	3.35	121.01
MEAN	10.1	12.7	14.9	15.9	17.1	20.0	17.7	21.1	13.4	.16	.11	4.03
MAX	29	15	18	19	21	25	30	36	35	.87	.98	23
MIN	5.8	11	13	12	13	18	15	7.4	.01	.00	.00	.02
AC-FT	621	756	916	978	950	1230	1060	1300	800	9.6	6.6	240
CAL YR 1984	TOTAL	6782.65		MEAN	18.5	MAX	43	MIN	.68	AC-FT	13450	
WTR YR 1985	TOTAL	4464.79		MEAN	12.2	MAX	36	MIN	.00	AC-FT	8860	

PLATTE RIVER BASIN

06686000 NORTH PLATTE RIVER AT LISCO, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°29'18", long 102°37'25", in NW1/4SE1/4 sec.33, T.18 N., R.46 W., Garden County, Hydrologic Unit 10180009, near right bank on downstream side of pier of highway bridge, 0.5 mi south of Lisco.

DRAINAGE AREA.--26,700 mi², approximately, of which about 24,700 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 1916, June to October 1917, September 1931 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,474.5 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 8, 1931, nonrecording gage at present site at different datum and Sept. 8, 1931 to May 3, 1932, at present site at datum 1.0 ft higher. May 4, 1932, to May 28, 1974, water-stage recorder at present site at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Dec. 14 to Feb. 23. Records good except for period of estimated record, which is fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE (since Glendo project).--28 years (water years 1958-85), 1,463 ft³/s, 1,060,000 acre-ft/yr; median of yearly mean discharges, 1,160 ft³/s, 840,400 acre-ft/yr. Figures are unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,100 ft³/s June 27, 29, 1917, from graph based on daily gage readings, from rating curve extended above 15,000 ft³/s; minimum daily, 8 ft³/s Aug. 4, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,580 ft³/s Mar. 11, gage height, 3.07 ft; maximum gage height, 4.47 ft Jan. 12, backwater from ice; minimum daily discharge, 285 ft³/s July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3190	1850	1720	1650	1000	1220	1950	912	982	970	866	602
2	2740	1850	1660	1650	1000	1500	1990	866	1030	935	994	702
3	2550	1860	1630	1650	1000	1980	1990	798	1120	877	1060	766
4	2480	1860	1650	1700	1000	2460	2040	766	1690	787	1090	820
5	2620	1860	1570	1700	980	2760	2040	682	2140	641	1060	923
6	2530	1860	1480	1700	960	3130	1950	661	1860	545	959	959
7	2460	1860	1560	1650	940	3250	1770	682	1880	473	820	994
8	2330	1860	1510	1650	1000	3290	1660	651	1820	430	734	1060
9	2230	1860	1560	1650	1100	3350	1540	631	1650	382	702	1070
10	2110	1790	1540	1650	1200	3450	1500	612	1510	343	661	1370
11	2110	1740	1570	1600	1250	3430	1480	631	1460	314	682	1570
12	2110	1680	1590	1500	1250	3410	1480	787	1400	306	734	1830
13	2110	1650	1620	1600	1250	3390	1430	1240	1370	285	766	1980
14	2130	1690	1600	1650	1250	2770	1410	1340	1280	299	702	2130
15	2230	1710	1600	1700	1300	2460	1430	1330	1200	328	724	2210
16	2300	1690	1550	1700	1300	2300	1410	1210	1090	398	744	2200
17	2350	1690	1550	1700	1350	2250	1370	1080	959	439	744	2160
18	2350	1690	1400	1650	1350	2250	1370	982	798	447	702	2060
19	2320	1690	1350	1600	1350	2210	1320	935	713	456	702	1880
20	2210	1690	1350	1400	1350	2200	1280	912	641	482	787	1710
21	2110	1680	1400	1200	1300	2110	1220	982	661	518	798	1650
22	2040	1680	1450	1100	1300	2110	1220	923	734	583	798	1710
23	2010	1690	1500	1200	1160	2090	1210	877	809	880	682	1830
24	1990	1710	1550	1200	1110	2060	1130	832	744	866	612	1960
25	2010	1710	1500	1250	1120	2090	1070	832	692	809	592	2110
26	1960	1680	1550	1300	1130	2060	1030	798	766	734	602	2200
27	1930	1660	1550	1350	1160	2010	982	832	843	682	612	2300
28	1900	1660	1600	1400	1180	1960	970	843	1010	612	612	2390
29	1850	1710	1710	1450	---	1910	947	843	1060	583	602	2370
30	1850	1720	1660	1300	---	1910	982	832	970	641	621	2280
31	1850	---	1660	1200	---	1930	---	877	---	713	631	---
TOTAL	68960	52330	48190	46700	32640	75300	43171	27179	34882	17758	23395	49796
MEAN	2225	1744	1555	1506	1166	2429	1439	877	1163	573	755	1660
MAX	3190	1860	1720	1700	1350	3450	2040	1340	2140	970	1090	2390
MIN	1850	1650	1350	1100	940	1220	947	612	641	285	592	602
AC-FT	136800	103800	95580	92630	64740	149400	85630	53910	69190	35220	46400	98770
CAL YR 1984	TOTAL	1263020		MEAN	3451	MAX	8710	MIN	1200	AC-FT	2505000	
WTR YR 1985	TOTAL	520301		MEAN	1425	MAX	3450	MIN	285	AC-FT	1032000	

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1970 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1970 to September 1981.

WATER TEMPERATURES: October 1970 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,280 microsiemens Feb. 11, 1981; minimum daily, 275 microsiemens Mar. 1, 1978.

WATER TEMPERATURES: Maximum, 31.0°C July 19, 1972; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT										
17...	0930	2250	870	8.0	7.0	665	--	10.4	--	440
NOV										
19...	0915	1590	888	8.5	7.0	670	9.0	11.5	15	27
DEC										
17...	1100	1540	892	8.5	.5	677	--	12.4	--	K12
JAN										
15...	1130	1710	932	8.0	.5	659	5.5	11.4	--	24
FEB										
19...	1130	1340	888	8.1	3.0	672	--	11.8	--	K13
MAR										
18...	0930	2130	850	8.1	10.0	665	24	10.1	36	13
APR										
15...	1015	1440	840	8.5	15.0	665	--	9.2	--	K15
MAY										
21...	0945	1080	878	8.6	18.0	676	55	8.6	27	200
JUN										
11...	1000	1450	830	8.6	15.5	681	--	8.8	--	310
JUL										
16...	1100	402	852	8.5	24.5	673	70	8.4	47	540
AUG										
13...	1045	786	887	8.0	21.0	675	--	7.9	--	190
SEP										
17...	1100	2180	828	8.0	18.0	665	65	8.5	--	330

K Results based on colony count outside the acceptable range (non-ideal colony count).

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 17...	270	240	--	64	20	77	2	--	--	200
NOV 19...	120	280	25	79	21	80	2	8.2	130	190
DEC 17...	860	280	--	77	22	80	2	--	--	200
JAN 15...	620	320	12	90	24	87	2	11	265	240
FEB 19...	240	290	--	83	20	82	2	--	--	200
MAR 18...	58	290	75	78	24	80	2	7.3	212	200
APR 15...	29	300	--	82	23	86	2	--	--	220
MAY 21...	440	290	54	80	22	84	2	8.6	211	210
JUN 11...	820	290	--	75	25	70	2	--	--	210
JUL 16...	390	260	65	70	21	85	2	9.8	197	200
AUG 13...	300	250	--	67	21	85	2	--	--	200
SEP 17...	1700	270	43	76	20	78	2	9.0	214	200

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT 17...	17	--	--	--	--	--	--	88	1.9	--
NOV 19...	19	.50	32	605	590	.82	2600	33	2.2	2.2
DEC 17...	20	--	--	--	--	--	--	40	2.3	--
JAN 15...	22	.50	34	709	700	.96	3270	22	2.6	2.6
FEB 19...	19	--	--	--	--	--	--	51	2.6	--
MAR 18...	18	.40	24	595	560	.81	3420	102	1.5	1.5
APR 15...	18	--	--	--	--	--	--	63	1.7	--
MAY 21...	19	.40	27	568	590	.77	1660	187	1.4	1.4
JUN 11...	18	--	--	--	--	--	--	18	1.0	--
JUL 16...	22	.40	32	580	560	.79	630	246	1.3	1.3
AUG 13...	25	--	--	--	--	--	--	197	1.8	--
SEP 17...	18	.50	32	575	570	.78	3380	242	1.8	1.8

PLATTE RIVER BASIN

85

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

		NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	
	DATE										
	OCT 17...	.020	--	.88	.90	2.8	.090	--	--	5.6	
	NOV 19...	.040	.030	.76	.80	3.0	.060	.010	.020	3.7	
	DEC 17...	.060	--	.84	.90	3.2	.080	--	--	4.5	
	JAN 15...	.160	.170	.84	1.0	3.6	.080	.060	.060	5.2	
	FEB 19...	.080	--	1.0	1.1	3.7	.100	--	--	4.3	
	MAR 18...	.050	.220	.75	.80	2.3	.080	.030	.030	4.4	
	APR 15...	.020	--	.88	.90	2.6	.110	--	--	5.0	
	MAY 21...	.060	.050	1.7	1.8	3.2	.170	<.010	<.010	6.8	
	JUN 11...	.090	--	1.1	1.2	2.2	.010	--	--	6.5	
	JUL 16...	.090	.030	1.6	1.7	3.0	.290	<.010	.010	12	
	AUG 13...	.070	--	1.5	1.6	3.4	.150	--	--	10	
	SEP 17...	.040	.060	1.1	1.1	2.9	.120	.020	.020	10	
DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 19...	0915	20	5	97	<.0	<1	30	<3	5	7	<1
MAR 18...	0930	20	3	86	<.5	<1	2	<3	12	10	<1
MAY 21...	0945	20	4	98	<.5	<1	20	<3	10	19	3
JUL 16...	1100	40	7	99	<.5	<1	20	<3	5	13	2
DATE		LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 19...		37	4	1.5	<10	<1	3	<1	820	7	<3
MAR 18...		41	5	<.1	<10	<1	5	<1	750	6	11
MAY 21...		44	5	<.1	<10	1	4	<1	760	8	19
JUL 16...		39	2	<.1	<10	<1	4	<1	790	10	<3

PLATTE RIVER BASIN

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV						
19...	0915	1590	7.0	206	884	26
JAN						
15...	1130	1710	.5	59	272	25
MAR						
18...	0930	2130	10.0	374	2150	34
MAY						
21...	0945	1080	18.0	323	942	79
JUL						
16...	1100	402	24.5	300	326	92
SEP						
17...	1100	2180	18.0	549	3230	62

PLATTE RIVER BASIN

87

06687000 BLUE CREEK NEAR LEWELLEN, NE

LOCATION.--Lat 41°20'08", long 102°10'21", in NE1/4 sec.30, T.16 N., R.42 W., Garden County, Hydrologic Unit 10180009, on left bank 5 ft downstream from county highway bridge, 0.5 mi downstream from bridge on U.S. Highway 26, 0.8 mi upstream from mouth, and 1.5 mi west of Lewellen.

DRAINAGE AREA.--1,190 mi², approximately, of which about 80 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year.

REVISED RECORDS.--WSP 1310: 1941(M). WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,310.04 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Apr. 10, 1958. Apr. 10, 1958 to Sept. 17, 1983, recording gage at site 125 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 14, 15, 18-29, Jan. 1-5, Jan. 10 to Feb. 16, and Mar. 4-6. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--55 years, 69.4 ft³/s, 50,280 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 720 ft³/s May 20, 1938, gage height, 6.46 ft, present datum, from rating curve extended above 500 ft³/s; maximum gage height, 6.93 ft, present datum, Dec. 21, 1945, backwater from ice; no flow for short periods in 1940, 1947, 1957, 1960-61, 1963, 1971, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 274 ft³/s July 24, gage height, 4.99 ft; maximum gage height, 6.31 ft Jan. 2, backwater from ice; minimum daily discharge, 0.19 ft³/s June 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	77	100	94	80	96	89	95	39	92	81	18
2	48	81	100	86	50	92	90	91	37	27	80	38
3	47	82	99	86	66	92	89	89	37	12	78	66
4	50	80	98	100	80	90	88	88	37	5.6	78	67
5	65	80	96	100	80	88	91	79	37	3.7	67	65
6	68	83	96	108	86	86	90	82	36	1.7	56	61
7	66	84	93	108	92	85	85	76	35	.32	43	59
8	71	85	91	106	92	88	84	74	35	.64	35	55
9	80	85	94	102	96	88	85	75	31	.78	22	52
10	84	84	94	94	100	88	87	73	25	.32	25	53
11	85	84	96	90	100	88	88	83	15	.32	36	62
12	84	83	94	70	110	91	85	90	7.9	.37	45	61
13	82	84	91	68	110	94	84	102	2.3	.50	36	60
14	83	83	90	86	110	94	83	108	.51	.41	26	58
15	83	81	90	110	110	96	84	86	.40	.38	25	60
16	82	83	94	120	125	92	84	70	.40	.57	28	134
17	82	85	91	120	102	92	83	68	.25	.56	30	87
18	82	84	86	120	101	91	85	66	.25	.64	30	80
19	83	84	50	100	99	91	83	71	.19	1.8	26	79
20	82	84	130	60	101	90	82	64	.49	13	20	76
21	81	88	110	80	102	91	83	54	1.0	17	12	79
22	81	86	86	100	102	91	83	50	1.3	14	11	86
23	81	90	86	110	102	90	83	47	.83	22	13	94
24	82	93	84	125	98	90	82	45	1.4	127	13	92
25	81	96	80	125	99	90	82	45	2.4	44	14	88
26	84	94	80	120	98	90	90	46	4.6	26	15	88
27	81	94	84	100	96	90	93	49	8.1	17	13	86
28	79	97	94	96	96	89	92	54	4.6	14	11	84
29	80	98	100	94	---	88	90	52	10	38	29	84
30	79	98	108	90	---	88	104	47	5.1	90	33	86
31	80	---	108	84	---	88	---	47	---	91	19	---
TOTAL	2344	2590	2893	3052	2683	2797	2601	2166	416.02	662.61	1050	2158
MEAN	75.6	86.3	93.3	98.5	95.8	90.2	86.7	69.9	13.9	21.4	33.9	71.9
MAX	85	98	130	125	125	96	104	108	39	127	81	134
MIN	47	77	50	60	50	85	82	45	.19	.32	11	18
AC-FT	4650	5140	5740	6050	5320	5550	5160	4300	825	1310	2080	4280
CAL YR 1984	TOTAL	24630.97		MEAN	67.3	MAX	150	MIN	.12	AC-FT	48860	
WTR YR 1985	TOTAL	25412.63		MEAN	69.6	MAX	134	MIN	.19	AC-FT	50410	

PLATTE RIVER BASIN

06687500 NORTH PLATTE RIVER AT LEWELLEN. NE

LOCATION.--Lat 41°19'01", long 102°07'32", in SE1/4NW1/4 sec.34, T.16 N., R.42 W., Garden County, Hydrologic Unit 10180009, on left bank 19 ft downstream from bridge on State Highway 26, 1 mi southeast of Lewellen, and approximately 0.5 mi upstream from high-water line of Lake McConaughy.

DRAINAGE AREA.--28,600 mi², approximately, of which about 25,400 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July to September 1931, December 1940 to current year.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,285.88 ft above National Geodetic Vertical Datum of 1929. July to September 1931, nonrecording gage at site 0.9 mi upstream at different datum. December 1940 to Sept. 19, 1973, water-stage recorders on two channels at present site at datum 1.28 ft lower. Sept. 21, 1973 to July 13, 1984, water-stage recorder at site 0.9 mi upstream at datum 4.28 ft higher.

REMARKS.--Estimated daily discharges: Dec. 6-9 and Dec. 18 to Feb. 26. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE (since Glendo project).--28 years (water years 1958-85), 1,563 ft³/s, 1,132,000 acre-ft/yr; median of yearly mean discharges, 1,280 ft³/s, 927,400 acre-ft/yr. Figures are unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s June 4, 1971, at different datum; minimum daily, 44 ft³/s July 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,650 ft³/s Mar. 13, gage height, 6.35 ft; maximum gage height, 7.57 ft Dec. 18, backwater from ice; minimum daily discharge, 270 ft³/s July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3210	1980	1880	1600	1000	1430	2220	1150	917	1080	982	589
2	2910	1970	1830	1500	1020	1350	2250	1000	1020	949	1030	734
3	2650	1980	1800	1500	1040	1660	2250	938	1090	895	1060	783
4	2560	1950	1800	1700	1060	1980	2200	885	1230	843	1110	783
5	2720	1880	1810	1750	1080	2540	2250	854	1870	754	1120	813
6	2640	1880	1600	1800	1080	2990	2120	793	2010	642	982	864
7	2540	1930	1700	1750	1080	3280	1960	783	1980	555	906	927
8	2430	1940	1800	1600	1100	3340	1820	773	1990	459	843	960
9	2370	1940	2000	1500	1200	3400	1720	784	1880	407	669	1030
10	2330	1910	1770	1300	1300	3480	1690	725	1740	379	606	1210
11	2310	1880	1710	1750	1300	3520	1660	734	1550	332	589	1590
12	2300	1870	1730	1750	1300	3500	1610	783	1470	306	633	1810
13	2270	1880	1730	1750	1300	3570	1550	1210	1440	288	660	1950
14	2280	1880	1810	1700	1300	3480	1510	1550	1370	276	697	2020
15	2340	1850	1870	1700	1300	2980	1500	1500	1250	270	744	2220
16	2370	1840	1880	1650	1400	2750	1500	1420	1130	282	763	2450
17	2330	1880	1840	1650	1500	2620	1460	1290	1040	319	763	2250
18	2300	1880	1700	1650	1500	2550	1400	1150	906	365	734	2200
19	2270	1880	1500	1600	1500	2480	1390	1110	813	386	734	2170
20	2240	1880	1300	1500	1500	2470	1340	1090	744	490	725	1960
21	2190	1910	1300	1400	1600	2420	1310	1070	697	506	754	1910
22	2160	1940	1400	1350	1650	2400	1290	1120	687	530	773	1850
23	2150	1940	1500	1300	1700	2310	1220	1050	763	555	773	1900
24	2160	1980	1600	1300	1750	2250	1150	982	813	951	715	1880
25	2160	2010	1400	1350	1650	2230	1090	917	793	864	687	1930
26	2150	2030	1300	1450	1650	2220	1140	917	813	783	669	2200
27	2130	1950	1600	1400	1620	2200	1080	917	843	706	660	2330
28	2100	1840	1700	1400	1590	2170	1040	938	874	642	697	2450
29	2070	1930	1800	1300	---	2130	1080	949	949	725	651	2610
30	2010	1930	1700	1200	---	2130	1250	938	982	783	642	2590
31	2010	---	1700	1100	---	2180	---	927	---	1290	606	---
TOTAL	72660	57540	52060	47250	38070	80010	47050	31247	35654	18612	23977	50963
MEAN	2344	1918	1679	1524	1360	2581	1568	1008	1188	600	773	1699
MAX	3210	2030	2000	1800	1750	3570	2250	1550	2010	1290	1120	2610
MIN	2010	1840	1300	1100	1000	1350	1040	725	687	270	589	589
AC-FT	144100	114100	103300	93720	75510	158700	93320	61980	70720	36920	47560	101100
CAL YR 1984	TOTAL	1334600		MEAN	3646	MAX	9650	MIN	1000	AC-FT	2647000	
WTR YR 1985	TOTAL	555093		MEAN	1521	MAX	3570	MIN	270	AC-FT	1101000	

06690000 LAKE MCCONAUGHY NEAR KEYSTONE, NE

LOCATION.--Lat 41°12'45", long 101°40'03", in NW1/4SW1/4 sec.3, T.14 N., R.38 W., Keith County, Hydrologic Unit 10180014, near right bank at outlet tower of Kingsley Dam on North Platte River, 4.5 mi west of Keystone.

DRAINAGE AREA.--29,300 mi², approximately, of which about 25,800 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1941 to current year.

GAGE.--Electric tape gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; storage began Feb. 9, 1941. Capacity, 1,948,000 acre-ft between elevations 3,130.0 ft, sill of outlet gates, and 3,270.0 ft, top of morning-glory spillway gates. Elevation of crest of morning-glory spillway is 3,254.0 ft. Dead storage negligible. Figures given herein represent total contents. Water is used for power development and irrigation in South-Central Nebraska by the Central Nebraska Public Power and Irrigation District.

COOPERATION.--Records of elevations and capacity table furnished by the Central Nebraska Public Power and Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 1,920,000 acre-ft July 12-16, 1971, elevation, 3,269.1 ft; minimum observed since operation of reservoir began, 32,860 acre-ft Sept. 29, 1941, elevation, 3,153.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,711,000 acre-ft Oct. 24-28, elevation, 3,262.3 ft; minimum observed, 1,354,000 acre-ft Sept. 9-11, elevation, 3,249.3 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	3,260.9	1,670,000	-
Oct.	31	3,262.2	1,708,000	+38,000
Nov.	30	3,260.6	1,661,000	-47,000
Dec.	31	3,258.2	1,593,000	-68,000
CAL YR 1984	.....	-	-	-109,000
Jan.	31	3,257.8	1,581,000	-12,000
Feb.	28	3,257.7	1,579,000	-2,000
Mar.	31	3,258.0	1,587,000	+8,000
Apr.	30	3,258.9	1,613,000	+26,000
May	31	3,260.2	1,650,000	+37,000
June	30	3,259.4	1,627,000	-23,000
July	31	3,253.1	1,453,000	-174,000
Aug.	31	3,249.9	1,370,000	-83,000
Sept.	30	3,251.6	1,414,000	+44,000
WTR YR 1985	.....	-	-	-256,000

06690500 NORTH PLATTE RIVER NEAR KEYSTONE, NE

LOCATION.--Lat 41°12'30", long 101°37'50", in SW1/4 sec.1, T.14 N., R.38 W., Keith County, Hydrologic Unit 10180014, on right bank 0.2 mi downstream from diversion dam of Sutherland Reservoir supply canal and 2.5 mi southwest of Keystone.

DRAINAGE AREA.--29,300 mi², approximately, of which about 25,800 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June to August 1917, July to September 1939, May to September 1940, January to April 1941, March 1942 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1942, 1946-47. WSP 1630: 1958. WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,105.59 ft above National Geodetic Vertical Datum of 1929 (Nebraska Public Power District bench mark). See WSP 1918 for history of changes prior to May 1, 1964.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Flow completely regulated by Lake McConaughy (station 06690000) since Feb. 9, 1941. Supply canal for Nebraska Public Power District diverts 0.2 mi upstream from station.

AVERAGE DISCHARGE.--43 years (water years 1943-85), 531 ft³/s, 384,700 acre-ft/yr; median of yearly mean discharges, 365 ft³/s, 264,400 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s June 30, 1917, from graph based on daily gage readings; no flow for many days in 1975-85.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,330 ft³/s Jan. 23, gage height, 5.14 ft; no flow Oct. 24, 25, Apr. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	437	1610	1290	159	1660	88	77	125	1330	802	318
2	.40	848	1780	1060	142	1860	88	89	128	1030	566	329
3	.50	1100	1850	1050	138	2010	86	112	78	1320	315	329
4	32	1870	1980	1060	142	2260	86	138	49	1890	261	296
5	51	929	2050	1060	107	2200	16	134	121	2170	324	271
6	36	414	1860	1120	36	2300	.90	134	178	2280	421	246
7	6.6	552	1630	1150	97	2370	.50	128	206	2300	468	202
8	31	411	1810	1230	249	2230	.10	121	231	2470	395	206
9	17	972	1850	1200	324	2370	.00	118	246	2570	245	190
10	12	1100	1850	1200	335	2260	61	118	242	2570	289	334
11	1.3	1360	1450	1230	389	2280	101	128	237	2610	376	402
12	.90	1590	1250	1230	601	2240	59	121	242	2470	395	125
13	.50	1780	924	1180	638	1780	69	131	242	2370	497	73
14	.50	954	318	1140	699	1640	77	128	269	2370	664	19
15	.20	2280	389	1140	708	1230	106	131	291	2370	842	88
16	.30	1730	389	942	745	710	153	131	296	2370	893	62
17	.20	1130	522	736	783	332	130	125	312	2160	893	1.8
18	.30	1260	1110	747	754	186	150	128	341	1960	956	8.2
19	.10	1240	1380	707	754	246	163	128	352	1950	989	19
20	.10	1230	1340	790	822	302	159	125	389	1760	1000	18
21	.10	1240	1340	475	862	296	156	115	616	1550	1000	18
22	.30	1240	1330	277	862	291	178	115	875	1320	1020	14
23	.10	1250	1360	498	882	358	206	131	1280	1150	1020	13
24	.00	1260	1380	8.6	862	341	202	133	1700	946	1020	12
25	.00	1290	1370	1.5	857	161	142	128	2090	627	1010	12
26	529	1300	1370	1.4	1000	101	109	128	1640	434	1050	12
27	673	1260	1380	121	1280	84	106	128	1520	461	1020	12
28	754	1240	1320	278	1540	86	112	128	1500	622	935	12
29	822	1130	1370	557	---	91	112	129	1520	851	610	10
30	946	1150	1380	565	---	91	91	125	1540	893	396	9.4
31	868	---	1500	314	---	88	---	128	---	812	329	---
TOTAL	4783.80	35547	42442	24358.5	16767	34454	3007.50	3833	18856	51986	21001	3661.4
MEAN	154	1185	1369	786	599	1111	100	124	629	1677	677	122
MAX	946	2280	2050	1290	1540	2370	206	138	2090	2610	1050	402
MIN	.00	411	318	1.4	36	84	.00	77	49	434	245	1.8
AC-FT	9490	70510	84180	48320	33260	68340	5970	7600	37400	103100	41660	7260
CAL YR 1984	TOTAL 822221.80			MEAN	2247	MAX	5530	MIN	.00	AC-FT 1631000		
WTR YR 1985	TOTAL 260697.20			MEAN	714	MAX	2610	MIN	.00	AC-FT 517100		

PLATTE RIVER BASIN

91

06691000 NORTH PLATTE RIVER NEAR SUTHERLAND, NE

LOCATION.--Lat 41°12'37", long 101°06'53", in sec.4, T.14 N., R.33 W., Lincoln County, Hydrologic Unit 10180014, on left bank 80 ft downstream from bridge on county road, 2.5 mi upstream from Birdwood Creek, and 3.5 mi north of Sutherland.

DRAINAGE AREA.--29,800 mi², approximately, of which about 26,120 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--June to October 1917, July 1931 to August 1933 (irrigation seasons only), May to September 1935, May 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 976: 1942. WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,920 ft, from topographic map. Prior to Apr. 29, 1936, nonrecording gage near present site at different datums. Apr. 29, 1936 to Oct. 6, 1971, water-stage recorder at site 80 ft upstream and Oct. 7, 1971 to Sept. 30, 1984 at present site, all at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1, 3-9, and May 18-21. Records good except those above 1,000 ft³/s and for periods of estimated record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--43 years (water years 1943-85), 536 ft³/s, 388,300 acre-ft/yr; median of yearly mean discharges, 361 ft³/s, 261,500 acre-ft/yr. Figures unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s June 29, 1917, from discharge graph based on daily gage readings, from rating curve extended above 16,000 ft³/s; no flow July 24-28, 30, 31, 1931, Aug. 7, 1934, July 20-28, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,080 ft³/s Nov. 16, gage height, 4.57 ft; maximum gage height, 5.57 ft Jan. 22, backwater from ice; minimum daily discharge, 15 ft³/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	835	1340	1710	500	1520	283	92	58	1410	681	188
2	20	662	1760	1440	400	1740	279	86	97	930	681	162
3	20	827	1880	1340	350	1940	273	79	173	677	489	158
4	19	1260	1990	1320	300	2000	279	75	216	1050	269	148
5	18	1820	2100	1360	300	2220	254	78	152	1480	149	138
6	18	1000	2180	1400	300	2200	197	76	119	1770	112	120
7	17	676	1840	1410	200	2350	195	75	68	1850	113	108
8	16	702	1820	1420	160	2350	99	71	64	1870	229	100
9	15	684	1970	1440	350	2290	95	67	66	2010	154	99
10	30	1060	1980	1440	450	2390	85	67	72	2110	117	144
11	115	1250	1990	1400	480	2270	101	110	76	2020	92	257
12	150	1470	1550	1380	560	2220	118	109	65	1940	92	329
13	148	1760	1410	1440	760	2160	96	149	67	1810	81	186
14	146	1610	1010	1460	780	1670	89	263	71	1750	85	164
15	170	1330	721	1460	820	1590	93	178	65	1740	216	125
16	188	2480	685	1460	900	1190	86	120	67	1670	428	112
17	180	1720	655	1120	940	784	94	106	71	1640	525	125
18	170	1420	794	980	980	524	72	80	68	1410	552	134
19	170	1390	1500	989	960	434	68	80	72	1310	637	132
20	156	1360	1700	760	1000	438	78	78	68	1360	657	132
21	153	1360	1590	500	1090	460	75	75	73	1190	644	140
22	149	1360	1580	400	1070	467	75	75	275	1130	650	142
23	147	1360	1580	350	1040	453	75	73	555	920	823	149
24	149	1370	1530	600	1000	471	82	77	852	1130	775	142
25	149	1420	1550	300	983	454	86	72	1250	840	755	138
26	150	1480	1580	200	958	336	95	62	1610	535	723	135
27	483	1450	1580	200	1080	297	98	64	1220	380	707	134
28	701	1410	1560	200	1320	269	93	65	1110	353	833	133
29	789	1360	1540	450	---	256	91	62	1110	445	682	144
30	861	1310	1560	700	---	253	101	59	1130	695	400	160
31	985	---	1560	760	---	262	---	59	---	696	257	---
TOTAL	6502	39196	48085	31389	20031	38258	3805	2782	10960	40121	13608	4478
MEAN	210	1307	1551	1013	715	1234	127	89.7	365	1294	439	149
MAX	985	2480	2180	1710	1320	2390	283	263	1610	2110	833	329
MIN	15	662	655	200	160	253	68	59	58	353	81	99
AC-FT	12900	77750	95380	62260	39730	75880	7550	5520	21740	79580	26990	8880
CAL YR 1984	TOTAL	835154		MEAN	2282	MAX	5580	MIN	15	AC-FT 1657000		
WTR YR 1985	TOTAL	259215		MEAN	710	MAX	2480	MIN	15	AC-FT 514200		

PLATTE RIVER BASIN

06692000 BIRDWOOD CREEK NEAR HERSHEY, NE

LOCATION.--Lat 41°13'20", long 101°04'12", in NE1/4NW1/4 sec.2, T.14 N., R.33 W., Lincoln County, Hydrologic Unit 10180014, on left bank 60 ft downstream from bridge on county road, 1 mi upstream from mouth, and 5 mi northwest of Hershey.

DRAINAGE AREA.--940 mi², approximately, of which about 80 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May 1931 to current year.

REVISED RECORDS.--WSP 1390: 1948(M), 1949, 1951-52(M). WDR NE-67, WDR NE 76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,920 ft, from topographic map. Jan. 1, 1931, to Dec. 16, 1934, nonrecording gage and Dec. 17, 1934 to Nov. 4, 1953, water-stage recorder, at site 50 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 18, 19, 25, 26, Dec. 31 to Jan. 3, Jan. 9, 10, 13, 14, 20-24, Jan. 30 to Feb. 15. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--54 years, 151 ft³/s, 109,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s Apr. 1, 1949, gage height, 4.35 ft, from rating curve extended above 680 ft³/s; maximum gage height, 5.12 ft Dec. 15, 1940, backwater from ice; minimum daily discharge, 61 ft³/s Jan. 19, 1935, Apr. 7, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 255 ft³/s May 11, gage height, 2.09 ft; maximum gage height, 4.41 ft Jan. 21, backwater from ice; minimum daily discharge, 95 ft³/s July 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	140	157	145	155	162	141	152	152	113	132	128
2	130	148	151	150	155	160	141	152	156	110	132	125
3	129	148	154	155	150	159	140	149	156	106	135	127
4	134	152	154	159	150	135	143	151	156	106	132	126
5	148	151	154	160	145	146	143	157	148	103	115	144
6	137	144	154	160	140	159	140	148	148	103	107	128
7	135	151	156	162	140	170	140	144	148	102	111	126
8	132	159	157	160	145	162	140	146	146	100	125	123
9	135	165	160	160	155	160	140	144	138	99	112	122
10	135	135	156	160	165	162	135	148	141	100	109	156
11	135	138	157	167	175	162	148	187	128	98	110	158
12	135	162	159	169	175	154	148	172	114	95	113	168
13	138	156	154	165	175	159	141	189	117	95	109	160
14	137	152	160	155	175	162	141	169	124	98	107	149
15	140	151	156	151	170	160	144	169	140	103	108	146
16	141	146	156	160	164	160	148	156	135	103	108	164
17	143	152	156	164	167	159	149	149	111	102	112	141
18	148	148	155	164	162	159	152	149	113	103	108	144
19	143	148	155	157	165	157	157	149	111	103	106	148
20	144	151	152	145	169	160	154	149	107	107	106	147
21	144	146	157	145	172	157	154	144	113	104	108	148
22	144	151	156	150	159	160	151	144	111	100	127	149
23	144	154	156	155	159	157	148	146	104	102	150	155
24	149	156	143	170	164	154	148	144	96	140	140	156
25	149	164	140	165	169	154	160	144	96	111	135	156
26	152	164	150	151	162	152	172	151	113	107	137	156
27	157	149	157	152	159	144	146	167	106	104	135	153
28	156	148	157	156	160	140	160	160	106	104	139	147
29	154	160	149	162	---	135	165	170	104	113	135	135
30	159	156	148	160	---	135	165	162	104	141	134	126
31	146	---	145	155	---	135	---	151	---	134	134	---
TOTAL	4401	4545	4771	4889	4501	4790	4454	4812	3742	3309	3771	4311
MEAN	142	152	154	158	161	155	148	155	125	107	122	144
MAX	159	165	160	170	175	170	172	189	156	141	150	168
MIN	128	135	140	145	140	135	135	144	96	95	106	122
AC-FT	8730	9020	9460	9700	8930	9500	8830	9540	7420	6560	7480	8550
CAL YR 1984	TOTAL	52901	MEAN	145	MAX	192	MIN	101	AC-FT	104900		
WTR YR 1985	TOTAL	52296	MEAN	143	MAX	189	MIN	95	AC-FT	103700		

06693000 NORTH PLATTE RIVER AT NORTH PLATTE, NE

LOCATION.--Lat 41°09'13", long 100°45'16", in sec.28, T.14 N., R.30 W., Lincoln County, Hydrologic Unit 10180014, on right bank 150 ft downstream from bridge on U.S. Highway 83, 0.5 mi north of city of North Platte, and 4.5 mi upstream from confluence with South Platte River.

DRAINAGE AREA.--30,900 mi², approximately, of which about 26,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1895 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area. WSP 2118: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 2,792.14 ft above National Geodetic Vertical Datum of 1929 (Nebraska Department of Roads bench mark). See WSP 2118 for history of changes prior to June 3, 1968.

REMARKS.--Estimated daily discharges: Dec. 13 to Feb. 23. Records good except for period of estimated record, which is fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--43 years (water years 1943-85), 774 ft³/s, 560,800 acre-ft/yr; median of yearly mean discharges, 599 ft³/s, 434,000 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 29,600 ft³/s June 11, 1909, discharge measurement; minimum daily, 20 ft³/s Sept. 20, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,030 ft³/s Nov. 17, gage height, 4.98 ft; maximum gage height, 6.09 ft Jan. 14, backwater from ice; minimum daily discharge, 206 ft³/s June 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388	1330	1460	1650	580	1800	541	411	278	1170	905	560
2	372	949	1690	1600	580	1970	521	346	301	1270	847	493
3	361	1170	2010	1350	500	2180	489	316	325	865	812	428
4	378	1270	2100	1350	500	2220	502	320	388	856	610	408
5	434	1880	2260	1400	500	2440	534	351	383	1230	445	412
6	440	1750	2330	1500	500	2630	464	335	356	1590	366	400
7	411	1150	2330	1500	500	2660	434	335	311	1810	346	394
8	394	1020	2010	1500	450	2740	411	325	278	1820	425	377
9	378	920	2160	1500	450	2680	378	311	264	1920	442	372
10	400	1170	2200	1500	460	2710	372	311	273	2050	389	486
11	411	1420	2290	1500	480	2740	351	378	306	2130	339	551
12	446	1740	2180	1300	500	2640	388	561	295	2200	342	678
13	452	1910	1700	1400	550	2610	388	554	281	2180	282	722
14	452	2230	1600	1500	680	2420	367	760	278	2080	282	585
15	464	1540	1100	1500	800	2080	361	663	291	2090	335	533
16	495	2180	1000	1400	1000	1860	351	548	292	2120	506	519
17	534	2540	900	1300	1100	1400	330	502	269	2100	625	535
18	508	1600	900	1200	1200	987	361	489	230	1950	682	504
19	508	1580	1150	1100	1200	727	346	452	214	1650	771	442
20	502	1540	1750	1000	1200	687	356	372	226	1700	845	425
21	489	1510	1800	1000	1200	671	367	351	206	1710	882	453
22	470	1500	1800	1000	1220	711	372	340	214	1420	892	463
23	458	1440	1750	900	1400	752	367	335	434	1260	1050	460
24	470	1440	1700	960	1300	719	367	351	610	1320	1160	459
25	476	1490	1600	900	1280	743	405	340	916	1180	1140	456
26	464	1580	1650	800	1270	679	452	330	1300	892	1130	449
27	490	1630	1700	700	1330	625	464	346	1340	623	1130	440
28	803	1530	1650	680	1540	582	417	340	1120	524	1220	391
29	949	1550	1600	680	---	561	400	311	1040	534	1200	401
30	1050	1460	1600	680	---	561	422	320	1060	774	975	433
31	1210	---	1650	600	---	548	---	292	---	957	696	---
TOTAL	16057	46019	53620	36950	24270	49333	12278	12296	14079	45975	22071	14229
MEAN	518	1534	1730	1192	867	1591	409	397	469	1483	712	474
MAX	1210	2540	2330	1650	1540	2740	541	760	1340	2200	1220	722
MIN	361	920	900	600	450	548	330	292	206	524	282	372
AC-FT	31850	91280	106400	73290	48140	97850	24350	24390	27930	91190	43780	28220
CAL YR 1984	TOTAL	923481		MEAN	2523	MAX	5970	MIN	361	AC-FT 1832000		
WTR YR 1985	TOTAL	347177		MEAN	951	MAX	2740	MIN	206	AC-FT 688600		

PLATTE RIVER BASIN

06762500 LODGEPOLE CREEK AT BUSHNELL, NE

LOCATION.--Lat 41°13'50", long 103°53'28", in sec.32, T.15 N., R.57 W., Kimball County, Hydrologic Unit 10190016, on right bank 0.1 mi south of Bushnell at south end of highway bridge on State Highway 53c.

DRAINAGE AREA.--1,350 mi².

PERIOD OF RECORD.--October 1931 to current year. Records for March to September 1931 at site 1.5 mi upstream not equivalent owing to diversions. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1933, 1935, 1937-38, 1941, 1948-49. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,845.31 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 26, 1938, nonrecording gage, Mar. 26, 1938 to July 2, 1981 water stage recorder, July 3, 1981 to Sept. 30, 1981 a nonrecording gage at previous site 1.7 mi downstream from present site at datum 33.01 ft lower.

REMARKS.--Estimated daily discharges: Nov. 26, 27, Dec. 3-6, Dec. 22 to Jan. 8, Jan. 16 to Feb. 11, and Feb. 25 to Mar. 8. Records fair except for periods of estimated record, which are poor. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas. Diversions for irrigation of about 12,600 acres above station.

AVERAGE DISCHARGE.--54 years, 10.9 ft³/s, 7,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s Sept. 15, 1950, gage height, 9.98 ft, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 10.06 ft July 2, 1981, from highwater mark, site and datum then in use; minimum daily discharge, 0.09 ft³/s July 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft³/s Sept. 11, gage height, 1.20 ft; maximum gage height, 1.59 ft Nov. 27, backwater from ice; minimum daily discharge, 0.30 ft³/s Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	9.0	6.7	7.0	6.0	13	15	14	5.2	2.2	3.2	1.3
2	8.0	8.9	6.5	7.8	6.0	13	15	13	5.8	3.2	3.4	4.6
3	7.9	9.0	6.0	8.6	6.0	13	15	13	5.8	3.2	2.3	3.8
4	8.5	8.2	5.0	9.0	6.4	12	14	13	7.3	2.6	1.8	2.5
5	10	7.9	7.0	9.4	7.8	12	12	13	8.5	2.0	1.8	2.8
6	11	8.6	7.0	9.6	8.2	12	13	13	7.7	2.1	1.4	2.1
7	9.7	8.8	7.7	10	9.0	13	14	13	7.3	2.2	1.3	2.3
8	9.5	8.5	8.1	10	9.0	14	15	13	6.9	1.4	1.3	1.9
9	9.8	8.5	10	10	10	18	15	13	5.8	1.4	1.0	1.9
10	10	7.9	9.5	9.0	10	18	15	12	5.2	1.3	1.1	1.9
11	10	8.4	9.0	7.3	11	18	15	9.0	4.9	1.2	1.1	22
12	10	8.3	10	6.9	12	16	15	8.5	4.9	1.6	1.2	11
13	10	8.4	7.3	8.1	10	14	15	10	5.8	1.4	1.0	6.9
14	10	8.4	7.0	6.9	9.5	16	15	11	5.5	1.1	1.1	5.2
15	10	7.6	6.9	6.5	10	16	15	9.5	5.2	1.1	1.3	4.9
16	10	7.4	7.7	5.4	11	16	14	8.5	6.2	1.1	1.1	4.9
17	10	8.2	9.0	4.0	11	15	14	8.1	5.8	1.1	1.0	4.3
18	10	7.7	8.0	5.0	11	15	14	6.9	5.2	1.1	1.4	4.6
19	9.3	7.4	7.7	6.0	12	16	15	6.5	4.3	1.5	2.6	3.6
20	10	7.1	6.5	7.0	13	16	14	6.5	4.3	3.6	1.6	2.5
21	10	7.0	5.5	7.0	15	16	12	5.8	3.6	2.5	1.6	2.1
22	9.8	7.3	5.4	6.4	15	15	11	5.8	2.8	2.1	1.6	2.0
23	10	7.4	5.4	7.0	16	13	10	5.2	2.3	2.5	1.1	1.9
24	10	7.7	5.0	8.0	17	16	9.5	6.2	1.8	2.5	1.1	2.1
25	10	8.2	5.0	9.0	14	17	9.5	6.5	1.2	3.2	1.1	2.0
26	10	7.8	5.0	9.0	14	16	12	6.5	1.6	3.2	1.6	2.3
27	9.9	7.8	6.0	9.0	14	16	15	7.3	1.4	2.8	.90	2.3
28	9.4	6.5	7.0	8.0	14	15	15	8.1	1.6	2.8	.93	2.7
29	9.7	6.7	8.0	7.4	---	13	14	9.0	2.0	3.0	.30	2.6
30	9.5	7.0	8.0	7.0	---	12	15	7.0	1.7	3.2	.39	2.8
31	9.5	---	7.0	6.0	---	16	---	5.2	---	3.2	.86	---
TOTAL	299.6	237.6	219.9	237.3	307.9	461	412.0	287.1	137.6	67.4	43.48	117.8
MEAN	9.66	7.92	7.09	7.65	11.0	14.9	13.7	9.26	4.59	2.17	1.40	3.93
MAX	11	9.0	10	10	17	18	15	14	8.5	3.6	3.4	22
MIN	7.9	6.5	5.0	4.0	6.0	12	9.5	5.2	1.2	1.1	.30	1.3
AC-FT	594	471	436	471	611	914	817	569	273	134	86	234
CAL YR 1984	TOTAL	4351.8		MEAN	11.9	MAX	60	MIN	3.9	AC-FT	8630	
WTR YR 1985	TOTAL	2828.68		MEAN	7.75	MAX	22	MIN	.30	AC-FT	5610	

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO

LOCATION.--Lat 40°58'46", long 102°15'15", in NW1/4NE1/4 and SE1/4NE1/4 (two channels) sec.33, T.12 N., R.44 W., Sedgwick County, Hydrologic Unit 10190018, on left bank of channel 4 (left channel) 215 ft downstream from bridge, and on right bank of channel 2, 800 ft downstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

DRAINAGE AREA.--23,138 mi².

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-8, 1915-16, and as "at Ovid" 1922-24.

REVISED RECORDS.--WSP 1310: 1902, 1906-7, 1948(P). WSP 1440: 1903-4. WSP 1730: Drainage area.

GAGE.--Two water-stage recorders. Datum of gages is 3,446.76 ft above National Geodetic Vertical Datum of 1929. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1956. Since Oct. 1, 1956, water-stage recorders on channels nos. 2 and 4. Channel no. 2: Oct. 1, 1956, to Sept. 22, 1965, at site 300 ft downstream at present datum. Channel no. 4: Oct. 1, 1956, to Dec. 10, 1958, at site 135 ft downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 2 to Feb. 8, July 23, 24, 30, 31. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of 1,200,000 acres above station, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

AVERAGE DISCHARGE.--83 years, 539 ft³/s; 390,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s, June 20, 1965, gage height, 10.44 ft, from floodmarks in gage well; no flow, Aug. 18-20, 1902, July 25 to Aug. 7, 1903.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,200 ft³/s, Oct. 10, gage height, 5.84 ft; minimum daily, 20 ft³/s, July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	2840	1820	1240	1200	1370	159	804	1780	33	182	88
2	1220	2830	1750	1200	1100	1220	154	1020	1500	31	191	109
3	1270	2870	1750	1150	1050	1120	149	1170	1300	31	223	149
4	1270	2890	1680	1150	1050	1010	145	1300	1070	31	290	159
5	1360	2900	1600	1150	1050	939	145	1580	991	29	351	167
6	1460	2870	1540	1100	1050	887	159	1810	1010	28	369	196
7	1580	2790	1480	1100	1050	868	176	1910	1050	27	335	296
8	2220	2760	1420	1050	1050	832	187	1980	1220	28	248	410
9	3060	2720	1370	1050	1050	783	199	2030	1500	34	171	489
10	3130	2620	1310	1050	1050	686	209	1990	1690	29	105	536
11	2920	2590	1260	950	1060	620	227	1950	1830	26	91	558
12	2670	2530	1270	950	1200	571	227	1840	1960	23	83	591
13	2530	2520	1250	900	1500	550	208	1780	2180	23	69	611
14	2520	2520	1270	850	1800	533	169	1840	2210	21	62	618
15	2420	2500	1200	850	2100	519	138	1920	1740	21	61	634
16	2390	2390	1170	850	2220	437	112	1990	1300	21	62	658
17	2360	2290	1290	850	2340	428	104	2150	991	21	58	668
18	2520	2140	1240	900	2460	396	89	2280	587	20	55	675
19	2660	2130	1210	1100	2460	360	77	2300	324	30	53	656
20	2780	2060	1220	1300	2460	338	77	2190	202	100	53	593
21	2900	1980	1230	1400	2420	319	79	2290	132	96	53	575
22	3000	1940	1290	1500	2240	297	79	2390	95	131	54	593
23	3070	1900	1410	1600	2160	280	79	2380	73	471	57	611
24	3000	1880	1390	1700	2000	264	81	2380	61	708	63	640
25	2960	1890	1360	1650	1910	250	91	2280	54	745	65	677
26	2850	1880	1320	1600	1840	232	103	2140	53	515	68	705
27	2780	1880	1310	1550	1690	215	137	2120	47	345	69	712
28	2720	1880	1300	1500	1510	199	170	2150	43	256	68	721
29	2780	1860	1260	1450	---	184	232	2120	41	154	70	749
30	2800	1880	1270	1400	---	176	448	2100	36	164	74	771
31	2850	---	1250	1300	---	166	---	2040	---	174	75	---
TOTAL	75250	70730	42490	37390	46070	17049	4609	60224	27070	4366	3828	15615
MEAN	2427	2358	1371	1206	1645	550	154	1943	902	141	123	521
MAX	3130	2900	1820	1700	2460	1370	448	2390	2210	745	369	771
MIN	1200	1860	1170	850	1050	166	77	804	36	20	53	88
AC-FT	149300	140300	84280	74160	91380	33820	9140	119500	53690	8660	7590	30970
CAL YR 1984	TOTAL	754823		MEAN	2062	MAX	7800	MIN	84	AC-FT	1497000	
WTR YR 1985	TOTAL	404691		MEAN	1109	MAX	3130	MIN	20	AC-FT	802700	

PLATTE RIVER BASIN

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE

LOCATION.--Lat 41°07'33" long 101°34'35", in NW1/4SW1/4 sec.4, T.13 N., R.37 W.. Keith County, Hydrologic Unit 10190018, on left bank 20 ft downstream from bridge on Highway L-51B connecting Interstate 80 and U.S. Highway 30, 0.5 mi southeast of Roscoe.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,150 ft, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 13 to Mar. 10. Records good except for period of estimated record, which is poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s July 2, 1983, gage height, 9.31 ft; maximum gage height, 10.23 ft Dec. 16, 1984, backwater from ice; minimum daily discharge, 5.3 ft³/s Aug. 25, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,820 ft³/s Oct. 9, gage height, 6.56 ft; maximum gage height, 10.23 ft Dec. 16, backwater from ice; minimum daily discharge, 5.3 ft³/s Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	2700	1780	1100	1300	2400	208	468	2030	95	345	8.2
2	1070	2730	1690	1100	1100	2400	195	950	1810	65	330	8.9
3	1100	2810	1670	1150	1080	2350	190	1090	1550	59	325	10
4	1110	2790	1710	1150	1040	2200	188	1100	1350	52	426	10
5	1190	2740	1600	1200	1060	1900	202	1300	1150	51	584	15
6	1190	2680	1450	1100	1080	1700	202	1530	1160	43	574	12
7	1220	2490	1450	1100	1060	1600	265	1780	1220	37	430	26
8	1540	2450	1580	1100	1060	1600	299	1880	1420	37	329	46
9	3400	2410	1680	1100	1060	1500	310	1910	1940	34	219	103
10	3650	2340	1630	1100	1040	1200	340	1800	2250	34	149	274
11	3200	2300	1600	1000	1040	900	365	1770	2220	33	92	416
12	2870	2260	1630	1000	1100	720	371	1690	2280	32	60	525
13	2640	2270	1450	920	1200	691	299	1800	2430	28	50	541
14	2510	2280	1300	900	1400	643	258	1830	2470	23	39	482
15	2410	2320	1250	900	1600	613	217	1780	2150	21	34	463
16	2300	2280	1200	900	1800	556	197	1920	1670	19	28	541
17	2200	2150	1150	900	2200	496	182	2090	1300	18	28	549
18	2310	2010	1150	900	2300	480	168	2380	1010	18	20	617
19	2660	1950	1150	1100	2400	412	168	2390	770	16	22	646
20	2790	1880	1150	1300	2500	371	139	2270	556	23	31	564
21	3060	1810	1200	1500	2600	352	122	2110	365	44	28	506
22	3220	1770	1200	1600	2700	352	132	2300	234	64	19	526
23	3180	1760	1150	1700	2700	310	112	2410	164	58	13	594
24	3040	1740	1100	1800	2800	294	112	2420	122	408	7.5	623
25	2920	1770	1000	1700	2900	279	112	2350	96	1180	5.3	645
26	2820	1770	1000	1700	2900	261	136	2210	134	973	11	626
27	2730	1730	980	1600	2800	239	136	2060	99	656	12	588
28	2620	1710	1000	1500	2600	216	154	2100	68	458	16	544
29	2710	1770	1000	1450	---	201	186	2110	57	346	14	626
30	2690	1830	1000	1450	---	204	222	2060	60	384	14	686
31	2730	---	1100	1300	---	212	---	2090	---	417	13	---
TOTAL	74150	65500	41000	38320	50420	27652	6187	57948	34135	5726	4267.8	11821.1
MEAN	2392	2183	1323	1236	1801	892	206	1869	1138	185	138	394
MAX	3650	2810	1780	1800	2900	2400	371	2420	2470	1180	584	686
MIN	1070	1710	980	900	1040	201	112	468	57	16	5.3	8.2
AC-FT	147100	129900	81320	76010	100000	54850	12270	114900	67710	11360	8470	23450
CAL YR 1984	TOTAL	776621		MEAN	2122	MAX	7860	MIN	14	AC-FT	1540000	
WTR YR 1985	TOTAL	417126.9		MEAN	1143	MAX	3650	MIN	5.3	AC-FT	827400	

06765500 SOUTH PLATTE RIVER AT NORTH PLATTE, NE

LOCATION.--Lat 41°07'08", long 100°45'45", in NE1/4NW1/4 sec.9, T.13 N., R.30 W., Lincoln County, Hydrologic Unit 10190018, on left bank 50 ft downstream from bridge on U.S. Highway 83, 0.5 mi north of intersection of U.S. Highway 83 and Interstate 80 south of North Platte, and 4.5 mi upstream from confluence with North Platte River.

DRAINAGE AREA.--24,300 mi², approximately.

PERIOD OF RECORD.--June to November 1897, June to August 1914, May to September 1915, and May 1917 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1932-33, 1935.

GAGE.--Water-stage recorder. Datum of gage is 2,787.73 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Dec. 11, 1956. Dec. 11, 1956, to Mar. 29, 1973, at site 50 ft upstream at same datum. Mar. 30, 1973, to Aug. 12, 1981, at site 0.5 mi upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 16-19, 24-27, Dec. 30 to Jan. 3, Jan. 7-10, 13-15, Jan. 19 to Feb. 22, and July 9-14. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. South Platte canal diverts around station; diversion began Nov. 13, 1946.

AVERAGE DISCHARGE.--39 years (water years 1947-85, since Sutherland Canal diversion), 447 ft³/s, 323,900 acre-ft/yr; median of yearly mean discharges, 254 ft³/s, 184,000 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 37,100 ft³/s June 3, 1935, gage height, 14.02 ft, present datum; no flow at times in summers of most years prior to 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,570 ft³/s Oct. 11, gage height, 5.55 ft; maximum gage height, 6.02 ft Feb. 21, backwater from ice; minimum daily discharge, 131 ft³/s July 19, Aug. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	968	2370	1570	720	1300	1980	232	233	1180	212	235	160
2	978	2460	1390	800	1300	1890	236	260	1040	236	230	156
3	968	2500	1280	820	1250	1800	182	573	788	218	245	150
4	989	2570	1280	840	1250	1340	164	665	597	196	230	159
5	1020	2610	1300	740	900	1180	164	505	456	205	205	181
6	1020	2530	1250	761	1000	1220	160	520	378	190	188	197
7	1160	2510	1330	760	980	1290	156	724	330	175	190	190
8	1110	2350	1220	780	860	1130	164	817	313	183	232	174
9	1370	2370	1200	800	860	866	152	826	313	185	213	160
10	2970	2370	1220	820	900	779	179	788	630	180	196	219
11	3410	2220	1180	837	920	715	200	807	987	175	188	258
12	3010	2150	1150	602	1000	689	218	846	1170	175	188	322
13	2640	2050	1140	600	1100	698	200	869	1220	170	188	295
14	2320	2100	889	620	1250	672	218	1080	1410	165	149	232
15	2320	2110	807	650	1400	655	213	1110	1460	164	149	200
16	2250	2160	880	664	1600	565	218	991	1120	156	135	187
17	2200	2200	900	569	1800	470	196	1060	731	152	131	203
18	2150	2080	840	499	2000	371	175	1120	473	145	131	181
19	2320	1920	820	450	2300	291	164	1250	342	131	136	169
20	2610	1830	874	430	2300	260	138	1210	282	142	139	146
21	2640	1750	874	1250	2400	251	149	1090	225	164	138	148
22	2800	1650	824	1400	2500	251	149	951	194	156	149	159
23	2930	1580	723	1600	2610	246	152	1100	188	155	170	155
24	2890	1580	720	1650	2320	252	149	1260	192	232	184	151
25	2640	1580	700	1700	2320	260	164	1280	183	236	166	143
26	2460	1580	640	1600	2220	272	196	1160	202	645	164	152
27	2390	1600	660	1500	2060	240	188	1040	217	562	160	151
28	2320	1610	672	1450	1950	223	188	1000	230	377	169	160
29	2270	1510	672	1400	---	204	193	1020	223	272	163	171
30	2250	1550	660	1450	---	202	218	1060	207	268	155	193
31	2300	---	700	1400	---	219	---	1060	---	247	163	---
TOTAL	65673	61450	30365	30162	44650	21481	5475	28275	17281	6869	5479	5522
MEAN	2118	2048	980	973	1595	693	183	912	576	222	177	184
MAX	3410	2610	1570	1700	2610	1980	236	1280	1460	645	245	322
MIN	968	1510	640	430	860	202	138	233	183	131	131	143
AC-FT	130300	121900	60230	59830	88560	42610	10860	56080	34280	13620	10870	10950
CAL YR 1984	TOTAL	696591		MEAN	1903	MAX	7030	MIN	152	AC-FT	1382000	
WTR YR 1985	TOTAL	322682		MEAN	884	MAX	3410	MIN	131	AC-FT	640000	

06766000 PLATTE RIVER AT BRADY, NE

LOCATION.--Lat 41°01'10", long 100°22'16" (north channel only), on two channels in secs.11 and 23, T.12 N., R.27 W., Lincoln County, Hydrologic Unit 10200101, on downstream side of highway bridges 0.5 mi and 2.5 mi, respectively, south of Brady and 18 mi downstream from confluence of North Platte and South Platte Rivers.

DRAINAGE AREA.--56,200 mi², approximately, of which about 51,400 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May to September 1937, May 1938 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1941(M). WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Two water-stage recorders. Datum of gage on north channel is 2,639.19 ft and on south channel, 2,640.66 ft above National Geodetic Vertical Datum of 1929. No information available on gages operated by State engineer prior to Nov. 18, 1938. Nov. 18, 1938, to Sept. 30, 1942, gage on north channel at datum 1 ft higher. Nov. 18, 1938, to Oct. 1, 1983, gage on south channel at datum 1 ft higher.

REMARKS.--Estimated daily discharges: Dec. 24-27, Jan. 1, 2, and Jan. 9 to Feb. 24. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Tri-County main supply canal, capacity, about 2,000 ft³/s, diverts 18 mi above station; diversion started Nov. 26, 1940. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

AVERAGE DISCHARGE.--44 years (water years 1942-85, since storage in Lake McConaughy), 783 ft³/s, 567,300 acre-ft/yr; median of yearly mean discharges, 373 ft³/s, 270,200 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,500 ft³/s June 29, 1983; no flow Aug. 22-24, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,210 ft³/s Nov. 17; minimum daily, 185 ft³/s June 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	3600	3360	4530	2470	2790	519	289	527	457	675	511
2	996	3580	3350	4830	2460	3020	519	270	539	635	655	384
3	938	3540	3580	4150	2570	3040	500	257	460	658	554	378
4	901	3730	3790	3020	2670	3400	470	244	362	600	391	362
5	929	4380	4090	2620	3020	4400	482	390	331	716	320	407
6	907	4860	4760	2490	2970	3450	516	483	316	892	291	343
7	808	4200	4830	2600	2870	3220	378	410	297	1120	289	306
8	677	3730	3990	2740	2670	3840	309	328	273	1260	287	283
9	642	3770	3360	2670	2070	3280	300	292	253	1350	284	277
10	1000	3880	3300	2570	1770	3210	302	271	243	1480	288	300
11	2150	4140	3280	2370	1870	3450	299	284	243	1650	292	312
12	2480	4350	3250	2260	1980	3540	287	447	420	1760	287	317
13	2720	4570	2830	2270	2080	3680	279	550	572	1680	284	312
14	2590	4790	3290	1970	2180	3710	275	867	708	1520	368	311
15	2800	4470	3190	1970	2380	3290	275	1090	873	1460	497	309
16	3000	4010	2150	2070	2480	2460	266	896	787	1450	637	306
17	3030	4890	2170	2070	2580	1830	261	708	426	1410	645	293
18	2880	4230	3110	2170	3280	1500	255	614	246	1350	622	293
19	2840	3850	2960	2070	3890	1260	251	644	216	1180	704	286
20	3070	3790	3520	1760	3990	1110	247	638	209	1080	667	280
21	3130	3770	3660	2060	3690	1050	242	608	207	1160	645	280
22	3120	3740	3130	2270	3390	1020	240	598	198	1070	588	282
23	3320	3670	2830	2370	3190	1040	240	570	193	994	588	286
24	3320	3680	2660	2170	3190	1020	235	680	185	1060	795	282
25	3380	3700	2560	1880	3260	973	252	707	254	1020	836	278
26	3200	3800	2570	2070	2920	973	312	676	781	767	792	270
27	3090	3950	2660	2070	2650	881	369	585	1000	756	760	266
28	3140	3880	2640	2070	2590	788	351	525	723	654	743	264
29	3320	3570	2350	2270	---	649	303	470	545	686	808	260
30	3360	3390	2360	2360	---	560	298	467	460	712	670	256
31	3460	---	3280	2460	---	524	---	487	---	656	537	---
TOTAL	72328	119510	98860	77250	77130	68958	9832	16345	12847	33243	16799	9294
MEAN	2333	3984	3189	2492	2755	2224	328	527	428	1072	542	310
MAX	3460	4890	4830	4830	3990	4400	519	1090	1000	1760	836	511
MIN	642	3390	2150	1760	1770	524	235	244	185	457	284	256
AC-FT	143500	237000	196100	153200	153000	136800	19500	32420	25480	65940	33320	18430
CAL YR 1984	TOTAL	1635235		MEAN	4468	MAX	11900	MIN	642	AC-FT	3243000	
WTR YR 1985	TOTAL	612396		MEAN	1678	MAX	4890	MIN	185	AC-FT	1215000	

06766500 PLATTE RIVER NEAR COZAD, NE

LOCATION.--North Channel gage: Lat 40°50'13", long 99°59'09" in NE1/4SW1/4 sec.18, T.10 N., R.23 W., Dawson County, Hydrologic Unit 10200101, on left bank 30 ft upstream from highway bridge, 1.5 mi south of Cozad. South Channel gage: Lat 40°49'51", long 99°59'16" in SE1/4SW1/4 sec.18, T.10 N., R.23 W., Dawson County, on right bank on upstream side of highway bridge, 1.5 mi south of Cozad.

DRAINAGE AREA.--56,500 mi², approximately, of which about 51,700 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July to September 1932, May 1937 to current year (prior to April 1939, irrigation seasons only). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Two water-stage recorders. Datum of gage on south channel is 2,473.07 ft and on north channel, 2,475.72 ft above National Geodetic Vertical Datum of 1929 (Nebraska Department of Roads bench mark). See WSP 2118 for history of changes prior to May 10, 1966. North channel gage: May 10, 1966, to May 10, 1976, at datum 1.00 ft higher and May 11, 1976, to June 16, 1977, at present datum, both at downstream side of highway bridge 30 ft downstream. South channel gage: May 10, 1966, to July 17, 1980, at downstream side of highway bridge at present datum.

REMARKS.--Estimated daily discharges on one or both channels: Oct. 25-30, Dec. 16-20, Dec. 22 to Jan. 7, Jan. 9 to Feb. 27, Mar. 17 to Apr. 28, Apr. 30 to May 8, and July 22. Records good except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

AVERAGE DISCHARGE.--44 years (water years 1942-85, since storage in Lake McConaughy), 698 ft³/s, 505,700 acre-ft/yr; median of yearly mean discharges, 320 ft³/s, 231,800 acre-ft/yr. Figures are unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s June 29, 1983; no flow at times in 1937-40.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,370 ft³/s Dec. 7; minimum daily, 27 ft³/s June 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280	4480	4150	3600	2500	2880	658	368	233	170	284	49
2	1750	4580	4090	3300	2200	3100	720	350	270	54	389	110
3	1770	4480	4200	2900	1840	3190	717	330	271	116	301	198
4	1800	4550	4580	2600	1720	3210	676	314	215	134	190	171
5	1930	4590	4780	2510	1740	4000	662	411	151	82	114	177
6	1910	5000	5600	2640	1630	3960	690	474	113	50	214	209
7	1860	5080	6180	2310	1630	3300	654	489	74	83	188	146
8	1690	4510	5660	2270	1620	3580	565	435	58	73	195	112
9	1590	4310	4710	2240	1580	3500	473	333	44	55	98	97
10	1650	4250	4270	2100	1580	3260	411	286	38	41	64	104
11	2500	4410	4530	1700	1820	3200	415	264	32	97	102	95
12	3310	4610	4470	1600	1940	3460	382	296	75	174	98	263
13	3630	4880	4410	1600	2100	3620	400	448	215	215	31	396
14	3720	5040	4350	1700	2260	3680	387	652	336	223	28	385
15	3780	5160	4760	1740	2520	3350	349	825	467	309	35	364
16	3920	4550	3470	1800	2780	2660	317	912	607	279	109	368
17	3990	5050	2470	1900	2940	2020	325	756	492	281	119	346
18	3870	5590	3470	2100	3200	1750	298	608	166	273	36	340
19	3670	4630	3810	2000	3360	1580	277	552	40	248	74	316
20	3760	4420	3760	1700	3520	1350	303	487	35	251	111	292
21	3970	4330	4150	1640	3600	1240	299	424	31	267	124	301
22	3940	4300	3900	1600	3450	1200	281	377	28	168	117	348
23	4100	4290	3510	2040	3300	1140	292	355	27	75	78	373
24	4190	4260	3240	2500	3150	1150	267	361	28	109	41	360
25	4370	4330	3170	2560	2900	1130	282	463	53	91	42	323
26	4380	4410	2900	2800	2800	1130	362	523	323	51	47	335
27	4290	4410	2800	2900	2830	1070	466	474	458	49	44	319
28	4200	4470	2840	3000	2810	1000	431	383	472	106	57	303
29	4370	4410	2860	2750	---	845	403	317	256	190	79	320
30	4300	4190	3200	2550	---	745	381	256	223	312	50	327
31	4410	---	3700	2540	---	695	---	242	---	213	41	---
TOTAL	99900	137570	123990	71190	69320	71995	13143	13765	5831	4839	3500	7847
MEAN	3223	4586	4000	2296	2476	2322	438	444	194	156	113	262
MAX	4410	5590	6180	3600	3600	4000	720	912	607	312	389	396
MIN	1280	4190	2470	1600	1580	695	267	242	27	41	28	49
AC-FT	198200	272900	245900	141200	137500	142800	26070	27300	11570	9600	6940	15560
CAL YR 1984	TOTAL	1588162		MEAN	4339	MAX	11500	MIN	54	AC-FT	3150000	
WTR YR 1985	TOTAL	622890		MEAN	1707	MAX	6180	MIN	27	AC-FT	1236000	

PLATTE RIVER BASIN

06768000 PLATTE RIVER NEAR OVERTON, NE

LOCATION.--Lat 40°40'57", long 99°32'19", in NW1/4NE1/4 sec.12, T.8 N., R.20 W., Dawson County, Hydrologic Unit 10200101, on left bank 600 ft downstream from county highway bridge, 4 mi south of Overton and 4 mi downstream from Plum Creek.

DRAINAGE AREA.--57,700 mi², approximately, of which about 52,900 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to September 1914 (gage heights only), October 1914 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Elm Creek" 1914-15.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,297.83 ft above National Geodetic Vertical Datum of 1929. July 1914 to October 1917, nonrecording gages at site 8 mi downstream at different datum. June 1918 to Sept. 12, 1928, nonrecording gage at site 600 ft upstream (south channel only) at datum 4.0 ft higher. Sept. 13, 1928 to Sept. 30, 1930, nonrecording gage and Oct. 1, 1930 to Sept. 30, 1968, water-stage recorder, at site 600 ft upstream (south channel only) at datum 2.0 ft higher. Oct. 1, 1968 to Feb. 3, 1976, water-stage recorder on south channel at site 600 ft upstream at datum 2.0 ft higher, and Feb. 4 to June 2, 1976 (south channel gage discontinued), at datum 1.0 ft higher. Oct. 1, 1968 to July 10, 1974, north channel gage at site 600 ft upstream at datum 2.0 ft higher and July 11, 1974 to June 1, 1976, at datum 1.0 ft higher. June 2, 1976 to Aug. 19, 1984, at present site, at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Nov. 28 to Dec. 5, Dec. 22 to Jan. 20, and Jan. 31 to Feb. 21. Records good except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--44 years (water years 1942-85, since storage in Lake McConaughy), 1,614 ft³/s, 1,169,000 acre-ft per year; median of yearly mean discharges, 1,200 ft³/s, 869,000 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s June 5, 1935, gage height, 6.25 ft, datum then in use, south channel; maximum gage height, 7.44 ft, present datum, June 22, 1983; no flow at times in 1919, 1922, 1925, 1927-28, 1930-41.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,160 ft³/s Feb. 23, gage height, 4.10 ft; maximum gage height, 6.43 ft Feb. 11, backwater from ice; minimum daily discharge, 155 ft³/s June 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2820	5380	4800	4000	2500	5240	2340	1840	1770	1790	407	304
2	2590	5540	4800	3500	2300	5380	2510	1720	1690	1390	703	444
3	2840	5630	4900	4300	2300	5780	2630	1860	1690	655	1400	562
4	3040	5390	5100	5000	2300	5510	3040	2100	1650	403	1420	670
5	3190	5420	5400	4000	2300	5240	2510	2240	1620	351	1050	1020
6	3250	5560	5670	3500	2300	6020	2400	2270	1590	334	1130	1410
7	3180	6010	6410	3000	2400	5650	2480	2230	1430	364	952	1510
8	3170	5870	6660	2500	2500	4940	2400	1810	1330	378	700	1340
9	3010	5630	6250	3000	2600	5420	2340	1700	1250	402	741	1550
10	2940	5640	5450	2800	2300	5070	2120	1610	1200	441	655	1240
11	3040	5600	5290	2700	2300	5330	2070	1680	1160	373	520	1040
12	3680	5810	5390	2500	2300	4820	1940	1740	1130	263	465	911
13	4250	5970	5390	2300	2500	5830	1920	1910	1240	310	441	1380
14	4620	6310	5190	2700	2700	5600	1990	2950	1250	428	294	1680
15	4880	6420	5420	3000	2900	5690	2020	2910	1420	509	263	1790
16	4980	6540	5350	3200	3000	5330	1790	3110	1650	553	239	1740
17	5170	6180	4340	3500	3200	4770	1670	2110	1710	590	234	1780
18	5060	6740	4130	3800	3500	4290	1490	2620	1320	608	266	1540
19	4840	6900	5060	4000	3800	3720	1380	2370	869	646	223	1360
20	4620	6310	4960	3300	4200	3340	1260	1890	530	622	221	1260
21	4730	6040	4900	2860	5000	3070	1320	1580	325	606	237	1210
22	4880	5850	4900	2740	6110	2880	1260	1420	194	713	268	1250
23	4890	5630	4700	2920	6500	2910	1200	1260	178	690	274	1250
24	5150	5440	4000	3350	6300	2750	1220	1330	155	697	252	1260
25	5300	5360	3500	3710	6210	2340	1220	1480	222	774	220	1320
26	5350	5380	3700	3880	5780	2180	1360	1860	676	720	217	1420
27	5160	5310	4500	3560	5740	2260	1430	1910	1260	516	218	1370
28	4890	5200	5000	3390	5330	2480	1490	1930	1710	323	232	1420
29	4910	5000	4800	3430	---	2370	1510	1980	1650	333	235	1550
30	5100	4900	4800	3690	---	2460	1670	1720	1530	382	249	1600
31	5310	---	4600	3000	---	2340	---	1630	---	461	263	---
TOTAL	130840	172960	155360	103130	101170	131010	55980	60770	35399	17625	14989	38181
MEAN	4221	5765	5012	3327	3613	4226	1866	1960	1180	569	484	1273
MAX	5350	6900	6660	5000	6500	6020	3040	3110	1770	1790	1420	1790
MIN	2590	4900	3500	2300	2300	2180	1200	1260	155	263	217	304
AC-FT	259500	343100	308200	204600	200700	259900	111000	120500	70210	34960	29730	75730
CAL YR 1984	TOTAL	2185679		MEAN	5972	MAX	14500	MIN	310	AC-FT	4335000	
WTR YR 1985	TOTAL	1017414		MEAN	2787	MAX	6900	MIN	155	AC-FT	2018000	

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1958 to current year.

WATER TEMPERATURES: January 1958 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,480 microsiemens May 15, 1966 (south chan.); minimum daily, 214 microsiemens July 23, 1968 (south chan.).

WATER TEMPERATURES: Maximum, 37.0°C June 13, 1959 (south chan.), July 9, 1960 (north chan.); minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,090 microsiemens Feb. 22, 25, 27 (south chan.); minimum daily, 645 microsiemens June 26 (south chan.).

WATER TEMPERATURES: Maximum daily, 34.0°C July 11, 21 (north chan.); minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 11...	1300	3200	1050	8.4	16.5	10.7	40	920	3400	320	127	82
NOV 20...	1145	6600	995	8.3	2.5	12.6	22	230	120	330	--	86
DEC 06...	1015	5000	1050	8.5	.0	12.9	--	76	K220	330	127	87
JAN 17...	1330	3910	--	8.3	.0	13.1	--	K130	42	350	137	95
FEB 13...	1200	2300	--	8.1	.0	14.0	24	190	610	330	--	89
MAR 14...	1400	5920	1040	8.4	7.0	12.1	--	K30	75	340	139	90
APR 03...	1130	3140	930	8.3	10.5	9.7	--	520	500	330	148	85
MAY 23...	1545	1370	935	8.6	25.0	9.0	31	K28	K26	300	--	77
JUN 18...	1720	1560	880	8.4	23.5	10.6	--	58	150	320	163	80
JUL 15...	1445	477	818	8.4	30.0	12.6	--	240	80	260	101	68
AUG 12...	1245	499	--	8.3	27.0	8.0	18	K55	40	310	--	82
SEP 12...	1330	696	--	8.0	18.0	7.2	--	K1700	1100	250	82	66

K Results based on colony count outside the acceptable range (non-ideal colony count).

PLATTE RIVER BASIN

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINIT LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
OCT 11...	28	86	2	8.9	193	280	31	.70	21	650	.89	5650
NOV 20...	27	80	2	--	--	260	30	--	--	--	--	--
DEC 06...	28	86	2	8.4	206	270	30	.60	19	650	.89	8810
JAN 17...	28	85	2	9.3	216	260	32	.60	22	660	.90	6980
FEB 13...	27	87	2	--	--	270	33	--	--	--	--	--
MAR 14...	27	82	2	8.6	197	260	30	.60	18	630	.86	10100
APR 03...	28	85	2	9.5	180	260	32	.50	16	620	.85	5290
MAY 23...	26	81	2	--	--	240	31	--	--	--	--	--
JUN 18...	29	90	2	10	157	270	37	.70	13	620	.85	2630
JUL 15...	23	76	2	12	164	220	27	.50	19	540	.74	701
AUG 12...	25	79	2	--	--	230	29	--	--	--	--	--
SEP 12...	21	68	2	15	170	200	25	.50	22	520	.71	976

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	BORON, DIS- SOLVED (UG/L AS B) (01020)
OCT 11...	54	1.0	.90	.080	.72	.80	1.8	.150	.060	--	160
NOV 20...	50	1.3	--	.060	.64	.70	2.0	.170	--	--	--
DEC 06...	45	1.4	1.4	.030	1.3	1.3	2.7	.140	.100	--	150
JAN 17...	23	1.5	1.5	.090	.61	.70	2.2	.110	.080	--	150
FEB 13...	5	1.7	--	.100	.80	.90	2.6	.100	--	3	--
MAR 14...	37	1.4	1.3	.030	.97	1.0	2.4	.140	.060	--	140
APR 03...	9	1.1	1.1	.100	.80	.90	2.0	.090	.040	--	150
MAY 23...	13	.80	--	.050	1.1	1.1	1.9	.110	--	4	--
JUN 18...	45	.60	.58	.060	.94	1.0	1.6	.150	.040	--	150
JUL 15...	47	.40	.44	.030	1.5	1.5	1.9	.220	.040	--	130
AUG 12...	23	1.1	--	.040	1.1	1.1	2.2	.100	--	--	--
SEP 12...	137	1.1	1.0	.090	1.0	1.1	2.2	.240	.150	--	120

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 11...	--	--	--	8	--	4	--	--	--	--	6.2
NOV 20...	<1	10	9	--	7	--	6.0	--	<1	30	4.9
DEC 06...	--	--	--	4	--	10	--	--	--	--	5.0
JAN 17...	--	--	--	6	--	5	--	--	--	--	4.3
FEB 13...	<1	1	3	--	1	--	<.1	<1	<1	<10	3.8
MAR 14...	--	--	--	<3	--	7	--	--	--	--	4.3
APR 03...	--	--	--	4	--	4	--	--	--	--	4.8
MAY 23...	<2	18	6	--	8	--	.2	2	<2	20	6.5
JUN 18...	--	--	--	<3	--	2	--	--	--	--	5.0
JUL 15...	--	--	--	3	--	4	--	--	--	--	8.1
AUG 12...	<1	2	5	--	2	--	.1	--	7	20	5.1
SEP 12...	--	--	--	43	--	8	--	--	--	--	8.6

PLATTE RIVER BASIN

06767998 PLATTE RIVER NEAR OVERTON, NE (NORTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	981	1010	926	950	1010	899	859	887	941	878	845	892
2	968	1000	930	1000	---	900	868	887	925	895	824	920
3	974	998	932	938	---	890	872	879	924	915	778	905
4	946	1020	918	940	---	869	871	890	927	865	828	856
5	911	983	930	915	---	862	880	788	949	868	845	886
6	946	970	936	862	---	918	885	840	970	845	845	905
7	968	960	945	821	---	848	868	841	983	842	826	906
8	984	967	940	898	---	845	872	841	989	835	826	886
9	976	968	940	903	---	881	907	858	988	847	837	906
10	979	942	927	1060	---	839	898	891	990	869	868	892
11	1020	957	911	1040	---	830	912	889	993	848	873	906
12	997	931	908	1060	---	790	909	890	1000	815	855	944
13	990	936	909	1040	1000	847	922	791	932	827	858	873
14	1000	922	917	1040	1020	851	903	790	938	798	886	875
15	992	930	930	1040	997	862	900	826	909	772	895	875
16	998	932	931	1020	963	863	910	780	930	785	885	883
17	990	927	1050	980	908	839	900	823	899	795	846	866
18	993	917	1030	943	876	837	911	857	920	785	838	866
19	1000	932	1050	939	874	828	916	872	991	784	865	867
20	1010	930	1040	952	852	848	920	888	990	816	868	875
21	1030	931	963	942	866	859	912	873	1000	898	837	868
22	1020	950	901	947	875	836	862	895	1010	822	815	857
23	1020	934	903	950	868	841	908	893	1000	857	838	836
24	1020	949	926	1040	865	827	937	889	1000	828	855	845
25	1020	930	958	1040	900	816	823	884	962	828	878	868
26	1010	927	953	1040	888	830	820	855	706	870	845	848
27	1020	932	950	947	921	832	879	892	880	855	828	839
28	1010	940	848	898	925	831	882	914	929	894	805	826
29	993	933	844	890	---	847	861	939	910	804	815	827
30	1000	935	871	942	---	820	847	950	973	805	862	836
31	990	---	870	969	---	850	---	936	---	828	876	---
MEAN	992	950	935	966	---	850	887	869	949	838	847	874

06767999 PLATTE RIVER NEAR OVERTON, NE (SOUTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	972	972	950	992	---	1060	1000	910	970	945	925	860
2	964	973	953	1000	---	1060	1010	908	975	945	895	847
3	968	970	958	973	---	1060	1020	899	976	965	814	840
4	949	977	943	975	---	1050	998	904	971	945	865	822
5	922	959	957	979	---	1020	1000	895	979	925	887	800
6	950	963	962	980	---	1060	1000	896	983	935	878	677
7	959	950	976	978	---	1010	997	880	978	945	878	709
8	982	960	953	978	---	1010	993	881	987	905	885	802
9	950	960	960	961	---	1030	980	891	989	920	885	800
10	971	945	949	1020	---	1010	973	880	1020	930	867	767
11	983	944	941	1030	---	1010	980	875	1000	935	925	783
12	980	933	941	1010	---	1020	962	879	991	925	908	695
13	974	935	936	1020	---	1060	973	769	990	908	933	679
14	981	937	940	1020	---	1030	977	768	992	915	964	765
15	980	932	962	1030	990	985	961	867	990	872	945	790
16	981	953	960	1020	1020	1040	964	889	1000	897	962	836
17	978	950	1030	993	985	1050	962	848	1000	902	936	820
18	969	920	1010	950	1040	1020	953	895	1000	896	927	799
19	992	939	1020	984	1040	1030	952	900	981	875	942	798
20	998	930	1010	947	1030	1040	949	901	985	925	935	795
21	1000	949	972	998	1080	1040	950	901	999	888	922	792
22	1000	944	968	1000	1090	1020	919	908	1000	897	912	783
23	1000	950	968	1000	1080	1040	905	910	974	895	925	802
24	1000	942	970	1040	1080	1030	947	913	962	915	945	791
25	999	944	967	1030	1090	1020	910	917	963	905	952	822
26	1000	918	972	1040	1080	1020	908	926	645	897	936	820
27	1000	943	980	1020	1090	1030	912	930	841	895	912	789
28	1000	---	980	1010	1080	1040	919	932	807	935	933	778
29	1000	949	982	1020	---	1020	921	904	948	862	893	777
30	990	940	989	1020	---	1000	887	931	946	865	933	812
31	994	---	987	1020	---	996	---	943	---	896	945	---
MEAN	980	---	969	1000	---	1030	959	892	961	912	915	788

PLATTE RIVER BASIN

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06767998 PLATTE RIVER NEAR OVERTON, NE (NORTH CHANNEL)

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	5.0	---	1.0	1.0	8.0	14.0	22.0	26.0	28.0	22.0	27.0
2	20.0	6.5	---	1.0	.0	8.0	15.0	24.0	26.0	30.0	21.0	31.0
3	20.0	9.0	---	1.0	.0	8.0	17.0	23.0	21.0	30.0	28.0	28.0
4	17.0	9.5	---	1.0	.0	3.0	13.0	23.0	19.0	29.0	30.0	29.0
5	16.0	9.0	---	1.0	.0	4.0	12.0	24.0	19.0	31.0	23.0	---
6	18.0	8.0	---	1.0	.0	4.0	8.0	22.0	25.0	31.0	24.0	---
7	18.0	9.0	2.0	1.0	.0	8.0	11.0	25.0	30.0	31.0	30.0	---
8	16.0	9.0	3.0	1.0	.0	10.0	15.0	24.0	30.0	33.0	32.0	---
9	16.0	8.5	5.0	1.0	.0	10.0	16.0	25.0	26.0	32.0	23.0	---
10	17.0	6.0	5.0	1.0	.0	11.0	18.0	25.0	22.0	32.0	28.0	---
11	19.0	5.5	5.0	1.0	.0	10.0	19.0	20.0	23.0	34.0	28.0	19.0
12	17.0	5.5	5.0	1.0	.0	6.0	18.0	22.0	23.0	32.0	32.0	19.0
13	18.0	6.0	2.0	1.0	1.0	8.0	17.0	13.0	24.0	33.0	24.0	18.0
14	17.0	8.5	1.0	1.0	1.0	10.0	19.0	15.0	27.0	28.0	26.0	16.0
15	18.0	6.0	2.0	1.0	1.0	8.0	21.0	20.0	28.0	32.0	25.0	19.0
16	17.0	6.5	2.0	1.0	1.0	13.0	21.0	21.0	30.0	30.0	28.0	19.0
17	10.0	4.5	1.0	1.0	1.0	14.0	22.0	26.0	26.0	32.0	27.0	25.0
18	9.0	6.0	1.0	1.0	1.0	18.0	23.0	24.0	25.0	28.0	21.0	25.0
19	9.0	4.5	1.0	1.0	1.0	15.0	19.0	24.0	26.0	28.0	24.0	24.0
20	8.5	4.5	1.0	1.0	1.0	15.0	15.0	26.0	28.0	25.0	23.0	12.0
21	9.0	4.5	1.0	1.0	1.0	15.0	21.0	25.0	26.0	34.0	30.0	15.0
22	8.5	3.5	2.0	1.0	1.0	9.0	17.0	26.0	26.0	28.0	31.0	14.0
23	9.5	5.0	2.0	1.0	2.0	12.0	17.0	27.0	33.0	29.0	32.0	15.0
24	9.5	---	1.0	1.0	2.0	14.0	21.0	27.0	27.0	31.0	25.0	13.0
25	9.0	---	1.0	2.0	5.0	14.0	10.0	28.0	26.0	32.0	31.0	10.0
26	11.5	---	1.0	2.0	4.0	12.0	10.0	29.0	18.0	29.0	30.0	10.0
27	12.0	---	1.0	1.0	5.0	16.0	16.0	23.0	24.0	24.0	30.0	16.0
28	10.5	---	1.0	1.0	5.0	13.0	21.0	27.0	24.0	32.0	31.0	7.0
29	9.0	---	1.0	1.0	---	8.0	17.0	25.0	27.0	26.0	32.0	6.0
30	6.0	---	1.0	1.0	---	5.0	15.0	24.0	26.0	23.0	26.0	9.0
31	5.5	---	1.0	1.0	---	10.0	---	24.0	---	20.0	24.0	---
MEAN	13.5	---	---	1.0	1.0	10.5	16.5	23.5	25.5	29.5	27.0	---

06767999 PLATTE RIVER NEAR OVERTON, NE (SOUTH CHANNEL)

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	3.5	---	1.0	.0	6.0	11.0	19.0	25.0	26.0	22.0	27.0
2	18.0	7.0	---	1.0	.0	5.0	12.0	21.0	25.0	29.0	21.0	31.0
3	18.0	9.0	---	1.0	.0	5.0	14.0	22.0	21.0	29.0	26.0	28.0
4	15.0	9.0	---	1.0	.0	3.0	12.0	20.0	19.0	29.0	29.0	29.0
5	15.0	9.0	---	1.0	.0	4.0	11.0	20.0	20.0	30.0	22.0	---
6	16.0	8.0	---	1.0	.0	4.0	8.0	20.0	24.0	31.0	23.0	---
7	16.0	10.0	2.0	1.0	.0	5.0	10.0	22.0	30.0	31.0	29.0	---
8	16.0	9.5	3.0	1.0	.0	7.0	12.0	22.0	28.0	32.0	31.0	---
9	16.0	8.0	5.0	1.0	.0	7.0	13.0	23.0	25.0	31.0	23.0	---
10	17.0	6.0	5.0	1.0	.0	7.0	15.0	23.0	22.0	31.0	28.0	---
11	17.0	5.5	4.0	1.0	.0	7.0	17.0	19.0	22.0	33.0	28.0	19.0
12	17.0	5.5	3.0	1.0	.0	4.0	16.0	22.0	22.0	31.0	30.0	19.0
13	17.0	6.0	1.0	1.0	.0	7.0	17.0	13.0	23.0	32.0	24.0	18.0
14	17.0	9.5	1.0	1.0	.0	7.0	16.0	16.0	25.0	28.0	25.0	17.0
15	17.0	7.0	1.0	1.0	.0	7.0	17.0	19.0	26.0	30.0	25.0	21.0
16	17.0	7.0	2.0	1.0	1.0	10.0	21.0	18.0	27.0	30.0	28.0	21.0
17	10.5	5.0	1.0	1.0	1.0	10.0	21.0	23.0	25.0	32.0	26.0	24.0
18	9.0	6.0	1.0	1.0	1.0	13.0	22.0	20.0	24.0	28.0	20.0	24.0
19	9.0	4.5	1.0	1.0	1.0	11.0	19.0	22.0	25.0	29.0	24.0	23.0
20	9.5	4.5	1.0	1.0	1.0	10.0	15.0	23.0	26.0	25.0	23.0	12.0
21	9.5	4.5	1.0	1.0	1.0	12.0	19.0	22.0	25.0	33.0	29.0	16.0
22	9.5	3.5	2.0	1.0	1.0	8.0	15.0	23.0	26.0	27.0	31.0	16.0
23	9.5	5.0	2.0	1.0	2.0	10.0	16.0	25.0	32.0	28.0	30.0	18.0
24	9.5	---	1.0	1.0	2.0	11.0	20.0	26.0	29.0	30.0	24.0	15.0
25	9.5	---	1.0	2.0	6.0	12.0	10.0	26.0	26.0	31.0	31.0	12.0
26	11.5	---	1.0	2.0	6.0	14.0	10.0	26.0	18.0	29.0	31.0	12.0
27	11.0	---	1.0	2.0	6.0	13.0	15.0	22.0	24.0	24.0	29.0	16.0
28	10.5	---	1.0	2.0	3.0	11.0	20.0	26.0	24.0	31.0	30.0	10.0
29	9.0	---	1.0	2.0	---	8.0	15.0	24.0	26.0	25.0	31.0	10.0
30	6.0	---	1.0	1.0	---	6.0	15.0	23.0	26.0	23.0	25.0	11.0
31	5.5	---	1.0	1.0	---	10.0	---	23.0	---	20.0	23.0	---
MEAN	13.0	---	---	1.0	1.0	8.0	15.0	21.5	24.5	29.0	26.5	---

06770000 PLATTE RIVER NEAR ODESSA, NE

LOCATION.--Lat 40°39'44", long 99°15'03", in NE1/4SW1/4 sec.16, T.8 N., R.17 W., Phelps County, Hydrologic Unit 10200101, on right bank 1,500 ft downstream from county bridge, 2.5 mi south of Odessa and 5 mi downstream from Elm Creek.

DRAINAGE AREA.--58,100 mi², approximately, of which about 53,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--March 1937 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,195.07 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, nonrecording gage and Oct. 7, 1938 to Sept. 30, 1942, water-stage recorder, both at datum 3.00 ft higher and Oct. 1, 1942 to July 23, 1984, water-stage recorder at datum 2.00 ft higher, all at site 1,500 ft upstream.

REMARKS.--Estimated daily discharges: Jan. 9, 10, and Jan. 12 to Feb. 26. Records good except for periods of estimated record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--44 years (water years 1942-85, since storage in Lake McConaughy), 1,527 ft³/s, 1,106,000 acre-ft per year; median of yearly mean discharges, 1,170 ft³/s, 848,000 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s June 29, 1983, gage height, 5.82 ft, datum then in use; maximum gage height, 5.90 ft June 22, 1983, datum and site then in use; no flow for periods in each year prior to 1947 and in 1953-57, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,470 ft³/s Dec. 8, gage height, 4.68 ft; maximum gage height, 5.55 ft Feb. 20, backwater from ice; minimum daily discharge, 152 ft³/s July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2840	5040	5010	3810	2600	4890	2720	1710	1550	1790	487	164
2	2020	5040	4880	3840	2400	4930	2860	1710	1500	1570	476	266
3	2220	5130	4790	5070	2400	5350	2940	1570	1480	1160	1070	365
4	2640	4880	4940	5350	2400	5220	2830	1680	1520	307	1520	444
5	2920	4940	5160	4760	2400	4890	2830	1800	1520	248	1400	872
6	2980	5070	5040	4210	2400	5400	2750	1900	1440	203	1440	1200
7	2680	5550	5910	3660	2500	5710	2690	1800	1330	248	1270	1330
8	2430	5350	6370	4000	2600	5180	2580	1550	1220	260	1120	1270
9	2280	5100	6240	3500	2600	5180	2480	1380	1170	260	927	1330
10	2150	4820	5520	3000	2700	5270	2140	1300	1120	254	872	1520
11	2110	4700	5230	2890	2700	5010	1940	1240	1080	248	705	1270
12	2580	4820	5260	2600	2700	4690	1840	1220	1070	178	596	1280
13	3210	4880	5130	2300	2700	5220	1590	1440	1110	152	559	2160
14	3530	5160	4820	2300	2700	5050	1610	3090	1110	193	476	2530
15	4100	5260	4880	2600	2900	4930	1590	3210	1140	260	393	2580
16	4300	5580	5010	3000	3000	4810	1520	2890	1320	278	356	2120
17	4440	5260	4080	3200	3000	4530	1360	2370	1380	331	339	1880
18	4440	5550	3410	3500	3300	4150	1320	2050	1160	374	315	1620
19	4440	5850	3970	3500	3700	3830	1110	2230	970	522	300	1220
20	4470	5480	4050	3500	4100	3430	998	1900	830	547	300	1100
21	4500	5290	4330	3100	4100	3030	927	1660	608	522	285	1140
22	4640	5260	4760	2800	4800	3030	872	1570	393	522	285	1190
23	4730	5070	4760	2900	6000	3150	1040	1400	323	559	272	1120
24	4790	4880	4270	3100	5800	3120	927	1320	278	572	266	1030
25	4910	4880	4240	3400	5700	2860	885	1440	268	631	248	1040
26	5010	4980	4330	3500	5400	2450	1120	1640	1120	643	214	1050
27	5010	4910	5010	3600	5400	2400	1240	1840	1620	596	193	956
28	4850	5070	5350	3600	4930	2560	1270	1840	2280	393	164	956
29	4670	5290	5130	3500	---	2690	1240	1800	2050	331	188	1140
30	4790	5190	4880	3000	---	2610	1320	1640	1750	393	169	1250
31	4880	---	4470	2800	---	2690	---	1440	---	476	173	---
TOTAL	115560	154280	151230	105890	97930	128260	52539	55630	35710	15021	17378	37393
MEAN	3728	5143	4878	3416	3498	4137	1751	1795	1190	485	561	1246
MAX	5010	5850	6370	5350	6000	5710	2940	3210	2280	1790	1520	2580
MIN	2020	4700	3410	2300	2400	2400	872	1220	268	152	164	164
AC-FT	229200	306000	300000	210000	194200	254400	104200	110300	70830	29790	34470	74170
CAL YR 1984	TOTAL	2116311		MEAN	5782	MAX	15000	MIN	185	AC-FT	4198000	
WTR YR 1985	TOTAL	966821		MEAN	2649	MAX	6370	MIN	152	AC-FT	1918000	

06770200 PLATTE RIVER NEAR KEARNEY, NE

LOCATION.--Lat 40°39'32", long 99°05'08", in SE1/4SE1/4 sec.14, T.8 N., R.16 W., Kearney county, Hydrologic Unit 10200101, on right bank near downstream side of bridge on State Highway 44, 2 mi south of Kearney.

DRAINAGE AREA.--58,200 mi², approximately, of which about 53,400 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--January 1982 to current year.

GAGE.--Water stage recorder.

REMARKS.--Estimated daily discharges: Dec. 6 to Feb. 25. Records fair except for period of estimated record, which is poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s June 29, 1983, gage height, 7.42 ft; minimum daily discharge, 61 ft³/s July 25, Sept. 11, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,100 ft³/s Feb. 22, gage height, 6.57 ft, backwater from ice; maximum gage height, 7.40 ft sometime during period Jan. 11-17, from floodmark, backwater from ice; minimum daily discharge, 273 ft³/s Sept. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2570	4200	4470	1500	2700	5110	3000	2080	1890	1680	635	273
2	1770	4250	4360	2000	2600	4930	2990	2210	1950	1620	613	273
3	1780	4440	4300	2800	2500	5270	2950	1820	1980	1330	1180	348
4	2170	4370	4550	3900	2500	5190	2860	2030	2170	736	2090	469
5	2730	4290	5100	4500	2400	4790	2800	2320	2110	583	1780	784
6	3070	4340	5300	4000	2400	5200	2770	2580	1990	478	1770	1180
7	2830	4690	5400	3000	2400	5920	2780	2480	1760	426	1550	1320
8	2580	4850	6500	2400	2400	5340	2810	2120	1410	418	1360	1270
9	2390	4510	6100	2100	2400	5140	2670	1730	1330	386	1070	1210
10	2270	4440	5600	1900	2300	5350	2390	1630	1210	355	1030	1450
11	2210	4480	5000	1800	2300	4920	2160	1550	1210	386	866	1160
12	2540	4630	4600	1700	2300	4580	2150	1530	1290	333	725	1190
13	3280	4940	4900	1800	2200	5510	1910	1800	1220	279	657	2110
14	3630	5290	4900	2000	2300	5370	2040	3390	1300	286	583	2650
15	4230	5490	5900	2500	2500	5410	2020	3980	1400	340	534	2870
16	4440	5600	5400	3200	2800	5440	2060	3570	1660	422	534	2320
17	4520	5260	4800	4000	3100	5010	1950	3060	1810	461	516	2020
18	4330	5330	3000	3700	3500	4450	1860	2190	1630	485	452	1880
19	4220	5740	3450	3200	3900	3900	1690	2550	1190	569	434	1410
20	3960	5400	3800	2900	4700	3290	1640	2410	982	606	426	1260
21	3920	4750	3900	2700	6000	3060	1600	1890	797	609	426	1310
22	4240	4650	3700	2500	7200	3010	1540	1770	668	579	410	1430
23	4280	4410	3500	2400	7000	3110	1850	1550	593	612	410	1450
24	4320	4320	3000	2600	6800	3090	1610	1460	524	668	386	1330
25	4530	4350	2300	2900	6400	2910	1530	1600	524	729	378	1310
26	4530	4460	3500	3500	6000	2490	1700	1780	1010	747	355	1380
27	4390	4450	6000	3700	5850	2460	1800	2130	1600	680	333	1350
28	4180	4370	5000	3600	5430	2630	1730	2160	2270	553	298	1380
29	3900	4580	4000	3400	---	2950	1650	2230	2080	464	319	1450
30	4000	4640	2400	3200	---	2880	1670	2110	1700	524	279	1450
31	4110	---	1800	3000	---	3080	---	1780	---	589	286	---
TOTAL	107920	141520	136530	88400	104880	131790	64180	67490	43258	18933	22685	41287
MEAN	3481	4717	4404	2852	3746	4251	2139	2177	1442	611	732	1376
MAX	4530	5740	6500	4500	7200	5920	3000	3980	2270	1680	2090	2870
MIN	1770	4200	1800	1500	2200	2460	1530	1460	524	279	279	273
AC-FT	214100	280700	270800	175300	208000	261400	127300	133900	85800	37550	45000	81890
CAL YR 1984	TOTAL	2055299		MEAN	5616	MAX	14600	MIN	233	AC-FT	4077000	
WTR YR 1985	TOTAL	968873		MEAN	2654	MAX	7200	MIN	273	AC-FT	1922000	

PLATTE RIVER BASIN

06770478 PLATTE RIVER (SOUTH CHANNEL) NEAR GRAND ISLAND, NE

LOCATION.--Lat 40°48'06", long 98°22'42", in SW1/4SW1/4 sec.29, T.10 N., R.9 W., Hall County, Hydrologic Unit 10200101, on right bank near downstream side of bridge on U.S. Highway 281, 9 mi south of Grand Island.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,870 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 26 to Mar. 2 and Sept. 22-25. Records fair except for periods of estimated record, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,400 ft³/s Feb. 28, gage height, 6.77 ft, backwater from ice; maximum gage height, 7.28 ft Dec. 26, backwater from ice; minimum daily discharge, 60 ft³/s June 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1830	2440	2370	920	1350	3050	1460	1040	778	867	120	85
2	1710	2510	2300	700	1300	2850	1490	1140	765	854	146	82
3	1330	2530	2220	1000	1250	2800	1460	1110	704	867	260	80
4	1300	2610	2280	1450	1250	2840	1430	947	828	716	622	85
5	1590	2560	2370	2250	1250	2500	1350	1060	880	408	1020	160
6	1880	2530	2250	2200	1250	2340	1350	1140	880	286	1000	181
7	1710	2540	2300	1800	1250	2620	1370	1290	867	227	933	350
8	1530	2710	2740	1600	1200	2720	1380	1170	790	196	741	511
9	1460	2800	2870	1200	1200	2340	1370	933	704	174	600	566
10	1420	2650	2740	1000	1200	2380	1320	716	588	146	438	622
11	1410	2460	2470	950	1200	2540	1200	704	577	133	408	790
12	1350	2400	2460	900	1200	2460	1060	692	511	114	388	704
13	1520	2420	2530	950	1200	2420	1000	790	511	120	340	947
14	1950	2530	2460	1000	1200	2840	803	1690	469	102	244	1290
15	2420	2540	2460	1250	1300	2860	854	2230	511	93	212	1410
16	2610	2530	2780	1250	1350	2900	778	2160	544	80	153	1480
17	2650	2540	2600	1450	1450	2720	765	1820	611	77	212	1220
18	2600	2380	1840	1500	1600	2440	669	1510	716	86	160	1020
19	2580	2490	1560	1650	1700	2160	634	1030	669	153	120	906
20	2470	2620	1750	1900	2050	1860	469	1130	533	146	108	681
21	2370	2400	2050	1750	2200	1700	340	1030	378	189	105	622
22	2350	2330	1990	1400	2450	1570	544	828	278	196	105	629
23	2420	2320	2230	1350	2650	1570	622	692	167	181	105	636
24	2400	2300	2180	1350	2950	1570	692	622	85	236	100	643
25	2460	2300	1890	1500	3450	1490	669	565	60	252	97	650
26	2490	2440	1550	1650	3900	1400	778	577	295	212	93	657
27	2530	2510	1750	1850	3700	1310	947	588	511	196	87	657
28	2490	2440	2000	2200	3400	1130	947	765	741	181	80	634
29	2400	2400	1950	2100	---	1190	893	960	1030	146	82	704
30	2320	2460	1800	2000	---	1340	920	1060	1020	133	80	803
31	2300	---	1550	1700	---	1410	---	947	---	120	85	---
TOTAL	63850	74690	68290	45770	51450	67320	29564	32936	18001	7887	9244	19805
MEAN	2060	2490	2203	1476	1838	2172	985	1062	600	254	298	660
MAX	2650	2800	2870	2250	3900	3050	1490	2230	1030	867	1020	1480
MIN	1300	2300	1550	700	1200	1130	340	565	60	77	80	80
AC-FT	126600	148100	135500	90780	102100	133500	58640	65330	35700	15640	18340	39280
CAL YR 1984	TOTAL	1125666		MEAN	3076	MAX	7640	MIN	110	AC-FT	2233000	
WTR YR 1985	TOTAL	488807		MEAN	1339	MAX	3900	MIN	60	AC-FT	969500	

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE

LOCATION.--Lat 40°52'28", long 98°16'54", in SW1/4SW1/4 sec.31, T.11 N., R.8 W., Merrick County, Hydrologic Unit 10200101, on left bank 20 ft downstream from bridge on U.S. Highway 34, 2 mi upstream from Burlington Northern Inc. bridge, and 5 mi southeast of Grand Island.

DRAINAGE AREA.--58,800 mi², approximately, of which about 54,000 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1942. WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,831.89 ft above National Geodetic Vertical Datum of 1929 (Nebraska Department of Highways bench mark). Prior to Oct. 23, 1933, nonrecording gage at bridge 68 ft downstream and Oct. 23, 1933, to Aug. 19, 1980, water-stage recorder at site 98 ft downstream, all at same datum.

REMARKS.--Estimated daily discharges: Dec. 20 to Mar. 2. Records good except for period of estimated record, which is poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--44 years (water years 1942-85, since storage in Lake McConaughy), 1,557 ft³/s, 1,128,000 acre-ft per year; median of yearly mean discharges, 1,180 ft³/s, 855,000 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s June 6, 1935, gage height, 5.99 ft, from rating curve extended above 18,000 ft³/s; maximum gage height, 6.16 ft Mar. 27, 1960, backwater from ice; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,000 ft³/s Feb. 26, gage height, 5.00 ft, backwater from ice; maximum gage height, 5.28 ft Feb. 6, backwater from ice; minimum daily discharge, 277 ft³/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2900	4800	5450	1650	2800	6200	3360	2300	1730	1930	558	319
2	2770	4880	5230	1500	2700	5800	3300	2410	1600	1800	629	331
3	2050	4910	5050	2050	2600	5690	3210	2410	1550	1780	733	319
4	2060	5020	4990	2900	2500	5840	3140	2060	1740	1380	1300	350
5	2690	4920	5050	4500	2500	5390	3100	2160	1860	842	2160	621
6	3360	4920	4730	4450	2500	5010	3000	2340	1870	633	2240	711
7	3160	5050	4760	3650	2500	5360	2910	2570	1810	564	2080	999
8	2790	5400	5780	3100	2400	5730	2820	2450	1640	497	1730	1240
9	2550	5650	6410	2400	2400	5270	2760	2210	1370	472	1410	1300
10	2410	5410	6310	2000	2400	5310	2730	1870	1270	429	1130	1350
11	2280	5050	5600	1900	2400	5540	2570	1740	1140	403	1070	1740
12	2140	5070	5150	1800	2400	5180	2320	1670	1070	399	1000	1700
13	2310	5140	5080	1900	2500	4970	2200	2100	1160	422	957	2230
14	2960	5200	5490	2000	2500	5640	2010	3890	1190	364	756	2770
15	3760	5160	5370	2300	2700	5470	2030	4570	1240	361	654	3050
16	4070	5170	6160	2550	2800	5400	1960	4560	1230	354	562	3040
17	4330	5370	5700	2900	3000	5220	1950	3880	1380	363	750	2530
18	4340	5300	3970	2950	3300	4830	1740	3310	1560	361	607	2140
19	4440	5430	3080	3300	3500	4410	1670	2420	1550	627	478	1890
20	4380	5900	3250	3800	4200	4050	1510	2600	1370	636	447	1480
21	4180	5760	3800	3500	4500	3730	1410	2360	1150	715	450	1620
22	4180	5450	3750	2800	5000	3580	1570	1900	876	676	432	1660
23	4370	5360	3950	2600	5400	3490	1680	1720	675	624	405	1780
24	4390	5270	3650	2600	6000	3410	1990	1560	463	702	346	1670
25	4550	5260	2650	2800	7000	3450	1940	1420	365	713	354	1450
26	4750	5270	2500	3000	8000	3290	2100	1450	975	660	353	1360
27	4730	5340	3250	3400	7600	2890	2170	1520	1150	669	326	1420
28	4700	5330	5150	3950	7000	2730	2200	1890	1650	637	277	1420
29	4610	5280	4650	3850	---	2790	2030	2260	2180	644	327	1560
30	4470	5440	3650	3600	---	3190	2150	2240	2240	636	352	1780
31	4630	---	3200	3100	---	3290	---	2070	---	550	362	---
TOTAL	111310	157510	142810	88800	105100	142150	69530	73910	41054	21843	25235	45830
MEAN	3591	5250	4607	2865	3754	4585	2318	2384	1368	705	814	1528
MAX	4750	5900	6410	4500	8000	6200	3360	4570	2240	1930	2240	3050
MIN	2050	4800	2500	1500	2400	2730	1410	1420	365	354	277	319
AC-FT	220800	312400	283300	176100	208500	282000	137900	146600	81430	43330	50050	90900
CAL YR 1984	TOTAL	2137314		MEAN	5840	MAX	15000	MIN	314	AC-FT	4239000	
WTR YR 1985	TOTAL	1025082		MEAN	2808	MAX	8000	MIN	277	AC-FT	2033000	

PLATTE RIVER BASIN

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1972 to September 1980.

WATER TEMPERATURES: July 1972 to September 1980.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,250 microsiemens Feb. 3, 1980; minimum daily, 575 microsiemens May 24, 1977.

WATER TEMPERATURES: Maximum, 34.5°C July 23, 1972; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 18...	0855	4380	988	8.2	8.0	10.6	--	5300	--	310	78	28
NOV 14...	0940	5230	973	8.3	7.5	10.8	20	190	82	330	86	28
DEC 06...	1045	4870	1050	8.2	.5	14.9	--	K17	86	350	92	28
JAN 04...	0920	2660	1120	8.2	.5	12.6	--	130	210	370	97	30
MAR 06...	0950	5100	979	8.2	.5	13.2	20	K23	88	340	91	27
28...	0940	2990	939	8.3	11.5	10.3	--	110	840	320	84	27
APR 23...	0930	1540	932	8.0	13.0	9.9	--	130	1100	300	79	26
MAY 22...	0840	2040	955	8.5	20.0	10.2	29	K73	110	320	84	27
JUN 19...	0810	1480	895	8.2	18.5	8.9	--	150	120	270	61	28
JUL 18...	0830	372	935	8.2	24.5	8.5	--	160	150	250	58	26
AUG 14...	0850	773	942	8.4	21.0	9.7	30	110	120	290	74	25
SEP 12...	0840	1440	850	8.1	17.0	8.4	--	970	420	260	66	23

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 18...	82	2	270	33	94	1.2	.010	1.3	1.3	2.5	.270	8.6
NOV 14...	83	2	270	32	82	1.4	.020	.68	.70	2.1	.220	4.2
DEC 06...	85	2	260	31	44	1.4	.050	.85	.90	2.3	.180	4.5
JAN 04...	92	2	280	31	--	1.3	.100	1.2	1.3	2.6	.120	4.4
MAR 06...	81	2	260	30	68	1.6	.060	1.4	1.5	3.1	.180	5.5
28...	80	2	250	30	21	1.3	.050	.75	.80	2.1	.110	3.7
APR 23...	81	2	250	31	38	.70	.040	.86	.90	1.6	.130	1.8
MAY 22...	88	2	240	32	57	.30	.080	1.2	1.3	1.6	.200	7.7
JUN 19...	94	3	280	38	56	<.10	.050	1.3	1.3	--	.190	11
JUL 18...	89	3	270	38	29	<.10	.050	.95	1.0	--	.160	8.0
AUG 14...	82	2	250	34	63	.10	.050	1.8	1.8	1.9	.290	10
SEP 12...	77	2	200	26	171	.60	.070	1.5	1.6	2.2	.190	12

06772000 WOOD RIVER NEAR ALDA, NE

LOCATION.--Lat 40°51'10", long 98°28'20", in NE1/4SE1/4 sec.7, T.10 N., R.10 W., Hall County, Hydrologic Unit 10200102, on right bank 1.2 mi south of Alda, 2.2 mi upstream from old north channel of the Platte River, and 19 mi upstream from present mouth.

DRAINAGE AREA.--628 mi².

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,897.66 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Estimated no flow: Dec. 5 to Jan. 14 and Jan. 16 to Feb. 19. Records fair. Numerous small pump diversions for irrigation above station.

AVERAGE DISCHARGE.--32 years, 10.8 ft³/s, 7,820 acre-ft/yr; median of yearly mean discharges, 8.1 ft³/s, 5,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft³/s June 16, 1967, gage height, 12.22 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 16	1830	572	9.93	Sept. 17	0930	*582	a*10.22

a From floodmark.

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.47	.00	.00	.00	49	.81	34	5.1	32	20	8.6
2	.00	.15	.00	.00	.00	47	1.2	18	4.8	17	16	13
3	.00	.35	.00	.00	.00	30	.65	15	3.6	13	53	81
4	.00	.87	.00	.00	.00	19	.94	9.5	3.7	15	33	43
5	.00	.96	.00	.00	.00	15	.62	7.7	4.3	15	70	34
6	1.2	.91	.00	.00	.00	12	.42	6.6	4.7	15	93	20
7	3.5	.91	.00	.00	.00	15	.18	6.9	3.7	16	35	13
8	3.1	.46	.00	.00	.00	8.4	.61	34	3.1	21	53	59
9	.88	.45	.00	.00	.00	5.7	.55	71	2.6	19	178	120
10	.17	.57	.00	.00	.00	3.6	.50	24	1.6	19	75	30
11	.00	.88	.00	.00	.00	4.9	.29	9.9	1.9	20	18	25
12	.00	1.3	.00	.00	.00	2.7	.40	6.0	1.6	20	9.9	34
13	.00	.99	.00	.00	.00	2.3	.38	11	2.2	21	8.0	105
14	.07	.55	.00	.00	.00	3.2	.26	140	2.3	23	8.7	105
15	1.4	.13	.00	.00	.00	2.6	.86	331	1.9	22	14	279
16	2.5	.00	.00	.00	.00	2.2	.37	540	1.1	20	11	453
17	4.3	.00	.00	.00	.00	1.7	.19	511	.63	22	13	529
18	4.9	.12	.00	.00	.00	1.3	.51	152	.27	27	16	166
19	4.1	.22	.00	.00	.00	.56	.85	57	.07	32	18	47
20	1.8	.21	.00	.00	1.8	.18	1.3	29	.03	24	19	26
21	3.3	.12	.00	.00	46	1.0	.29	21	.00	23	13	18
22	2.2	.32	.00	.00	81	.95	13	16	.00	16	7.2	15
23	1.3	.03	.00	.00	71	1.0	6.4	14	.00	12	5.5	13
24	.90	.00	.00	.00	70	1.5	3.0	12	.00	18	4.7	9.6
25	3.2	.11	.00	.00	76	.85	5.1	9.7	.00	20	3.6	7.1
26	2.7	.49	.00	.00	60	.23	11	8.1	9.2	17	2.6	5.9
27	2.3	.10	.00	.00	52	.01	18	5.9	22	15	4.2	6.2
28	1.3	.00	.00	.00	49	.00	24	5.0	119	13	3.8	7.7
29	.99	.00	.00	.00	---	.00	19	6.3	237	27	4.3	8.0
30	.65	.00	.00	.00	---	.00	34	6.8	106	52	7.9	9.2
31	.53	---	.00	.00	---	1.5	---	6.4	---	33	9.3	---
TOTAL	47.29	11.67	.00	.00	506.80	233.38	145.68	2124.8	542.40	659	827.7	2290.3
MEAN	1.53	.39	.00	.00	18.1	7.53	4.86	68.5	18.1	21.3	26.7	76.3
MAX	4.9	1.3	.00	.00	81	49	34	540	237	52	178	529
MIN	.00	.00	.00	.00	.00	.00	.18	5.0	.00	12	2.6	5.9
AC-FT	94	23	.00	.00	1010	463	289	4210	1080	1310	1640	4540
CAL YR 1984	TOTAL	9522.17		MEAN	26.0	MAX	532	MIN	.00	AC-FT	18890	
WTR YR 1985	TOTAL	7389.02		MEAN	20.2	MAX	540	MIN	.00	AC-FT	14660	

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°22'05", long 97°29'35", in SE1/4SW1/4 sec.12, T.16 N., R.2 W., Platte County, Hydrologic Unit 10200103, on left bank 300 ft downstream from highway bridge, 1.5 mi south of Duncan, and 12 mi upstream from Loup River.

DRAINAGE AREA.--60,900 mi², approximately, of which about 56,100 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1895 to December 1909 (irrigation seasons only 1895-1900), July 1910 to December 1911 (gage heights and discharge measurements only), April 1912 to September 1915, June 1928 to current year. Published as "near Columbus" 1895-1915.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1897, 1899-1901, 1903-5, 1929-32, 1935(M), 1936. WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,476.82 ft above National Geodetic Vertical Datum of 1929. June 1895 to December 1909, April 1912 to September 1915, and June to October 1928, nonrecording gage at site 7 mi downstream at different datums. Oct. 25, 1928, to Feb. 20, 1935, nonrecording gage and Feb. 20, 1935 to Mar. 21, 1984 recording gage both at site 300 ft upstream at 2.00 ft higher datum.

REMARKS.--Estimated daily discharges: Nov. 23 to Dec. 4, Dec. 21-26, Dec. 30 to Mar. 1, July 7-18, July 23 to Aug. 4, Aug. 16, and Aug. 20 to Sept. 8. Records good except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--44 years (water years 1942-85, since storage in Lake McConaughy), 1,727 ft³/s, 1,251,000 acre-ft/yr; median of yearly mean discharges, 1,340 ft³/s, 971,000 acre-ft/yr. Figures unadjusted for storage or diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 44,100 ft³/s June 23, 1905, gage height, 6.50 ft, site and datum then in use; no flow at times in 1896, 1902, 1904-5, 1910-11, 1913-14, 1928, all at site downstream, 1931, 1933-42, 1944, 1952-57, 1959, 1963, 1974, 1976, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,900 ft³/s Mar. 1, gage height, 6.05 ft, backwater from ice; maximum gage height, 8.00 ft Jan. 22, backwater from ice; minimum daily discharge, 290 ft³/s July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3360	5460	5200	2100	3200	10000	3450	4650	2420	2820	640	420
2	3210	5640	5000	2000	3000	8530	3470	4170	2180	2640	700	470
3	3110	5800	4900	2200	2900	6990	3400	3730	2020	2340	800	540
4	2790	5720	4900	2500	2700	5960	3220	3510	2200	2230	1000	620
5	2660	5730	4840	3100	2600	6320	3160	3040	2350	1860	1090	740
6	3130	5560	5040	4000	2600	6050	3170	2820	2350	1440	1710	760
7	3470	5310	4390	4500	2600	5680	3080	2870	2340	840	2650	720
8	3530	5200	4690	4800	2600	6280	3090	3000	2240	600	2610	800
9	3310	5740	5680	4000	2700	6780	3150	3060	2040	520	2310	813
10	3150	6510	6130	3500	2700	6200	3110	2980	1700	490	1920	1090
11	3150	5760	6280	3000	2800	5900	3070	2750	1410	450	1670	1420
12	3180	5220	5720	2800	2900	6120	2980	2550	1240	440	1370	2150
13	3180	5020	5180	2600	3000	6130	2670	2700	1240	460	1250	3020
14	3170	5160	5370	2400	3100	6170	2560	4360	1150	400	1300	3190
15	4130	5360	6150	2500	3200	6770	2560	6850	1220	350	1120	3410
16	4990	5500	7360	2800	3300	6790	2520	6940	1170	320	960	4380
17	5640	5640	8200	3000	3500	6860	2450	7130	1140	290	1140	5210
18	5820	5680	7270	3300	3700	6730	2490	6440	1160	500	1260	5220
19	5760	5550	4790	3500	3900	6340	2530	5900	1490	903	1220	4490
20	5570	5720	3620	3800	4100	5790	2500	4240	1640	1480	900	3420
21	5470	6020	3600	3600	4400	5260	2490	3640	1390	1250	760	2730
22	5040	6200	4100	3400	4800	4730	2410	3220	1080	965	680	2330
23	4670	6200	4000	3100	5000	4490	2570	2790	1020	800	600	2260
24	4840	6000	4000	3200	5400	4240	2750	2460	986	820	540	2300
25	4940	5600	3800	3400	5800	4120	2930	2270	970	820	500	2390
26	4990	5600	3600	3700	6200	4050	3200	2080	944	740	450	2050
27	5180	5800	4310	4000	7100	3890	3190	1940	1860	700	400	1900
28	5300	5400	6110	4100	9000	3420	3150	2020	1990	700	350	1720
29	5400	5200	7090	4200	---	3160	3280	2250	2020	700	380	2040
30	5310	5200	4000	3900	---	3150	3730	2580	2360	680	390	2390
31	5350	---	3000	3500	---	3400	---	2490	---	620	380	---
TOTAL	132800	168500	158320	102500	108800	176300	88330	111430	49320	30168	33050	64993
MEAN	4284	5617	5107	3306	3886	5687	2944	3595	1644	973	1066	2166
MAX	5820	6510	8200	4800	9000	10000	3730	7130	2420	2820	2650	5220
MIN	2660	5020	3000	2000	2600	3150	2410	1940	944	290	350	420
AC-FT	263400	334200	314000	203300	215800	349700	175200	221000	97830	59840	65550	128900
CAL YR 1984	TOTAL	2629667		MEAN	7185	MAX	18600	MIN	397	AC-FT	5216000	
WTR YR 1985	TOTAL	1224511		MEAN	3355	MAX	10000	MIN	290	AC-FT	2429000	

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1965 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1981.

WATER TEMPERATURES: November 1977 to September 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,100 microsiemens Feb. 12, 1981; minimum daily, 290 microsiemens Mar. 21, 1978.

WATER TEMPERATURES: Maximum, 33.0°C July 10, 11, 1980; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
NOV 07...	1330	5440	977	8.1	8.0	720	39	11.1	K500	K100	340
JAN 03...	1500	1960	930	8.3	1.0	--	8.2	17.1	K36	330	350
APR 03...	1000	3380	1040	8.4	11.0	727	9.4	10.6	K10	K60	320
MAY 21...	1500	3670	--	--	24.0	734	75	11.2	K46	K550	260
JUL 17...	0915	287	920	8.5	24.0	735	4.2	8.6	190	640	290
SEP 09...	1200	945	792	8.7	19.0	725	80	13.0	670	440	220

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
NOV 07...	140	89	29	88	2	9.3	203	280	37	.70	20
JAN 03...	125	93	29	88	2	11	227	270	34	.60	23
APR 03...	136	85	27	82	2	9.7	187	260	31	.50	18
MAY 21...	80	68	22	72	2	13	168	200	27	.50	17
JUL 17...	270	67	29	100	3	14	149	260	44	.60	18
SEP 09...	57	52	21	78	2	13	133	200	32	.50	17

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 07...	685	680	.93	10100	1.4	<.010	.50	.250	.120	.120
JAN 03...	707	690	.96	3740	1.6	.190	.70	.180	.150	.140
APR 03...	638	630	.87	5820	1.3	.050	1.3	.140	.160	.060
MAY 21...	518	530	.70	5130	.33	.120	3.0	.320	.310	.110
JUL 17...	630	540	.86	488	<.10	.040	.90	.090	<.010	.010
SEP 09...	529	510	.72	1350	.41	.050	3.6	.330	.040	.020

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 07...	1330	<10	3	84	<.0	--	<1	<1	<3	3	6
APR 03...	1000	<10	3	73	<.5	--	<1	<1	<3	5	4
MAY 21...	1500	20	4	91	<.5	--	1	<1	<3	7	28
JUL 17...	0915	<10	5	70	<.5	10	<1	<1	<3	3	<3

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 07...	<1	35	3	<.1	<10	3	2	<1	850	6	13
APR 03...	1	37	<1	<.1	<10	3	3	<1	760	<6	<3
MAY 21...	<1	28	9	<.1	<10	5	2	<1	590	11	41
JUL 17...	1	38	14	<.1	<10	3	<1	<1	750	<6	9

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	
NOV 07...	1330	5440	8.0	289	4240	--	--	
JAN 03...	1500	1960	1.0	214	1130	--	--	
APR 03...	1000	3380	11.0	101	922	--	--	
MAY 21...	1500	3670	24.0	264	2620	38	44	
JUL 17...	0915	287	24.0	100	77	--	--	
SEP 09...	1200	945	19.0	309	788	--	--	
DATE		SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 07...	--	40	46	76	96	100	--	
JAN 03...	--	68	72	96	99	100	--	
APR 03...	--	--	--	--	--	--	46	
MAY 21...	63	75	78	90	98	100	--	
JUL 17...	--	--	--	--	--	--	74	
SEP 09...	--	--	--	--	--	--	88	

PLATTE RIVER BASIN

06775500 MIDDLE LOUP RIVER AT DUNNING, NE

LOCATION.--Lat 41°49'50", long 100°06'00", in NW1/4SE1/4 sec.33, T.22 N., R.24 W., Blaine County, Hydrologic Unit 10210001, on left bank just upstream from bridge on State Highway 2 at northeast corner of Dunning, 1 mi upstream from Dismal River.

DRAINAGE AREA.--1,850 mi², approximately, of which about 80 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,607.14 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 12, 1946, nonrecording gage, and Sept. 12, 1946, to Sept. 30, 1962, water-stage recorder at site 0.2 mi upstream at datum 0.03 ft higher.

REMARKS.--Estimated daily discharges: Dec. 4-6, 17-23, Jan. 1-3, 9-15, 17, Jan. 20 to Feb. 17. Records good those for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--40 years, 404 ft³/s, 292,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s Apr. 20, 1971, gage height, 2.50 ft; maximum gage height, 7.02 ft Mar. 31, 1949, backwater from ice, site and datum then in use; minimum daily discharge, 100 ft³/s Dec. 5, 6, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 892 ft³/s May 11, gage height, 2.12 ft; maximum gage height, 3.99 ft Feb. 15, backwater from ice; minimum daily discharge, 385 ft³/s Mar. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412	438	443	430	395	442	434	473	442	406	493	432
2	430	439	429	415	400	437	432	464	448	411	490	429
3	422	431	427	410	400	491	444	461	458	420	480	435
4	429	440	425	401	390	453	468	465	453	418	473	447
5	449	432	410	386	390	385	466	464	458	408	482	439
6	442	439	410	409	400	385	449	459	444	406	530	436
7	424	440	408	406	390	426	458	451	435	403	493	436
8	405	438	430	404	400	432	428	453	423	403	479	444
9	404	532	436	405	400	448	439	444	418	406	473	437
10	406	500	454	390	390	475	447	451	425	399	460	444
11	406	448	467	400	400	486	447	538	431	397	452	491
12	411	452	478	390	400	431	460	489	418	399	498	480
13	406	460	457	450	405	429	456	515	416	399	496	470
14	407	459	450	500	420	420	458	527	424	397	475	464
15	444	479	441	480	430	428	453	485	421	393	475	464
16	450	464	455	408	450	433	455	482	416	389	489	464
17	433	476	450	415	480	437	456	487	414	423	475	457
18	442	490	430	417	466	446	454	478	405	487	467	454
19	406	492	400	431	429	450	479	468	401	453	454	447
20	402	461	410	425	439	448	478	469	406	439	458	448
21	422	460	410	420	449	454	472	459	413	428	456	449
22	429	452	410	415	447	474	472	454	403	436	490	473
23	423	452	405	400	448	465	458	448	399	428	475	470
24	422	458	409	420	433	444	446	442	404	435	460	456
25	424	483	418	425	440	443	442	442	422	422	444	462
26	428	502	440	445	431	459	519	432	502	409	434	448
27	448	462	434	430	432	463	482	442	448	402	430	440
28	433	442	422	420	432	468	463	437	421	407	430	452
29	418	429	412	395	---	461	484	453	408	509	431	461
30	442	443	422	390	---	452	519	470	406	598	438	451
31	435	---	448	390	---	433	---	442	---	525	437	---
TOTAL	13154	13793	13340	12922	11786	13798	13818	14444	12782	13255	14517	13580
MEAN	424	460	430	417	421	445	461	466	426	428	468	453
MAX	450	532	478	500	480	491	519	538	502	598	530	491
MIN	402	429	400	386	390	385	428	432	399	389	430	429
AC-FT	26090	27360	26460	25630	23380	27370	27410	28650	25350	26290	28790	26940
CAL YR 1984	TOTAL	164538		MEAN	450	MAX	622	MIN	385	AC-FT	326400	
WTR YR 1985	TOTAL	161189		MEAN	442	MAX	598	MIN	385	AC-FT	319700	

06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-56, 1965 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1949 to September 1956, October 1965 to current year.

SUSPENDED SEDIMENT DISCHARGE: March 1950 to September 1952, October 1953 to September 1954.

INSTRUMENTATION.--Temperature recorder from Oct. 1, 1965.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum, 34.0°C June 21, 1956; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 3,800 mg/L Feb. 23, 1952; minimum daily, 56 mg/L Jan. 23, 1952.

SEDIMENT LOADS: Maximum daily, 5,160 tons Mar. 31, 1952; minimum daily, 21 tons Jan. 23, 1952.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.5°C July 8; minimum, 0.5°C on many days during winter period.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	9.0	5.5	1.0	4.5	1.0	.5	.5	.5	.5	10.5	5.0
2	14.5	11.0	6.0	2.0	1.5	1.0	.5	.5	.5	.5	9.0	5.5
3	14.5	11.5	10.0	5.5	1.0	1.0	.5	.5	.5	.5	6.0	1.5
4	15.0	13.0	9.5	6.5	1.0	1.0	.5	.5	.5	.5	1.0	1.0
5	14.5	14.0	8.5	4.5	1.0	1.0	3.5	.5	.5	.5	3.0	1.0
6	14.5	14.0	8.0	4.5	1.0	1.0	3.5	2.0	.5	.5	7.0	1.5
7	14.0	11.5	9.5	6.0	3.5	1.0	2.0	.5	.5	.5	9.5	4.0
8	14.0	13.0	10.0	6.5	5.0	2.0	2.0	.5	.5	.5	10.5	5.5
9	11.0	11.0	9.0	1.0	7.0	5.0	.5	.5	.5	.5	11.5	6.0
10	13.0	12.0	4.0	1.0	5.5	3.5	.5	.5	.5	.5	10.5	7.0
11	16.0	13.0	6.0	2.0	5.5	4.5	.5	.5	.5	.5	10.0	5.5
12	11.5	14.5	6.5	3.5	4.5	1.0	.5	.5	.5	.5	5.5	3.5
13	17.0	16.0	9.0	5.0	2.0	.5	.5	.5	.5	.5	9.0	2.0
14	16.5	11.0	9.0	6.0	.5	.5	.5	.5	.5	.5	11.0	4.0
15	11.5	10.0	8.0	4.0	2.0	.5	.5	.5	.5	.5	11.5	5.5
16	10.0	8.0	5.0	3.0	2.0	1.0	.5	.5	.5	.5	12.0	6.0
17	8.0	5.5	6.0	3.5	1.0	.5	1.5	.5	1.5	.5	14.0	6.0
18	7.0	5.0	6.0	3.0	.5	.5	2.0	1.0	5.5	1.5	14.0	8.0
19	8.5	3.5	5.5	3.0	.5	.5	2.0	.5	7.0	3.0	13.5	8.0
20	9.0	5.0	6.0	4.0	.5	.5	.5	.5	8.5	3.5	13.5	8.0
21	8.0	5.5	5.0	3.0	.5	.5	.5	.5	8.0	4.5	13.5	8.0
22	9.0	5.0	6.5	4.0	.5	.5	.5	.5	9.0	4.0	10.0	6.5
23	9.0	4.5	6.5	3.5	1.5	.5	.5	.5	8.0	3.5	10.0	4.5
24	8.0	5.5	6.5	4.5	.5	.5	.5	.5	8.0	1.5	13.0	5.5
25	11.0	7.0	6.5	6.0	.5	.5	.5	.5	9.0	4.0	12.0	5.5
26	11.0	6.5	6.0	2.0	.5	.5	.5	.5	7.0	2.0	15.5	10.0
27	10.5	8.0	2.0	1.0	3.0	.5	.5	.5	8.5	3.5	12.0	8.5
28	8.0	4.5	3.5	1.0	4.5	2.0	.5	.5	9.5	4.0	10.5	7.0
29	10.5	5.5	5.5	3.0	2.0	.5	.5	.5	---	---	8.0	3.5
30	10.0	5.0	5.0	3.5	.5	.5	.5	.5	---	---	5.0	1.0
31	8.0	5.0	---	---	.5	.5	.5	.5	---	---	10.0	2.0
MONTH	17.0	3.5	10.0	1.0	7.0	.5	3.5	.5	9.5	.5	15.5	1.0

06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[illegible]

06775900 DISMAL RIVER NEAR THEDFORD, NE
(Hydrologic bench-mark station and Radiochemical program)

LOCATION.--Lat 41°46'45", long 100°31'30", in SE1/4NW1/4 sec.23, T.21 N., R.28 W., Thomas County, Hydrologic Unit 10210002, on right bank 1,400 ft downstream from bridge on U.S. Highway 83, 2 mi upstream from boundary of Nebraska National Forest (Bessey Division), and 14 mi south of Thedford.

DRAINAGE AREA.--960 mi², approximately, of which about 30 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,800.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 9-15, Jan. 20, and Jan. 27 to Feb. 6. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--19 years, 194 ft³/s, 140,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s Aug. 23, 1983, gage height, 3.83 ft; maximum gage height, 5.10 ft Dec. 18, 1983, backwater from ice; minimum daily discharge, 146 ft³/s Dec. 26, 30, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 313 ft³/s July 29, gage height, 1.91 ft; minimum daily discharge, 177 ft³/s Mar. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	188	197	242	200	206	190	192	202	195	202	218
2	207	191	178	236	200	210	192	191	209	201	206	221
3	204	203	182	243	195	217	200	200	211	198	206	233
4	205	194	188	254	190	192	195	197	211	192	201	228
5	239	185	203	246	190	184	195	194	201	190	201	234
6	225	182	200	255	190	199	186	186	196	191	202	230
7	211	191	193	259	194	208	181	189	205	193	197	220
8	209	191	208	254	197	198	180	185	203	192	200	219
9	205	230	211	242	207	196	185	194	193	194	188	218
10	202	203	205	245	200	203	188	194	197	205	186	221
11	200	209	205	245	185	199	190	234	186	200	187	236
12	205	206	227	230	206	186	192	220	183	197	216	227
13	210	212	227	232	210	189	188	210	195	199	203	232
14	212	212	219	244	217	190	185	216	195	205	195	217
15	215	209	215	242	211	194	190	207	195	202	193	226
16	218	200	222	240	214	195	191	210	197	201	197	239
17	206	206	218	241	224	190	195	204	193	200	200	243
18	203	212	209	257	218	192	200	196	186	215	191	233
19	200	218	215	249	219	191	196	193	185	218	192	233
20	194	212	233	225	228	189	194	198	187	208	190	232
21	194	211	236	197	235	185	188	192	190	202	200	232
22	191	199	236	186	223	193	188	188	192	210	224	235
23	191	197	242	207	227	191	182	192	188	203	221	234
24	194	199	239	220	218	197	183	191	196	213	192	231
25	191	201	233	242	223	184	182	190	200	208	194	232
26	197	199	242	226	213	195	205	190	220	199	192	226
27	194	180	249	200	201	194	188	197	197	198	196	241
28	185	195	268	190	203	195	191	193	189	200	198	220
29	188	192	258	190	---	177	200	193	193	240	201	203
30	185	191	252	190	---	184	203	213	190	281	202	208
31	182	---	242	195	---	185	---	205	---	221	205	---
TOTAL	6245	6018	6852	7124	5838	6008	5723	6154	5885	6371	6178	6822
MEAN	201	201	221	230	209	194	191	199	196	206	199	227
MAX	239	230	268	259	235	217	205	234	220	281	224	243
MIN	182	180	178	186	185	177	180	185	183	190	186	203
AC-FT	12390	11940	13590	14130	11580	11920	11350	12210	11670	12640	12250	13530
CAL YR 1984	TOTAL	73929	MEAN	202	MAX	271	MIN	149	AC-FT	146600		
WTR YR 1985	TOTAL	75218	MEAN	206	MAX	281	MIN	177	AC-FT	149200		

PLATTE RIVER BASIN

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1968 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
NOV 20...	1100	207	167	7.7	5.0	689	10	10.4	K16	K40	75
FEB 14...	0950	212	166	7.6	3.5	687	20	11.4	260	40	74
MAY 07...	1140	201	173	8.0	20.0	686	15	8.0	53	54	77
AUG 27...	1020	202	174	7.6	20.5	686	7.5	8.7	140	100	71

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
NOV 20...	0	24	3.5	6.9	.4	4.7	79	7.5	1.0	.30	55
FEB 14...	0	24	3.4	6.6	.3	4.8	78	7.5	.90	.30	57
MAY 07...	0	25	3.5	6.7	.3	4.9	81	7.7	.80	.30	59
AUG 27...	0	23	3.4	6.8	.4	5.1	78	7.1	.90	.30	58

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 20...	144	150	.20	80	.52	.020	.30	.170	.130	.140
FEB 14...	116	150	.16	66	.56	.060	.30	.220	.130	.140
MAY 07...	152	160	.21	82	.41	.020	.50	.240	.140	.130
AUG 27...	151	150	.21	82	.35	.040	.30	.200	.140	.100

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 20...	1100	30	4	53	<.5	<1	<1	<3	<1	35	3
MAY 07...	1140	110	4	54	3.5	<1	2	<3	<1	24	4
DATE	TIME	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 20...	13		4	1.5	<10	2	<1	<1	110	10	<3
MAY 07...	13		16	.2	<10	5	<1	<1	120	11	<3
DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED (PCI/L AS AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED (PCI/L AS AS SR/ YT-90) (80060)	URANIUM DIS- SOLVED (PCI/L AS AS SR/ YT-90) (80060)	URANIUM DIS- SOLVED (PCI/L AS AS SR/ YT-90) (80060)
NOV 20...	1100	<2.4	3.2	4.4	3.1	3.8	2.6	.07	.29		
DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
FEB 14...	0950	212	3.5	1070	612	20	60	94	99	100	--
MAY 07...	1140	201	20.0	667	362	--	--	--	--	--	18
AUG 27...	1020	202	20.5	595	325	--	--	--	--	--	11

PLATTE RIVER BASIN

06776500 DISMAL RIVER AT DUNNING, NE

LOCATION.--Lat 41°49'23", long 100°06'05", in sec.4, T.21 N., R.24 W., Blaine County, Hydrologic Unit 10210002, on right bank 100 ft downstream from bridge on State Highway 2 at southeast corner of Dunning and 1 mi upstream from mouth.

DRAINAGE AREA.--2,040 mi², approximately, of which about 45 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--March to June 1932, September 1945 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,606.3 ft above National Geodetic Vertical Datum of 1929. Mar. 1 to June 30, 1932, nonrecording gage at site 0.2 mi upstream at datum 0.5 ft lower. Sept. 13, 1945 to Apr. 19, 1956, nonrecording gage on bridge 100 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 14, 18-26, Dec. 28 to Jan. 3, Jan. 8-15, Jan. 19 to Feb. 16, and Feb. 26 to Mar. 10. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--40 years (1945-85), 324 ft³/s, 234,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s June 13, 1983, gage height, 2.40 ft; maximum gage height observed, 5.21 ft Jan. 19, 1947, backwater from ice; minimum daily discharge, 100 ft³/s Jan. 25, 1950, Jan. 9, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 579 ft³/s May 11, gage height, 1.28 ft; maximum gage height, 1.53 ft Feb. 15, or may have been higher during period of no gage height record, backwater from ice; minimum daily discharge, 285 ft³/s Mar. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	357	314	334	315	300	340	328	358	344	309	350	340
2	362	320	316	350	300	330	347	348	341	319	331	338
3	364	337	315	370	290	340	353	351	352	322	322	343
4	375	343	308	349	290	300	361	347	351	318	325	349
5	391	325	298	347	300	285	353	344	346	305	332	369
6	389	323	306	356	300	290	344	338	340	308	370	359
7	375	338	325	345	310	300	332	337	333	308	343	351
8	362	331	343	350	330	320	329	336	336	307	332	343
9	357	387	340	350	340	340	340	324	328	309	333	337
10	352	333	350	340	315	350	350	324	331	312	322	348
11	348	316	347	340	320	348	354	413	327	314	312	379
12	358	328	353	335	340	337	351	404	314	314	343	380
13	363	336	339	360	360	340	351	405	315	320	345	369
14	369	344	330	390	370	343	348	428	329	319	331	358
15	377	332	322	370	380	352	355	373	329	325	322	349
16	354	319	343	361	380	347	355	355	332	323	334	351
17	338	328	318	365	375	353	351	367	329	332	337	356
18	340	325	320	376	344	361	354	368	315	410	328	357
19	326	335	315	360	348	354	370	369	314	367	327	353
20	331	330	320	350	363	350	383	378	325	357	325	340
21	329	330	315	340	371	350	355	365	338	358	335	337
22	316	329	315	330	371	356	351	359	333	358	391	337
23	320	328	320	330	371	343	349	354	329	357	384	335
24	328	337	315	320	367	336	340	358	327	361	369	325
25	331	342	310	330	371	341	342	359	326	361	349	322
26	346	339	320	340	350	351	371	350	370	350	339	317
27	344	305	342	330	330	354	366	352	340	345	337	321
28	321	300	350	330	335	356	355	358	314	349	338	317
29	319	322	340	310	---	334	353	387	305	395	340	315
30	328	329	330	295	---	320	367	368	310	431	344	316
31	331	---	320	290	---	327	---	351	---	392	341	---
TOTAL	10801	9905	10119	10624	9521	10448	10558	11228	9923	10555	10531	10311
MEAN	348	330	326	343	340	337	352	362	331	340	340	344
MAX	391	387	353	390	380	361	383	428	370	431	391	380
MIN	316	300	298	290	290	285	328	324	305	305	312	315
AC-FT	21420	19650	20070	21070	18880	20720	20940	22270	19680	20940	20890	20450
CAL YR 1984	TOTAL	125624		MEAN	343	MAX	436	MIN	250	AC-FT	249200	
WTR YR 1985	TOTAL	124524		MEAN	341	MAX	431	MIN	285	AC-FT	247000	

PLATTE RIVER BASIN

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06779000 MIDDLE LOUP RIVER AT ARCADIA, NE

LOCATION.--Lat 41°25'20", long 99°08'10", in sec.26, T.17 N., R.16 W., Valley County, Hydrologic Unit 10210003, on left bank 80 ft downstream from bridge on State Highway 70 at southwest edge of Arcadia.

DRAINAGE AREA.--5,040 mi², approximately, of which about 820 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1937 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area. WDR NE-82-1: 1981(M).

GAGE.--Water-stage recorder. Datum of gage is 2,146.30 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 23, 1938, nonrecording gage at bridge just upstream at datum 1.23 ft lower.

REMARKS.--Estimated daily discharges: Dec. 13 to Mar. 4. Records poor. Middle Loup Public Power and Irrigation District began diversion above station Mar. 30, 1938. Farwell Irrigation District canal began diversion from river in November 1962 at point 8 mi above station.

AVERAGE DISCHARGE.--23 years (1962-85), 685 ft³/s, 496,300 acre-ft/yr since diversion to Farwell Irrigation District canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 18,500 ft³/s June 22, 1947, gage height, 6.24 ft; maximum discharge computed, 9,700 ft³/s May 27, 1945, gage height, 5.12 ft; maximum gage height, 6.41 ft Mar. 27, 1960, backwater from ice; minimum daily discharge, 6.0 ft³/s July 23, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,350 ft³/s Oct. 15, gage height, 3.01 ft; maximum gage height, 4.50 ft Feb. 11, backwater from ice; minimum daily discharge, 21 ft³/s July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	448	509	1710	280	800	1050	496	730	473	309	337	493
2	456	644	1790	300	700	1050	570	765	498	291	286	607
3	504	630	1210	400	700	1100	611	672	505	240	253	1040
4	789	490	1250	900	750	1400	702	666	625	130	220	855
5	2010	574	1810	1700	800	1170	841	904	629	79	193	844
6	2010	693	2040	1800	750	1500	595	784	664	53	174	1050
7	1340	541	2310	1900	800	1060	605	760	598	49	208	1030
8	1160	636	2330	2000	800	749	526	695	561	65	170	996
9	771	1600	1810	1800	900	652	531	720	528	68	119	960
10	504	1850	1330	1500	1200	512	511	733	548	71	68	1220
11	470	889	1120	600	1150	481	539	766	592	37	55	1840
12	676	585	810	1000	1150	488	471	1350	556	58	57	2150
13	1260	562	750	1500	1150	685	451	898	493	41	61	2190
14	1910	741	700	1050	1150	907	425	1720	415	21	78	1990
15	2390	1120	810	1800	1150	1070	452	691	382	36	53	2000
16	2260	923	900	2300	1150	1310	447	417	412	89	63	2030
17	1990	985	850	2100	1150	1050	462	392	406	24	210	2160
18	1370	937	700	2100	1100	1020	455	429	351	62	325	2380
19	1870	1300	700	2000	1200	1030	473	442	336	176	357	2170
20	1180	1470	1000	1800	1200	784	572	451	288	72	399	2230
21	775	1760	1100	1400	1150	845	526	486	256	48	486	2220
22	1650	1880	1400	400	1150	1130	575	493	219	65	588	2120
23	1060	1340	1200	450	1150	1290	948	493	219	28	860	1860
24	1780	1640	500	1000	1100	930	494	508	178	257	756	1030
25	1760	1850	200	1500	1050	848	594	512	116	115	602	771
26	1850	2040	400	1600	1050	992	946	497	371	77	542	786
27	1960	2060	700	1400	1050	1150	700	494	508	48	485	693
28	1970	1710	1200	1200	1050	1150	461	485	436	59	456	702
29	1200	2030	1000	1100	---	738	485	519	371	85	448	1120
30	1150	2000	700	900	---	600	653	636	329	377	441	664
31	536	---	400	1000	---	620	---	539	---	447	469	---
TOTAL	41059	35989	34730	40780	28500	29361	17117	20647	12863	3577	9819	42201
MEAN	1324	1200	1120	1315	1018	947	571	666	429	115	317	1407
MAX	2390	2060	2330	2300	1200	1500	948	1720	664	447	860	2380
MIN	448	490	200	280	700	481	425	392	116	21	53	493
AC-FT	81440	71380	68890	80890	56530	58240	33950	40950	25510	7090	19480	83710
CAL YR 1984	TOTAL	344869		MEAN	942	MAX	2400	MIN	73	AC-FT	684000	
WTR YR 1985	TOTAL	316643		MEAN	868	MAX	2390	MIN	21	AC-FT	628100	

PLATTE RIVER BASIN

06783500 MUD CREEK NEAR SWEETWATER, NE

LOCATION.--Lat 41°02'15", long 98°59'35", in NE1/4SE1/4 sec.3, T.12 N., R.15 W., Buffalo County, Hydrologic Unit 10210005, on right bank 12 ft downstream from bridge on State Highway 2, 0.9 mi southeast of Sweetwater, and 11.6 mi upstream from mouth.

DRAINAGE AREA.--707 mi², of which 655 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1946 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,013.69 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 15-28, Nov. 30, Dec. 1 to Mar. 2, and June 2-5. Records good except for periods of estimated record, which are poor. Minor irrigation developments above station.

AVERAGE DISCHARGE.--39 years, 39.2 ft³/s, 28,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 27,000 ft³/s June 22, 1947, gage height, 23.20 ft; maximum discharge computed, 5,600 ft³/s June 24, 1968, gage height, 20.07 ft; no flow at times in 1955-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1929, that of June 22, 1947, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 14	1430	*386	*11.03	No peaks greater than base discharge.			
Minimum daily discharge, 9.3 ft ³ /s July 18.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	25	26	22	28	52	32	46	60	25	43	21
2	19	25	25	25	18	56	32	42	54	25	37	19
3	19	25	23	28	21	52	32	38	45	23	31	21
4	20	26	23	30	23	58	32	38	40	22	26	21
5	24	25	28	27	26	47	31	35	37	21	24	149
6	57	25	24	25	27	47	31	34	35	21	23	41
7	42	25	29	25	29	44	31	33	33	19	50	24
8	30	26	29	23	30	37	30	43	32	19	48	19
9	26	27	29	23	30	36	30	34	30	21	26	18
10	22	50	26	22	30	36	30	31	29	20	24	91
11	21	35	25	22	31	36	30	30	28	19	21	47
12	20	31	25	21	31	35	30	31	28	16	22	37
13	20	33	24	20	31	36	31	43	27	16	23	105
14	21	29	24	20	29	35	30	291	27	11	22	40
15	25	28	25	22	27	35	30	188	27	10	22	38
16	28	27	27	25	33	34	29	130	26	11	22	27
17	30	27	26	25	38	34	29	76	26	11	141	25
18	31	26	25	25	45	34	29	63	25	9.3	110	23
19	33	25	26	27	50	34	28	60	24	19	37	22
20	30	25	27	26	46	34	28	58	24	20	25	22
21	26	25	28	24	63	32	28	56	22	19	25	22
22	24	25	27	22	55	32	29	56	22	17	23	25
23	25	26	27	23	50	32	36	56	22	16	22	25
24	24	27	25	24	55	32	43	55	22	22	22	23
25	24	28	26	26	54	31	39	55	21	177	22	23
26	25	29	25	28	52	32	54	55	186	132	21	24
27	26	30	26	30	52	32	78	54	88	54	21	24
28	26	30	30	33	52	31	56	54	38	55	22	23
29	26	30	40	37	---	31	51	60	37	92	23	25
30	26	28	35	35	---	31	46	64	30	207	21	25
31	25	---	30	35	---	32	---	59	---	62	22	---
TOTAL	813	843	835	800	1056	1160	1065	1968	1145	1211.3	1021	1049
MEAN	26.2	28.1	26.9	25.8	37.7	37.4	35.5	63.5	38.2	39.1	32.9	35.0
MAX	57	50	40	37	63	58	78	291	186	207	141	149
MIN	18	25	23	20	18	31	28	30	21	9.3	21	18
AC-FT	1610	1670	1660	1590	2090	2300	2110	3900	2270	2400	2030	2080
CAL YR 1984	TOTAL	22325		MEAN	61.0	MAX	2030	MIN	14	AC-FT	44280	
WTR YR 1985	TOTAL	12966.3		MEAN	35.5	MAX	291	MIN	9.3	AC-FT	25720	

PLATTE RIVER BASIN

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06783500 MUD CREEK NEAR SWEETWATER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 16...	1430	30	587	7.8	9.0	7.8	--	K24000	--	270	82	15
NOV 29...	1430	30	665	8.2	1.0	13.7	14	K42	260	320	100	17
DEC 20...	1350	30	762	7.8	.5	11.9	--	93	140	350	110	19
JAN 16...	1230	24	784	7.3	.5	6.3	--	370	160	350	110	18
FEB 21...	1320	68	422	7.6	.5	10.4	130	2100	K110000	190	56	11
MAR 20...	1340	33	665	8.1	9.0	11.5	--	K42	K29	340	110	17
APR 09...	1315	30	662	8.2	8.5	12.8	--	K23	K40	320	100	17
MAY 09...	1400	33	692	7.7	20.0	6.6	46	1000	1000	320	100	17
JUN 06...	1410	35	635	7.8	16.5	7.7	--	1500	2000	310	95	17
JUL 31...	1340	58	425	7.6	19.0	7.0	--	20000	30000	180	57	9.9
AUG 28...	1340	22	712	7.9	20.5	7.4	29	2600	880	310	98	15
SEP 24...	1300	23	642	7.7	9.5	9.6	--	K2100	2600	300	96	15

K Results based on colony count outside acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 16...	15	.4	21	9.7	53	.50	.040	1.1	1.1	1.6	.800	8.1
NOV 29...	18	.5	29	10	21	1.4	.080	.62	.70	2.1	.410	3.5
DEC 20...	21	.5	35	14	25	1.7	.160	.64	.80	2.5	.410	3.7
JAN 16...	22	.5	30	16	18	2.0	.470	.63	1.1	3.1	.540	3.0
FEB 21...	11	.4	24	9.4	1020	1.7	1.60	--	--	--	1.90	38
MAR 20...	20	.5	28	13	12	1.4	.120	.78	.90	2.3	.630	4.4
APR 09...	20	.5	28	12	38	.80	.030	1.3	1.3	2.1	.600	4.3
MAY 09...	25	.6	28	18	288	1.8	.220	.68	.90	2.7	.970	14
JUN 06...	15	.4	29	9.4	364	1.8	.230	1.2	1.4	3.2	1.10	24
JUL 31...	10	.3	21	7.4	666	2.2	.030	2.8	2.8	5.0	1.60	28
AUG 28...	17	.4	26	11	69	1.2	.060	1.0	1.1	2.3	.770	5.3
SEP 24...	15	.4	25	9.2	240	1.3	.120	.88	1.0	2.3	.930	5.5

PLATTE RIVER BASIN

06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE

LOCATION.--Lat 41°01'53", long 98°44'25", in NW1/4NW1/4 sec.12, T.12 N., R.13 W., Buffalo County, Hydrologic Unit 10210004, 5 ft downstream and 30 ft shoreward from right downstream corner of county highway bridge, 0.6 mi northeast of St. Michael, and 3.4 mi upstream from Sweet Creek.

DRAINAGE AREA.--2,350 mi², approximately, of which about 1,610 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,921.26 ft above National Geodetic Vertical Datum of 1929.

Prior to June 22, 1947, water-stage recorder, and June 25 to Sept. 30, 1947, nonrecording gage, at present site at datum 2.00 ft higher. Oct. 1, 1947 to July 3, 1958, nonrecording gage at present site and datum. July 4, 1958 to Sept. 7, 1960, water-stage recorder at site 600 ft upstream at present datum. Sept. 8, 1960 to June 24, 1968, water-stage recorder at site 100 ft upstream at present datum. June 25 to Nov. 21, 1968, nonrecording gage at present site and datum. Nov. 22, 1968 to May 19, 1981, water-stage recorder at site 40 ft upstream at present datum. May 20 to July 16, 1981, water-stage recorder at site 70 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 6, 7, and Dec. 14 to Feb. 27. Records good except for periods of estimated record, which are poor. Minor irrigation developments above station.

AVERAGE DISCHARGE.--42 years, 239 ft³/s, 173,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 50,000 ft³/s June 22, 1947, gage height, 12.0 ft, present datum, from graph based on gage readings; maximum discharge computed, 27,500 ft³/s June 24, 1968, gage height, 11.00 ft; no flow Aug. 5-8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,590 ft³/s Sept. 13, gage height, 5.97 ft; minimum daily discharge, 54 ft³/s July 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	190	263	225	140	236	241	462	210	188	240	113
2	132	187	258	250	100	236	256	413	231	172	202	112
3	132	190	247	240	100	239	251	362	244	159	379	105
4	137	187	261	230	125	239	257	325	242	142	312	115
5	173	186	253	220	125	256	257	315	252	126	181	443
6	284	186	220	210	125	249	249	300	258	119	239	424
7	252	184	260	210	125	254	237	296	252	111	279	266
8	215	183	257	210	125	277	232	281	246	99	204	171
9	202	209	291	300	130	265	229	263	234	87	150	145
10	198	231	291	450	130	263	237	231	213	78	131	201
11	198	271	242	470	120	265	241	376	197	73	132	329
12	198	250	238	400	135	272	247	299	188	71	160	296
13	205	255	238	370	135	277	248	360	180	69	144	1660
14	201	260	240	350	155	274	244	1400	162	66	122	605
15	221	257	250	280	165	271	229	859	162	57	116	341
16	236	248	250	255	180	261	211	447	156	54	116	313
17	257	242	280	250	190	261	206	349	150	54	159	269
18	257	236	250	210	225	256	208	322	141	58	336	229
19	256	235	190	200	310	249	214	292	139	114	215	204
20	248	235	140	180	450	254	209	278	137	149	150	217
21	238	231	175	170	600	250	207	264	139	117	143	204
22	228	235	190	120	600	261	227	247	138	106	141	210
23	219	230	200	100	650	273	301	243	135	98	140	249
24	218	236	170	140	700	273	335	230	132	124	146	214
25	218	234	160	150	800	259	356	204	126	245	139	195
26	222	241	155	170	900	251	460	189	645	424	140	185
27	223	257	130	175	800	242	494	180	407	216	139	181
28	218	252	150	175	407	243	395	175	286	181	129	178
29	211	252	250	180	---	232	389	213	258	223	134	205
30	205	260	225	175	---	234	431	268	216	415	127	220
31	199	---	200	175	---	249	---	253	---	428	125	---
TOTAL	6530	6850	6924	7240	8747	7921	8298	10696	6476	4623	5470	8599
MEAN	211	228	223	234	312	256	277	345	216	149	176	287
MAX	284	271	291	470	900	277	494	1400	645	428	379	1660
MIN	129	183	130	100	100	232	206	175	126	54	116	105
AC-FT	12950	13590	13730	14360	17350	15710	16460	21220	12850	9170	10850	17060
CAL YR 1984	TOTAL	119082	MEAN	325	MAX	7250	MIN	98	AC-FT	236200		
WTR YR 1985	TOTAL	88374	MEAN	242	MAX	1660	MIN	54	AC-FT	175300		

06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1974 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: June 1946 to June 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 19,300 mg/L June 19, 1946; minimum daily, 13 mg/L Dec. 30, 31, 1951.

SEDIMENT LOADS: Maximum daily, 672,000 tons June 22, 1947; minimum daily, 6.1 tons Dec. 30, 31, 1951.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

				STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)				
DATE		TIME										
OCT												
16...		1130		229	422	8.2	9.0	10.8				
NOV												
29...		1020		249	468	8.2	.5	12.8				
DEC												
20...		1020		141	538	8.0	.5	12.6				
JAN												
17...		1045		251	503	7.7	.5	11.8				
FEB												
21...		0950		544	324	7.4	.5	11.4				
MAR												
20...		0940		248	453	8.1	8.0	11.0				
APR												
09...		0945		225	456	8.2	9.0	11.9				
MAY												
09...		1030		268	473	8.1	20.0	9.1				
JUN												
06...		1025		259	425	7.9	18.5	8.6				
JUL												
31...		1000		434	273	7.7	19.0	7.3				
AUG												
28...		0955		130	373	8.1	21.5	9.8				
SEP												
24...		0940		213	415	7.6	10.0	10.2				
DATE		TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAR	20...	0940	80	220	9	71	11	13	.4	8.7	214	20
JUL	31...	1000	110	120	0	36	6.1	6.5	.3	14	121	14
DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR	20...	5.4	.30	50	310	.42	206	.84	.180	40	7	6
JUL	31...	3.2	.30	30	180	.25	214	.71	.000	40	130	6

PLATTE RIVER BASIN

06784200 SHERMAN RESERVOIR NEAR LOUP CITY, NE

LOCATION.--Lat 41°18'10", long 98°52'45", in SW1/4NW1/4 sec.1, T.15 N., R.14 W., Sherman County, Hydrologic Unit 10210003, in control house of outlet works of Sherman Dam, 5 mi northeast of Loup City.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Mercury-column pressure gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam; closure date of dam, August 1960. First diversions from Middle Loup River, Nov. 8, 1962. Usable capacity, 65,237 acre-ft between elevations 2,118.5 ft, sill of canal outlet works, and 2,162.3 ft, crest of spillway. Dead and inactive storage, 3,839 acre-ft below elevation 2,118.5 ft. Figures given herein represent total contents. Water is used for irrigation of Farwell Unit of Bureau of Reclamation.

COOPERATION.--Records of elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 70,230 acre-ft June 22, 1975, elevation, 2,162.7 ft; minimum observed since appreciable storage was attained, 9,450 acre-ft Aug. 2, 1980, elevation, 2,127.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 69,080 acre-ft June 10-30, July 1-4, elevation, 2,162.3 ft; minimum observed, 46,480 acre-ft Oct. 1, 1984, elevation, 2,153.4 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,153.1	45,810	-
Oct. 31	2,157.4	55,920	+10,110
Nov. 30	2,156.8	54,430	-1,490
Dec. 31	2,156.3	53,210	-1,220
CAL YR 1984	-	-	-490
Jan. 31	2,155.9	52,240	-970
Feb. 28	2,155.5	51,290	-950
Mar. 31	2,155.1	50,350	-940
Apr. 30	2,158.8	59,500	+9,150
May 31	2,162.2	68,790	+9,290
June 30	2,162.3	69,080	+290
July 31	2,157.7	56,680	-12,400
Aug. 31	2,159.1	60,270	-3,590
Sept. 30	2,156.2	52,970	-7,300
WTR YR 1985	-	-	+7,160

06784800 TURKEY CREEK NEAR DANNEBROG, NE

LOCATION.--Lat 41°09'24", long 98°33'22", in SW1/4NW1/4 sec.26, T.14 N., R.11 W., Howard County, Hydrologic Unit 10210003, on left bank 25 ft downstream from bridge on State Highway 11, 2.8 mi north of Dannebrog, and 10 mi upstream from mouth.

DRAINAGE AREA.--66.2 mi².

PERIOD OF RECORD.--May 1966 to September 1970, October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,870.35 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Estimated daily discharges: Dec. 14, 16-18, 24, Dec. 31 to Jan. 1, Jan. 9-15, 19-22, and Jan. 31 to Feb. 6. Records good except for periods of estimated record, which are poor. Low flow includes return water from Farwell Irrigation District.

AVERAGE DISCHARGE.--7 years (1979-85), 20.6 ft³/s, 14,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft³/s June 14, 1967, gage height, 19.21 ft; maximum gage height, 19.26 ft June 12, 1983; no flow May 17-20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft³/s May 14, gage height, 15.85 ft; minimum daily, 5.8 ft³/s Apr. 14, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	12	13	11	7.0	13	10	103	16	14	21	29
2	7.9	11	12	13	7.0	12	12	33	15	14	18	33
3	8.2	13	11	14	7.4	18	10	27	14	14	33	36
4	8.7	13	11	14	7.4	26	8.9	24	17	14	20	38
5	15	11	12	15	7.4	13	8.2	23	19	13	17	118
6	49	11	13	16	8.2	13	7.3	21	16	15	17	71
7	21	13	11	16	8.2	13	6.6	19	15	21	16	31
8	11	12	12	14	8.6	12	6.4	18	14	25	16	19
9	9.9	17	14	12	8.7	12	6.3	17	13	27	16	15
10	11	20	13	11	8.0	13	6.7	17	12	31	16	41
11	12	13	16	11	8.3	15	6.7	20	12	31	16	48
12	11	13	15	10	8.7	14	6.4	16	12	31	19	128
13	10	18	14	10	8.9	13	6.2	46	12	33	17	427
14	10	16	13	11	8.9	13	6.2	782	13	30	17	125
15	37	13	12	11	9.2	14	6.0	212	13	31	23	28
16	37	11	12	12	12	14	6.0	38	12	28	32	23
17	36	13	11	12	12	15	5.9	31	12	29	195	22
18	17	12	11	12	11	16	5.8	27	11	47	72	19
19	16	12	12	11	13	16	5.9	25	11	139	18	17
20	13	11	12	10	15	16	6.4	25	11	96	14	15
21	12	11	13	10	21	15	5.8	21	11	31	14	17
22	11	12	13	10	19	16	69	20	10	20	15	33
23	11	12	13	10	17	17	179	19	12	15	15	61
24	12	13	12	11	15	15	37	19	12	33	14	22
25	12	14	11	11	15	14	37	18	11	22	13	18
26	13	15	12	10	15	14	217	17	96	14	13	17
27	13	13	13	10	12	13	118	16	49	13	12	16
28	12	12	80	10	13	11	32	16	17	13	13	15
29	11	13	108	10	---	9.1	41	22	14	25	14	36
30	11	13	33	7.0	---	8.2	119	20	14	98	17	46
31	11	---	15	7.0	---	9.5	---	17	---	53	24	---
TOTAL	477.6	393	573	352.0	311.9	432.8	998.7	1729	516	1020	777	1564
MEAN	15.4	13.1	18.5	11.4	11.1	14.0	33.3	55.8	17.2	32.9	25.1	52.1
MAX	49	20	108	16	21	26	217	782	96	139	195	427
MIN	7.9	11	11	7.0	7.0	8.2	5.8	16	10	13	12	15
AC-FT	947	780	1140	698	619	858	1980	3430	1020	2020	1540	3100
CAL YR 1984	TOTAL	12675.7		MEAN	34.6	MAX	1480	MIN	7.6	AC-FT	25140	
WTR YR 1985	TOTAL	9145.0		MEAN	25.1	MAX	782	MIN	5.8	AC-FT	18140	

PLATTE RIVER BASIN

06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE

LOCATION.--Lat 41°12'13", long 98°26'46", in SE1/4NW1/4NE1/4 sec.10, T.14 N., R.10 W., Howard County, Hydrologic Unit 10210003, on left bank at St. Paul, 20 ft upstream from bridge on U.S. Highway 281 and 6 mi upstream from confluence with North Loup River.

DRAINAGE AREA.--8,090 mi², approximately, of which about 3,130 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1036: 1943. WSP 1390: 1896, 1903, 1928(M), 1944. WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,776.61 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to June 5, 1957. June 5, 1957, to Mar. 16, 1978, water-stage recorder on left bank 430 ft upstream at same datum. Mar. 17 to May 31, 1978, nonrecording gage on railroad bridge 30 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 2 to Mar. 2. Records poor. Diversions above station for irrigation.

AVERAGE DISCHARGE.--78 years, 1,193 ft³/s, 864,300 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft³/s June 23, 1947, gage height, 12.69 ft, site then in use, present datum, from rating curve extended above 55,000 ft³/s; minimum daily since 1929, 23 ft³/s Aug. 9, 10, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,400 ft³/s Sept. 13, gage height, 4.62 ft; minimum daily, 239 ft³/s July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	703	1560	1580	1200	950	2300	948	946	1240	685	2580	684
2	626	1820	1550	700	1000	2500	846	664	1200	625	1490	703
3	573	1510	1400	1050	750	2400	1250	971	1130	555	1360	765
4	664	1620	1200	1200	500	2170	1330	1020	1240	453	1760	922
5	971	1820	1300	1500	950	1740	993	1210	1250	343	1070	1560
6	1800	1750	1200	1950	1000	1410	798	1300	1250	291	645	1660
7	1460	1950	1450	2300	1250	1860	684	1230	1230	259	830	1100
8	1050	2010	1700	2150	850	1930	762	1170	1150	259	684	946
9	906	2270	1700	2150	900	1120	886	1390	1040	259	590	852
10	843	1860	1750	1700	950	1160	943	1420	973	239	430	1160
11	735	1980	1700	1300	1200	2000	1010	2060	991	259	337	1550
12	689	1540	1550	800	1100	1750	1050	1980	1030	269	314	3100
13	676	1160	1050	550	1450	1850	1100	2460	1120	269	356	8890
14	819	1070	1100	650	1600	1490	946	7390	1130	259	308	3740
15	1350	991	1250	900	1250	1230	946	4420	1030	269	269	1590
16	1820	1050	1450	800	1350	1110	875	1920	765	249	321	1430
17	1260	1000	1700	1600	1400	1360	830	1660	665	249	723	1290
18	1090	1110	1200	1750	1600	1350	830	1360	683	402	1300	1410
19	1220	1090	800	1750	1600	1480	898	1210	704	684	875	1600
20	1260	1090	1000	850	1800	1540	830	1270	542	1070	626	1550
21	864	973	1850	1200	2000	1800	875	1240	490	946	590	1720
22	1010	916	1950	1050	2200	1890	1270	1250	459	490	830	1850
23	895	1060	2000	600	2100	1910	1800	1180	416	416	1030	2070
24	916	1200	2000	500	2000	2100	1090	1270	388	617	1030	1710
25	908	1290	1650	350	1800	1480	946	1240	360	971	1030	1450
26	1020	1450	950	500	1800	620	1070	1240	1830	1180	910	1490
27	1340	1600	800	900	1900	768	1050	1270	2240	744	852	1440
28	1310	1560	1500	1150	2000	1010	664	1240	1900	375	723	1600
29	1230	1570	2250	1450	---	1170	572	1390	1210	1270	703	1980
30	1300	1540	2050	750	---	1310	786	1420	851	2660	664	1890
31	1250	---	1700	750	---	1220	---	1390	---	3010	683	---
TOTAL	32558	43410	46330	36050	39250	49028	28878	51181	30507	20626	25913	53702
MEAN	1050	1447	1495	1163	1402	1582	963	1651	1017	665	836	1790
MAX	1820	2270	2250	2300	2200	2500	1800	7390	2240	3010	2580	8890
MIN	573	916	800	350	500	620	572	664	360	239	269	684
AC-FT	64580	86100	91900	71510	77850	97250	57280	101500	60510	40910	51400	106500
CAL YR 1984	TOTAL	581336		MEAN	1588	MAX	21800	MIN	269	AC-FT	1153000	
WTR YR 1985	TOTAL	457433		MEAN	1253	MAX	8890	MIN	239	AC-FT	907300	

PLATTE RIVER BASIN

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06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

				STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)					
		DATE	TIME										
		OCT 15...	1330	1300	331	8.0	12.0	9.9					
		NOV 26...	1430	1500	309	8.0	5.0	11.2					
		DEC 18...	1140	1240	366	7.8	.5	14.8					
		JAN 15...	1300	909	345	7.7	.5	12.6					
		FEB 19...	1335	1480	295	7.4	.5	12.1					
		MAR 18...	1420	1440	300	8.0	13.5	10.4					
		APR 11...	1415	1060	320	8.0	19.0	8.9					
		MAY 06...	1325	1250	373	8.1	22.5	9.0					
		JUN 04...	1345	1180	322	7.9	16.0	9.2					
		JUL 29...	1320	478	392	8.2	21.5	8.6					
		AUG 26...	1250	895	293	8.1	24.5	8.8					
		SEP 25...	1200	1460	321	7.5	10.0	9.8					
DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)		
		MAR 18...	1420	80	140	3	44	6.6	9.9	.4	7.6	134	14
		JUL 29...	1320	50	170	4	54	9.3	12	.4	14	169	20
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	
		MAR 18...	2.9	.30	55	220	.30	858	.82	.190	30	18	4
		JUL 29...	5.7	.30	42	260	.35	334	.89	--	50	21	3

PLATTE RIVER BASIN

06786000 NORTH LOUP RIVER AT TAYLOR, NE

LOCATION.--Lat 41°46'37", long 99°22'45". in NE1/4SE1/4 sec.22, T.21 N., R.18 W., Loup County, Hydrologic Unit 10210006, on left bank 64 ft downstream from bridge on U.S. Highway 183 and 0.4 mi north of Taylor.

DRAINAGE AREA.--2,280 mi², approximately, of which about 180 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1936 to current year.

REVISED RECORDS.--WSP 856: 1937. WSP 1310: 1939(M). WSP 1730: 1956-57(M). WSP 1918: 1952. WDR NE-72: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 2,248.21 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 28, 1938, nonrecording gage at same site and datum. Sept. 28, 1938, to July 16, 1958 water-stage recorder at site 450 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 1 to Feb. 24. Records fair except for period of estimated record, which is poor. North Loup Public Power and Irrigation District canal began diversion from river in April 1939 at point 5 mi above station. Several smaller diversions above station for irrigation.

AVERAGE DISCHARGE.--48 years (1937-85), 466 ft³/s. 337,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,210 ft³/s June 27, 1983, gage height, 5.94 ft; maximum gage height, 9.5 ft Feb. 25, 1957, ice jam, from floodmarks; minimum daily discharge, 45 ft³/s July 26, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,600 ft³/s Feb. 24, gage height, 6.67 ft, backwater from ice; maximum gage height, 7.21 ft Jan. 10, backwater from ice; minimum daily discharge, 162 ft³/s July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	535	474	612	330	350	504	512	732	391	383	599	347
2	530	477	510	400	375	546	570	714	383	391	540	364
3	526	450	491	500	400	597	574	683	392	369	511	385
4	574	499	532	640	510	512	577	645	431	338	467	401
5	662	490	605	740	530	391	548	609	404	273	417	489
6	688	480	543	720	540	441	560	577	421	239	447	435
7	637	500	622	675	540	630	527	550	417	207	411	407
8	617	512	656	635	580	680	497	452	421	206	397	388
9	585	773	701	600	540	565	517	438	382	198	381	382
10	586	866	729	450	520	602	543	467	386	176	374	424
11	601	664	714	350	530	571	599	472	393	167	370	592
12	602	711	635	255	600	510	604	637	379	162	452	646
13	582	687	536	350	680	528	578	631	399	175	548	614
14	597	732	486	645	775	526	575	734	410	183	578	545
15	665	720	591	600	850	524	603	618	411	223	454	527
16	639	692	720	620	840	533	622	501	430	245	399	506
17	593	709	614	620	840	580	623	459	418	218	389	491
18	563	748	432	580	860	542	601	433	364	446	382	475
19	524	726	354	400	900	535	597	440	356	511	373	456
20	544	709	479	280	1000	526	628	477	365	326	317	433
21	562	679	627	325	1100	549	659	452	372	289	314	439
22	547	697	644	400	1200	543	665	440	350	265	338	471
23	548	644	612	450	1150	529	675	414	317	282	364	473
24	543	614	454	470	960	541	578	392	287	372	329	442
25	553	710	282	500	793	536	606	367	293	287	305	419
26	559	727	475	620	604	565	689	358	585	252	278	426
27	564	693	638	600	574	573	832	350	585	217	272	434
28	541	566	677	580	577	568	734	357	501	223	289	422
29	521	585	619	540	---	540	726	461	444	355	298	388
30	511	602	505	450	---	515	729	491	415	631	293	399
31	511	---	356	300	---	469	---	431	---	758	336	---
TOTAL	17810	19136	17451	15625	19718	16771	18348	15782	12102	9367	12222	13620
MEAN	575	638	563	504	704	541	612	509	403	302	394	454
MAX	688	866	729	740	1200	680	832	734	585	758	599	646
MIN	511	450	282	255	350	391	497	350	287	162	272	347
AC-FT	35330	37960	34610	30990	39110	33270	36390	31300	24000	18580	24240	27020
CAL YR 1984	TOTAL	220718		MEAN	603	MAX	1300	MIN	196	AC-FT	437800	
WTR YR 1985	TOTAL	187952		MEAN	515	MAX	1200	MIN	162	AC-FT	372800	

06787000 CALAMUS RIVER NEAR HARROP, NE

LOCATION.--Lat 41°56'48", long 99°23'10" in NW1/4SE1/4 sec.22, T.23 N., R.18 W., Loup County, Hydrologic Unit 10210008, on right bank 44 ft upstream from bridge on U.S. Highway 183, 12.2 mi north of Taylor.

DRAINAGE AREA.--983 mi², most of which does not contribute directly to surface runoff.

PERIOD OF RECORD.--March to July 1932. August 1931 to February 1932, July 1932 to June 1939, 1955-64 and 1977, gage heights or discharge measurements only. June 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,260 ft from topographic map. Prior to June 5, 1978, staff gage or reference point at same site at datum 1.0 ft higher.

REMARKS.--Estimated daily discharges: Jan. 1-4, 12-14, 16, 19-22, Jan. 30 to Feb. 2, and Feb. 4. Records good except for periods of estimated record, which are fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--7 years, 244 ft³/s, 176,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s May 4, 1964, gage height, 4.80 ft, from floodmark; minimum daily discharge, 90 ft³/s Jan. 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 359 ft³/s July 30, gage height, 2.14 ft; maximum gage height, 3.10 ft Jan. 13, from floodmark, backwater from ice; minimum daily discharge, 177 ft³/s July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246	288	262	240	245	334	271	314	212	204	298	206
2	244	275	255	240	245	333	270	285	213	212	322	207
3	244	275	248	250	248	347	274	263	217	220	287	219
4	251	290	257	275	240	317	268	254	223	219	250	214
5	274	287	248	269	258	274	265	245	219	200	232	208
6	284	281	249	270	248	291	263	235	219	194	229	203
7	287	285	256	264	252	293	261	228	214	191	217	197
8	271	288	252	264	256	304	259	226	209	189	214	195
9	265	321	258	248	255	311	255	227	201	186	200	198
10	264	334	263	250	261	314	259	226	198	184	195	206
11	268	321	262	247	262	313	256	246	198	181	192	222
12	265	321	265	240	251	303	256	240	195	179	253	256
13	265	305	259	240	267	294	248	255	197	177	244	273
14	264	296	257	255	278	290	248	291	201	179	232	258
15	293	290	267	283	277	288	247	282	202	190	242	245
16	298	275	265	280	294	288	247	272	201	197	241	240
17	290	283	254	283	292	292	250	259	194	189	238	237
18	297	283	252	273	280	289	240	249	186	262	224	236
19	327	280	255	265	282	286	238	238	188	226	216	228
20	318	278	260	240	293	287	246	238	192	213	218	218
21	311	271	280	245	315	284	252	229	191	209	235	217
22	311	273	284	245	324	282	249	224	186	203	234	238
23	298	266	275	249	336	288	294	217	183	202	250	236
24	295	270	270	261	332	287	267	211	184	210	244	225
25	303	274	267	280	328	283	251	203	188	200	240	219
26	316	270	252	272	325	287	287	200	263	191	242	219
27	306	267	264	276	322	284	327	205	253	186	227	218
28	298	256	277	276	332	283	331	205	237	184	221	215
29	306	263	260	279	---	268	344	233	217	223	219	217
30	303	261	249	270	---	263	342	235	207	344	213	221
31	304	---	246	240	---	267	---	229	---	317	208	---
TOTAL	8866	8527	8068	8069	7898	9124	8065	7464	6188	6461	7277	6691
MEAN	286	284	260	260	282	294	269	241	206	208	235	223
MAX	327	334	284	283	336	347	344	314	263	344	322	273
MIN	244	256	246	240	240	263	238	200	183	177	192	195
AC-FT	17590	16910	16000	16000	15670	18100	16000	14800	12270	12820	14430	13270
CAL YR 1984	TOTAL	105105		MEAN	287	MAX	466	MIN	220	AC-FT	208500	
WTR YR 1985	TOTAL	92698		MEAN	254	MAX	347	MIN	177	AC-FT	183900	

PLATTE RIVER BASIN

06787500 CALAMUS RIVER NEAR BURWELL. NE

LOCATION.--Lat 41°48'35", long 99°10'56", in NW1/4NW1/4 sec.9, T.21 N.. R.16 W.. Garfield County, Hydrologic Unit 10210008, on left bank 20 ft (revised) downstream from highway bridge, 1.5 mi upstream from mouth, and 3 mi northwest of Burwell.

DRAINAGE AREA.--1,060 mi², approximately, of which about 110 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1918: 1958. WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,156.48 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 20, 1945, nonrecording gage at site 20 ft upstream; Apr. 21, 1945 to Jan. 28, 1964, water-stage recorder at site 400 ft downstream; Jan. 29, 1964 to Oct. 4, 1977, water-stage recorder at site 230 ft downstream; and Oct. 5, 1977 to July 30, 1985, water-stage recorder at site 190 ft downstream, all at present datum.

REMARKS.--Estimated daily discharges: Dec. 6, 15, 18-22, 25, 29, Jan. 1, 2, 10, 13-18, and Jan. 30 to Feb. 16. Records good except for periods of estimated record, which are fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--45 years, 305 ft³/s, 221,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s May 4, 1964, gage height, 4.35 ft; maximum gage height, 5.90 ft Jan. 26, 1967, backwater from ice; minimum daily discharge, 54 ft³/s Dec. 5, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 516 ft³/s Apr. 30, May 1, gage height, 3.89 ft; maximum gage height, 4.56 ft Jan. 22, backwater from ice; minimum daily discharge, 102 ft³/s Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	280	394	370	310	391	353	514	344	330	386	356
2	281	287	377	380	320	381	347	486	337	311	387	350
3	295	238	364	378	330	352	333	445	338	298	403	349
4	305	215	368	377	320	327	334	414	362	307	380	319
5	324	309	366	399	310	357	331	393	357	302	363	330
6	333	396	350	381	315	431	325	383	341	295	359	325
7	331	346	352	385	320	410	323	369	335	286	344	304
8	327	322	375	358	345	408	317	352	325	272	335	304
9	321	347	370	336	330	389	318	347	314	261	320	304
10	328	375	388	330	370	387	364	345	312	261	302	310
11	337	404	403	310	360	351	381	362	313	258	307	339
12	324	411	390	323	350	328	312	411	311	255	330	361
13	316	411	401	320	340	362	296	395	306	253	361	382
14	311	399	396	325	350	393	312	423	311	247	366	384
15	328	375	395	340	370	411	319	431	309	250	362	369
16	337	376	392	335	380	403	368	417	310	250	366	360
17	332	366	385	330	366	380	375	408	297	252	374	357
18	333	358	385	320	340	365	354	418	293	291	372	347
19	318	357	390	314	325	363	330	405	297	307	370	332
20	324	356	380	315	319	368	312	384	298	303	356	314
21	331	354	375	350	326	369	309	374	292	293	349	297
22	389	351	370	380	345	371	344	362	290	284	341	315
23	444	356	365	370	344	381	384	348	287	286	332	237
24	419	366	294	345	356	373	393	327	286	294	342	102
25	369	366	330	330	354	372	381	331	300	291	351	308
26	350	390	344	315	316	371	412	330	352	282	351	345
27	321	377	375	315	339	361	466	330	373	273	360	346
28	321	379	387	310	343	404	488	329	359	266	357	337
29	321	404	370	315	---	406	496	333	348	275	348	333
30	303	399	354	315	---	369	511	353	336	348	339	326
31	311	---	370	310	---	364	---	346	---	396	351	---
TOTAL	10209	10670	11555	10581	9493	11698	10888	11865	9633	8877	10964	9742
MEAN	329	356	373	341	339	377	363	383	321	286	354	325
MAX	444	411	403	399	380	431	511	514	373	396	403	384
MIN	225	215	294	310	310	327	296	327	286	247	302	102
AC-FT	20250	21160	22920	20990	18830	23200	21600	23530	19110	17610	21750	19320
CAL YR 1984	TOTAL	138269	MEAN	378	MAX	662	MIN	105	AC-FT	274300		
WTR YR 1985	TOTAL	126175	MEAN	346	MAX	514	MIN	102	AC-FT	250300		

06788500 NORTH LOUP RIVER AT ORD, NE

LOCATION.--Lat 41°36'27", long 98°55'17", in SW1/4NW1/4 sec.22, T.19 N., R.14 W., Valley County, Hydrologic Unit 10210007, on right bank 150 ft downstream from bridge on State Highway 70 at Ord.

DRAINAGE AREA.--3,750 mi², approximately, of which about 700 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1936 to September 1938 (published as "near Ord"), June 1952 to current year.

REVISED RECORDS.--WSP 1730: 1957(M). WDR NE-74: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 2,012.14 ft above National Geodetic Vertical Datum of 1929. Nov. 25, 1936, to Sept. 30, 1938, nonrecording gage at site 2 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 25 to Feb. 27. Records good except for period of estimated record, which is poor. Diversions above station for irrigation. Flow includes return water from North Loup irrigation project.

AVERAGE DISCHARGE.--34 years (1937-38, 1952-85), 883 ft³/s, 639,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s June 7, 1962, gage height, 5.52 ft; maximum gage height, 6.56 ft Jan. 16, 1981, ice jam; minimum daily discharge, 100 ft³/s Jan. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,930 ft³/s Feb. 25, gage height, 4.76 ft, backwater from ice; maximum gage height, 5.62 ft Dec. 30, backwater from ice; minimum daily discharge, 409 ft³/s July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	885	1090	1180	700	550	1150	1010	1440	902	793	1270	707
2	987	1100	1140	800	700	1150	1020	1330	829	752	1090	724
3	1010	1040	1130	1000	850	1170	1000	1280	823	697	1040	777
4	1070	1020	1130	1200	850	1130	1030	1200	854	663	1000	771
5	1230	1100	1220	1300	850	974	1020	1180	896	655	922	771
6	1260	1190	1160	1400	850	1120	1000	1040	887	590	958	812
7	1190	1120	1180	1200	900	1130	1010	1050	856	560	903	773
8	1190	1110	1260	1200	900	1330	992	988	829	550	847	743
9	1180	1350	1190	1000	900	1290	1010	903	779	482	846	760
10	1180	1550	1130	700	850	1300	1000	893	768	458	797	817
11	1190	1380	1170	600	900	1280	1090	924	764	428	765	1000
12	1150	1180	1080	550	1000	1240	1050	1110	745	409	767	1170
13	1160	1180	1160	700	1100	1210	1010	1190	747	410	818	1200
14	1190	1210	1180	800	1200	1240	1040	1460	744	421	898	1120
15	1340	1190	1210	900	1350	1240	1040	1310	729	455	849	1050
16	1360	1200	1290	1100	1350	1240	1030	1170	737	471	808	997
17	1240	1110	1290	1050	1350	1200	1110	1090	740	469	853	962
18	1210	1060	1220	1000	1300	1180	1060	1040	703	636	849	919
19	1250	1070	1080	850	1300	1200	1050	1020	671	751	820	892
20	1180	1100	1140	600	1350	1190	1070	1010	668	777	749	964
21	1160	1120	1330	500	1450	1200	1070	967	666	673	689	931
22	1130	1130	1380	500	1550	1200	1140	914	658	688	700	955
23	1210	1180	1450	650	1650	1180	1380	883	652	641	685	955
24	1220	1200	1290	850	1700	1150	1140	816	636	831	684	697
25	1190	1220	800	1000	1750	1130	1130	805	594	781	670	905
26	1170	1280	850	1050	1700	1100	1360	793	861	687	651	969
27	1190	1230	1000	1050	1500	1070	1330	797	980	641	630	911
28	1150	1090	1100	1050	1220	1100	1370	798	944	635	640	887
29	1160	1070	1300	950	---	1120	1290	888	877	709	686	915
30	1120	1080	1150	850	---	1060	1420	1070	823	1070	662	909
31	1130	---	800	700	---	1010	---	956	---	1250	673	---
TOTAL	36282	34950	35990	27800	32920	36284	33272	32315	23362	20033	25219	26963
MEAN	1170	1165	1161	897	1176	1170	1109	1042	779	646	814	899
MAX	1360	1550	1450	1400	1750	1330	1420	1460	980	1250	1270	1200
MIN	885	1020	800	500	550	974	992	793	594	409	630	697
AC-FT	71970	69320	71390	55140	65300	71970	66000	64100	46340	39740	50020	53480
CAL YR 1984	TOTAL	417911		MEAN	1142	MAX	2200	MIN	565	AC-FT	828900	
WTR YR 1985	TOTAL	365390		MEAN	1001	MAX	1750	MIN	409	AC-FT	724800	

PLATTE RIVER BASIN

06788988 MIRA CREEK NEAR NORTH LOUP, NE

LOCATION.--Lat 41°30'09", long 98°47'47", in NW1/4SE1/4 sec.27, T.18 N., R.13 W., Valley County, Hydrologic Unit 10210007, on left bank near county road 1.4 mi northwest of North Loup.

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WDR NE-83-1: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 1,964.41 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-16, Dec. 6, Jan. 20-21, and July 2-17. Records fair except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--6 years, 2.38 ft³/s, 1,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,460 ft³/s Aug. 5, 1981, gage height, 10.56 ft, from floodmark, from rating curve extended above 200 ft³/s on basis of indirect measurement of peak flow; no flow at times in 1980-81.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 23 ft³/s and maximim (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 14	1400	*88	*2.86	July 24	1600	48	2.52

Minimum daily discharge, 0.90 ft³/s, June 24 and Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.39	1.3	.65	.32	2.2	.75	2.9	.52	1.2	2.6	.17
2	.45	.40	1.1	.56	.26	1.7	.64	2.3	.33	1.1	1.1	.11
3	.50	.67	1.0	.53	.24	1.6	.64	1.9	.37	1.0	.76	.19
4	.65	.78	1.1	.63	.22	1.2	.65	1.2	.41	.60	.48	.13
5	.75	.69	1.1	.78	.22	1.0	.80	2.6	.43	.40	.45	.19
6	1.0	.59	1.0	.90	.23	.87	.66	3.2	.45	.35	.58	.15
7	.90	.58	1.2	1.6	.20	.91	.46	1.6	.43	.30	.71	.11
8	.80	.56	2.0	1.2	.24	.84	.37	1.1	.36	.25	1.0	.09
9	.80	2.2	2.4	.79	.22	.79	.38	.85	.28	.20	.78	.11
10	.75	2.8	2.9	.76	.22	.74	.46	.78	.22	.15	.66	.22
11	.75	1.9	3.0	.66	.23	.69	.62	.85	.21	.10	.60	.61
12	.75	1.1	2.0	.66	.23	.62	.75	.81	.18	.35	.60	1.9
13	.70	1.1	.89	.66	.31	.72	.62	1.6	.18	.30	.56	11
14	.50	1.1	.60	.68	.37	.67	.64	33	.18	.25	.57	13
15	.80	1.0	.87	.60	.39	.74	.79	12	.15	.20	.47	5.5
16	.60	.92	1.0	.59	.45	.71	.82	4.9	.14	.20	.35	2.5
17	.55	.93	.92	.61	.50	1.1	.90	4.2	.20	.20	.38	1.1
18	.40	.87	.79	.65	.74	.73	.79	3.8	.19	.40	.23	.93
19	.61	.77	.76	.67	1.1	.51	.70	3.8	.16	.63	.21	.78
20	.85	.78	.76	.55	2.9	.47	.85	2.1	.15	.70	.17	.70
21	.76	.79	.82	.44	6.9	.51	.83	1.8	.15	.44	.18	.62
22	.63	.85	.72	.41	6.5	.51	.82	1.6	.14	.25	.17	.65
23	.54	.93	.75	.36	9.5	.47	2.7	1.1	.12	.25	.21	.88
24	.48	.93	.73	.43	6.9	.45	1.5	.82	.09	21	.18	.67
25	.51	.96	.56	.48	7.8	.45	1.3	.81	.67	8.0	.17	.54
26	.57	1.3	.71	.48	5.3	.42	3.2	.64	11	2.5	.18	.51
27	.57	1.3	.81	.55	5.4	.39	3.8	.55	9.3	.89	.21	.44
28	.56	1.2	1.5	.63	4.2	.52	2.2	.52	6.6	.44	.22	.38
29	.57	1.4	1.1	.58	---	.61	1.5	.68	3.9	.45	.27	.37
30	.49	1.3	1.4	.51	---	.53	2.1	1.4	2.0	3.3	.33	.45
31	.49	---	.82	.38	---	.60	---	.54	---	6.6	.28	---
TOTAL	19.73	31.09	36.61	19.98	62.09	24.27	33.24	95.95	39.51	53.00	15.66	45.00
MEAN	.64	1.04	1.18	.64	2.22	.78	1.11	3.10	1.32	1.71	.51	1.50
MAX	1.0	2.8	3.0	1.6	9.5	2.2	3.8	33	11	21	2.6	13
MIN	.40	.39	.56	.36	.20	.39	.37	.52	.09	.10	.17	.09
AC-FT	39	62	73	40	123	48	66	190	78	105	31	89
CAL YR 1984	TOTAL	1028.83		MEAN	2.81	MAX	118	MIN	.02	AC-FT	2040	
WTR YR 1985	TOTAL	476.13		MEAN	1.30	MAX	33	MIN	.09	AC-FT	944	

06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE

LOCATION.--Lat 41°15'48", long 98°26'56", in NW1/4NW1/4NE1/4 sec.22, T.15 N., R.10 W., Howard County, Hydrologic Unit 10210007, on right bank 310 ft downstream from bridge on U.S. Highway 281, 3 mi north of St. Paul, and 4 mi upstream from confluence with Middle Loup River.

DRAINAGE AREA.--4,290 mi², approximately, of which about 1,240 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 976: 1942. WSP 1390: 1896. WDR NE-74: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,759.29 ft, adjusted, above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Oct. 1, 1954.

REMARKS.--Estimated daily discharges: Dec. 4 to Mar. 1. Records good except for period of estimated record, which is poor. Natural flow affected by diversions and ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--78 years, 974 ft³/s, 705,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft³/s, estimated, June 6, 1896, gage height, 14.9 ft, from floodmark, datum then in use; minimum daily since 1931, 85 ft³/s Aug. 8, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,340 ft³/s Apr. 21, gage height, 4.62 ft; maximum gage height, 6.03 ft Feb. 25, backwater from ice; minimum daily discharge, 295 ft³/s July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	667	1090	1170	637	700	1500	1230	2000	1080	859	1460	660
2	892	950	1180	544	800	1270	1220	1690	991	808	1310	705
3	987	1000	1010	722	900	1260	1190	1390	922	767	1220	750
4	1090	948	974	1210	1000	1420	1200	1300	934	709	1140	792
5	1310	875	991	1560	1100	1110	1260	1260	951	668	1060	985
6	1580	952	1190	1830	1200	1020	1220	1160	995	657	1060	948
7	1390	1080	840	1580	1200	1050	1130	1050	984	548	1130	969
8	1260	1070	1170	1500	1100	1270	1080	1030	958	469	1080	910
9	1200	1190	1350	1230	1100	1220	1020	965	937	425	1010	866
10	1200	1340	1250	851	1200	1230	1010	884	866	340	967	912
11	1200	1320	1270	639	1100	1410	1050	910	877	312	908	1010
12	1210	1150	1340	545	1200	1390	1200	1000	874	312	884	1480
13	1200	1180	1310	664	1300	1350	1150	1480	819	295	864	1970
14	1210	1240	1210	1010	1400	1360	1080	2550	809	297	935	1590
15	1380	1260	1090	853	1500	1450	1150	2060	830	298	1050	1310
16	1460	1180	1300	1060	1500	1410	1150	1540	828	301	945	1180
17	1340	1130	1310	1240	1400	1320	1130	1300	794	309	1020	1140
18	1230	1150	1130	1240	1400	1300	1210	1150	760	390	936	1150
19	1310	1120	625	1310	1400	1340	1130	1090	795	615	901	1110
20	1140	1090	794	925	1400	1340	1100	1070	767	698	856	1080
21	1100	1050	1150	633	1500	1290	1220	1000	708	825	798	1160
22	1080	1020	1310	645	1600	1300	1940	1000	656	700	724	1180
23	1060	1110	1430	642	1700	1300	1980	1010	609	675	755	1230
24	1080	1150	1210	836	1800	1280	1690	1020	634	719	740	1130
25	1100	1170	632	1020	1900	1210	1630	960	598	916	744	840
26	1090	1350	755	1130	1900	1260	2150	949	1040	824	722	1080
27	1090	1360	1080	1250	1800	1280	1820	946	1200	691	671	1110
28	1070	1200	1510	1140	1700	1340	1780	947	1150	637	649	1100
29	1060	1150	1730	1120	---	1440	1770	976	1030	688	657	1160
30	1060	1110	1430	818	---	1390	1920	1140	956	1140	706	1090
31	1070	---	1180	719	---	1300	---	1250	---	1340	621	---
TOTAL	36116	33985	35921	31103	37800	40410	40810	38077	26352	19232	28523	32597
MEAN	1165	1133	1159	1003	1350	1304	1360	1228	878	620	920	1087
MAX	1580	1360	1730	1830	1900	1500	2150	2550	1200	1340	1460	1970
MIN	667	875	625	544	700	1020	1010	884	598	295	621	660
AC-FT	71640	67410	71250	61690	74980	80150	80950	75530	52270	38150	56580	64660
CAL YR 1984	TOTAL	435672		MEAN	1190	MAX	2760	MIN	443	AC-FT	864200	
WTR YR 1985	TOTAL	400926		MEAN	1098	MAX	2550	MIN	295	AC-FT	795200	

PLATTE RIVER BASIN

06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1974 to September 1978.

WATER TEMPERATURES: July 1974 to September 1978.

SUSPENDED SEDIMENT DISCHARGE: April 1946 to June 1953.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 426 microsiemens Jan. 18, 1976; minimum daily, 138 microsiemens Oct. 21, 1977.

WATER TEMPERATURES: Maximum, 34.0°C July 17, 1978; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 17,400 mg/L Apr. 27, 1951; minimum daily, not determined.

SEDIMENT LOADS: Maximum daily, 463,000 tons June 22, 1947; minimum daily, 20 tons Aug. 3, 1946, Feb. 22, 1953.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

		DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)				
		OCT 15...	1020	1310	244	7.9	10.0	10.0				
		NOV 26...	1130	1380	237	7.9	4.5	11.4				
		DEC 18...	1010	1170	281	7.7	.5	13.4				
		JAN 15...	1045	816	272	7.5	.5	12.8				
		FEB 19...	1025	1360	215	7.5	.5	13.2				
		MAR 18...	1040	1270	231	7.8	10.0	11.0				
		APR 11...	1110	1050	236	7.9	15.0	9.4				
		MAY 06...	1000	1130	253	7.7	18.5	9.7				
		JUN 04...	1005	952	235	7.9	16.0	9.4				
		JUL 29...	1050	693	239	8.1	21.0	9.3				
		AUG 26...	0935	732	229	8.4	20.0	10.3				
		SEP 25...	0910	819	283	7.4	10.0	9.7				
DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	
MAR 18...	1040	80	100	0	32	4.9	7.7	.3	6.8	101	8.7	
JUL 29...	1050	20	100	0	33	5.3	8.0	.4	7.2	110	7.7	
DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR 18...	2.0	.30	52	180	.24	600	.82	.130	20	33	5	
JUL 29...	1.7	.30	45	170	.24	326	<.10	--	20	19	4	

06791500 CEDAR RIVER NEAR SPALDING, NE

LOCATION.--Lat 41°42'41", long 98°26'48", in NE1/4NE1/4NE1/4 sec.15, T.20 N., R.10 W., Greeley County, Hydrologic Unit 10210010, on left bank 15 ft downstream from bridge on county road, 0.4 mi upstream from small tributary, and 4.7 mi northwest of Spalding.

DRAINAGE AREA.--762 mi², approximately, of which about 50 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1944 to September 1953, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-73: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,896.24 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 4, 1961, at two sites 6.5 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 3 and Dec. 19 to Feb. 19. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--37 years, 159 ft³/s, 115,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s June 23, 1947, gage height, 7.50 ft, site and datum then in use, from rating curve extended above 640 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 30 ft³/s Jan. 30, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2000	516	4.55	Aug. 3	0530	377	3.98
May 1	1500	782	4.83	Sept. 13	2000	359	3.96
May 14	2300	*925	*5.04				

Minimum daily discharge, 110 ft³/s Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	147	172	120	150	204	192	725	192	172	314	159
2	148	185	169	150	150	200	196	654	181	167	278	161
3	146	153	160	195	150	202	195	531	175	162	330	164
4	153	163	166	200	140	207	191	413	176	153	246	169
5	162	157	163	200	140	181	191	310	176	148	219	176
6	203	153	348	200	140	199	190	236	175	141	212	176
7	201	154	423	195	150	189	189	164	172	143	213	170
8	187	155	201	175	160	185	186	185	169	142	198	163
9	173	196	180	155	170	186	184	176	161	140	181	160
10	167	234	178	140	180	187	185	174	157	139	172	168
11	156	231	184	130	185	192	186	172	157	136	169	202
12	152	206	192	140	185	190	183	220	159	137	171	263
13	151	197	190	175	190	189	181	227	160	138	172	335
14	156	192	180	210	210	192	179	667	160	139	174	300
15	183	182	169	190	220	187	180	788	156	139	169	250
16	196	174	229	200	235	187	180	628	153	144	161	236
17	206	173	200	210	250	189	178	639	146	142	163	222
18	206	173	170	200	255	190	178	633	142	155	162	205
19	206	174	125	170	240	189	178	531	150	189	159	196
20	209	173	140	130	209	187	161	333	153	202	160	193
21	184	170	160	170	188	188	180	284	152	193	158	193
22	172	165	170	170	193	191	189	242	146	189	162	202
23	162	159	150	170	195	194	241	191	145	176	170	206
24	154	157	135	180	193	192	283	203	148	229	170	197
25	158	162	110	180	202	191	324	197	149	199	170	194
26	162	174	130	185	202	192	421	188	220	174	169	189
27	161	178	150	185	202	195	460	184	229	163	167	182
28	158	174	180	180	205	197	469	184	225	162	164	179
29	155	174	160	170	---	183	441	192	200	173	171	178
30	151	170	145	160	---	179	573	220	181	245	173	180
31	146	---	130	120	---	187	---	204	---	273	168	---
TOTAL	5275	5255	5559	5355	5289	5921	7264	10695	5065	5204	5865	5968
MEAN	170	175	179	173	189	191	242	345	169	168	189	199
MAX	209	234	423	210	255	207	573	788	229	273	330	335
MIN	146	147	110	120	140	179	161	164	142	136	158	159
AC-FT	10460	10420	11030	10620	10490	11740	14410	21210	10050	10320	11630	11840
CAL YR 1984	TOTAL	82936		MEAN	227	MAX	725	MIN	110	AC-FT	164500	
WTR YR 1985	TOTAL	72715		MEAN	199	MAX	788	MIN	110	AC-FT	144200	

PLATTE RIVER BASIN

06792000 CEDAR RIVER NEAR FULLERTON, NE

LOCATION.--Lat 41°23'45", long 98°00'15", in SE1/4SE1/4 sec.33, T.17 N., R.6 W., Nance County, Hydrologic Unit 10210010, on left bank upstream from highway bridge, 3 mi northwest of Fullerton and 7.2 mi, upstream from mouth.

DRAINAGE AREA.--1,220 mi², approximately, of which about 480 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to June 1932, October 1940 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1390: 1932, 1941, 1943. WSP 1710: 1951(P), 1952(M), 1953, 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 1,638.39 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 5, 1942, nonrecording gage, Nov. 5, 1942, to June 23, 1947, water-stage recorder, June 24, 1947, to Apr. 6, 1948, nonrecording gage, Apr. 7, 1948, to Apr. 15, 1971, water-stage recorder, all on downstream side of bridge pier at datum 2.00 ft higher, and Apr. 16, 1971, to Aug. 26, 1980, on downstream side of bridge pier at present datum.

REMARKS.--Estimated daily discharges: Dec. 14 to Mar. 1 and Sept. 17-24. Records good except for periods of estimated record, which are poor. Natural flow affected by power developments, ground-water and surface-water withdrawals for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--45 years (1940-85), 245 ft³/s, 177,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,700 ft³/s Aug. 13, 1966, gage height, 16.90 ft, present datum, from high point on surge, from rating curve extended above 6,600 ft³/s on basis of flow-over-highway-embankment and contracted-opening measurement of peak flow; minimum daily, 30 ft³/s July 18, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 22	1100	*2720	*5.83	Apr. 26	1830	2450	5.58
Apr. 23	1030	1840	4.82				

Minimum daily discharge, 120 ft³/s Dec 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	233	290	140	230	270	272	999	297	239	335	264
2	208	221	291	140	250	230	285	736	278	226	364	252
3	194	253	191	180	270	219	281	676	254	225	340	270
4	223	261	223	210	290	281	284	676	277	215	384	280
5	268	247	245	230	300	210	273	620	278	206	337	314
6	455	237	205	220	290	201	269	510	278	185	280	282
7	318	237	204	220	290	213	265	404	273	163	267	276
8	295	234	258	200	290	217	264	294	266	156	251	304
9	290	260	368	180	290	213	268	282	263	151	246	308
10	283	325	328	150	300	210	287	287	254	151	231	410
11	278	347	232	130	310	245	271	281	236	139	215	588
12	290	322	229	140	320	249	267	275	220	138	204	1050
13	239	293	195	180	320	248	269	339	232	146	209	1240
14	244	285	150	215	330	241	267	1100	229	135	204	1010
15	290	309	190	210	340	241	267	1080	230	142	215	536
16	312	313	230	220	350	260	262	778	241	133	208	436
17	328	304	225	230	340	255	264	595	232	145	205	400
18	318	281	140	230	340	265	251	614	226	173	210	360
19	326	270	130	210	360	249	248	550	233	269	201	340
20	319	265	160	180	360	276	279	455	228	223	210	320
21	331	283	170	200	390	268	250	347	230	254	213	310
22	325	278	190	220	420	265	1270	403	230	228	210	320
23	293	271	180	250	430	280	1230	352	214	228	204	330
24	261	270	170	270	420	280	592	304	185	237	212	340
25	269	270	120	270	410	275	428	263	184	278	226	320
26	267	290	140	270	390	281	1470	281	280	286	219	314
27	268	283	170	270	350	289	1010	255	379	215	240	325
28	263	282	210	260	320	293	517	235	285	197	241	325
29	257	291	190	260	---	283	488	256	280	199	255	396
30	243	286	160	260	---	277	626	280	264	255	272	402
31	238	---	160	240	---	281	---	284	---	467	284	---
TOTAL	8693	8301	6344	6585	9300	7865	13274	14811	7556	6404	7692	12622
MEAN	280	277	205	212	332	254	442	478	252	207	248	421
MAX	455	347	368	270	430	293	1470	1100	379	467	384	1240
MIN	194	221	120	130	230	201	248	235	184	133	201	252
AC-FT	17240	16470	12580	13060	18450	15600	26330	29380	14990	12700	15260	25040
CAL YR 1984	TOTAL	128815		MEAN	352	MAX	1650	MIN	104	AC-FT	255500	
WTR YR 1985	TOTAL	109447		MEAN	300	MAX	1470	MIN	120	AC-FT	217100	

PLATTE RIVER BASIN

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06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-59, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1974 to September 1983.

WATER TEMPERATURES: July 1974 to September 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 550 microsiemens Jan. 1, 1978; minimum daily, 119 microsiemens Nov. 23, 1980.

WATER TEMPERATURES: Maximum, 36.0°C July 7, 1975; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	
		(00061)	(00095)	(00400)	(00010)	(00080)	(00900)	(95902)	(00915)	
OCT 10...	1400	280	275	8.2	16.0	70	120	0	38	
NOV 07...	1600	255	298	8.2	10.0	60	140	0	43	
DEC 05...	1350	263	289	--	.5	50	140	0	43	
JAN 03...	1020	148	390	8.1	.0	20	160	0	50	
FEB 26...	1320	385	270	7.2	.5	35	100	0	33	
MAR 28...	1130	285	282	8.3	11.5	5	150	2	47	
APR 29...	1235	548	290	7.3	16.0	120	110	0	34	
MAY 22...	0930	447	283	8.1	19.5	65	140	0	42	
JUN 20...	1530	225	--	8.1	28.0	15	140	0	45	
JUL 18...	0920	173	263	8.4	25.0	30	120	0	37	
AUG 14...	1332	204	264	7.9	2.5	20	120	0	38	
SEP 05...	1715	328	250	8.1	26.0	70	110	0	34	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
OCT 10...	6.0	7.8	.3	7.8	124	11	4.1	.20	39	
NOV 07...	7.0	8.3	.3	6.9	143	11	2.3	.20	43	
DEC 05...	6.9	8.9	.3	6.6	142	11	2.2	.20	43	
JAN 03...	9.0	10	.4	8.6	175	15	3.1	.30	49	
FEB 26...	5.4	7.5	.3	5.2	116	9.6	2.5	.20	32	
MAR 28...	7.7	8.9	.3	6.8	147	11	2.4	.30	40	
APR 29...	6.3	11	.5	8.7	122	14	3.5	.30	28	
MAY 22...	7.8	12	.5	7.6	139	15	3.1	.30	30	
JUN 20...	7.5	9.1	.3	6.7	150	10	2.2	.30	37	
JUL 18...	6.1	7.8	.3	7.1	121	10	2.2	.30	39	
AUG 14...	6.1	7.7	.3	6.0	131	9.4	2.0	.20	39	
SEP 05...	5.8	7.0	.3	7.1	115	9.3	2.1	.20	37	

PLATTE RIVER BASIN

06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 10...	190	.26	142	.51	.310	.230	30	26	9
NOV 07...	210	.28	143	.57	.320	.320	30	22	21
DEC 05...	210	.28	147	.64	.320	.160	30	37	21
JAN 03...	250	.34	100	.91	.250	.210	30	39	20
FEB 26...	170	.22	172	.54	.210	.150	20	47	46
MAR 28...	210	.29	163	.71	.370	.210	30	22	16
APR 29...	180	.24	265	.45	.560	.200	30	100	13
MAY 22...	200	.27	243	.38	.350	.250	30	23	4
JUN 20...	210	.28	126	<.10	.130	.120	<10	21	8
JUL 18...	180	.25	85	<.10	.470	.100	10	35	10
AUG 14...	190	.25	103	<.10	.420	.180	30	21	3
SEP 05...	170	.23	152	.40	.550	.230	30	14	7

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°23'31", long 97°49'20", in NE1/4NW1/4 sec.6, T.16 N., R.4 W., Nance County, Hydrologic Unit 10210009, at diversion structure, 2 mi upstream from gaging station and 5.5 mi southwest of Genoa.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to September 1981.

WATER TEMPERATURES: October 1972 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 479 microsiemens June 1, 1977; minimum daily, 178 microsiemens Aug. 16, 1980.

WATER TEMPERATURES: Maximum, 36.5°C July 11, 13, 14, 1980; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
NOV 07...	1730	2700	262	8.1	11.0	721	31	10.8	K780	K200	120
JAN 03...	1320	9.2	332	7.8	1.0	--	9.0	19.1	K43	1200	160
MAR 29...	1000	2790	320	8.1	7.5	730	29	11.2	K21	K120	130
MAY 22...	1300	2260	320	8.2	23.0	730	45	22.8	3400	10000	150
JUL 17...	1445	629	310	--	27.0	730	26	11.3	83	1400	140
SEP 06...	0845	2930	240	8.0	25.0	712	130	6.9	2000	7500	110

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
NOV 07...	0	38	6.1	9.1	.4	6.8	124	11	2.5	.30	52
JAN 03...	0	50	8.3	11	.4	9.0	166	19	4.2	.30	57
MAR 29...	9	41	6.5	9.5	.4	7.2	128	13	2.6	.30	51
MAY 22...	0	46	7.5	11	.4	8.7	144	18	3.6	.30	45
JUL 17...	127	45	7.7	12	.5	9.8	139	18	3.6	.30	50
SEP 06...	0	33	5.6	7.9	.3	7.7	114	9.9	2.5	.30	39

PLATTE RIVER BASIN

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 07...	197	200	.27	1440	.89	.010	.60	.240	.160	.160
JAN 03...	259	260	.35	6.4	1.2	.150	.90	.270	.240	.230
MAR 29...	202	200	.27	1520	.56	.060	.50	.290	.300	.140
MAY 22...	218	240	.30	1330	.21	.170	1.6	.280	.160	.130
JUL 17...	216	160	.29	367	<.10	.050	2.3	.360	.020	.040
SEP 06...	170	180	.23	1340	.11	.040	.90	.250	.130	.110

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
NOV 07...	1730	<10	5	110	<.0	--	1	3	<3	2	16
MAR 29...	1000	20	6	120	<.5	--	<1	2	<3	3	17
MAY 22...	1300	10	7	130	<.5	--	1	<1	<3	3	35
JUL 17...	1445	<10	11	130	<.5	30	<1	<1	<3	7	45

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 07...	<1	15	8	<.1	<10	1	1	<1	200	8	14
MAR 29...	6	18	4	<.1	<10	2	1	<1	200	11	24
MAY 22...	<1	14	5	<.1	<10	4	1	<1	230	13	7
JUL 17...	8	18	6	<.1	10	<1	5	<1	240	14	12

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 07...	1730	2700	11.0	140	1020	86	89	100	--	--
JAN 03...	1320	9.2	1.0	206	5.1	24	26	52	100	--
MAR 29...	1000	2790	7.5	210	1580	--	--	--	--	89
MAY 22...	1300	2260	23.0	242	1480	--	--	--	--	94
JUL 17...	1445	629	27.0	114	194	--	--	--	--	98
SEP 06...	0845	2930	25.0	331	2620	--	--	--	--	97

06792500 LOUP RIVER POWER CANAL NEAR GENOA, NE

LOCATION.--Lat 41°25'03", long 97°47'37", in NE1/4NE1/4 sec.32, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, at skimming weir on downstream end of settling basin on left bank, 2 mi downstream from point of diversion and 3.5 mi southwest of Genoa.

PERIOD OF RECORD.--December 1936 to current year.

GAGE.--Water-stage recorder and concrete weir. Datum of gage is 1,566.26 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1956, at datum 3.0 feet higher.

REMARKS.--No estimated daily discharges. Records good. Canal diverts from Loup River in sec.6, T.16 N., R.4 W.; water is used in powerplants near Monroe and Columbus and is returned to Platte River 1.5 mi downstream from Loup River. Diversion began Dec. 2, 1936.

AVERAGE DISCHARGE.--48 years (water years 1938-85), 1,589 ft³/s, 1,151,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,410 ft³/s Apr. 27, 1944; no flow Aug. 16, 24-27, 30, 31, 1966, flood damage to canal being repaired.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,070 ft³/s June 28; minimum daily, 4.5 ft³/s Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1590	2850	2720	7.6	294	1850	2820	2910	2540	1980	2780	1550
2	1490	2830	988	4.5	271	1990	2550	2810	2330	1800	2690	1560
3	1670	2650	76	6.0	32	2170	2320	2740	2300	1690	2620	1620
4	1850	2600	46	203	44	1090	2430	2500	2470	1540	2490	2790
5	2070	2530	39	54	172	22	2750	2270	2640	1390	2490	2460
6	2700	2630	24	311	303	803	2820	2200	2550	1250	2130	2840
7	2810	2680	14	278	235	2450	2690	2150	2510	1100	1940	2670
8	2750	2620	214	27	210	2870	2440	2090	2370	926	1910	2230
9	2600	2680	532	32	387	2870	2300	2100	2220	819	1760	2020
10	2510	2710	962	17	54	2830	2080	2050	2160	847	1670	2000
11	2360	2740	2220	17	373	2890	1940	2060	2070	728	1540	2520
12	2240	2650	2180	14	522	2920	1920	2230	2050	684	1450	2780
13	2180	2700	138	7.6	833	2980	1970	2410	2050	709	1410	2700
14	2200	2700	24	12	763	2930	2000	2960	2010	669	1400	2650
15	2700	2710	16	22	853	2950	1880	2850	2000	683	1410	2780
16	2970	2750	20	28	1240	2880	1850	2910	1900	656	1450	2770
17	2850	2660	16	204	1200	2970	1840	2800	1730	614	1510	2880
18	2900	2630	31	253	1000	2820	1750	2490	1650	668	2140	2640
19	2940	2640	32	103	864	2620	1850	2310	1690	1080	2360	2590
20	2940	2660	17	12	856	2790	1930	2260	1680	1520	1950	2760
21	2900	2560	60	9.2	1300	2790	1820	2220	1540	1820	1800	2880
22	2970	2550	78	80	1350	2850	2340	2290	1470	1690	1710	2890
23	2970	2530	93	135	1550	2940	2790	2260	1340	1350	1760	2860
24	2980	2480	109	751	1400	2870	2880	2200	1250	1350	1820	2860
25	2970	2420	37	158	1660	2740	2860	2160	1180	1480	1850	2680
26	2960	2600	54	182	1800	2560	2910	2080	1560	1790	1900	2580
27	2780	2670	297	293	1360	2530	2740	2030	2740	1760	1830	2580
28	2960	2130	626	182	1760	2660	2510	2020	3070	1470	1750	2660
29	2960	2610	43	406	---	2700	2710	2060	2750	1330	1670	2890
30	2870	2550	24	75	---	2940	2920	2330	2240	1730	1660	2860
31	2910	---	11	100	---	2890	---	2520	---	2590	1640	---
TOTAL	80550	78720	11741	3983.9	22686	78165	70610	73270	62060	39713	58490	76550
MEAN	2598	2624	379	129	810	2521	2354	2364	2069	1281	1887	2552
MAX	2980	2850	2720	751	1800	2980	2920	2960	3070	2590	2780	2890
MIN	1490	2130	11	4.5	32	22	1750	2020	1180	614	1400	1550
AC-FT	159800	156100	23290	7900	45000	155000	140100	145300	123100	78770	116000	151800
CAL YR 1984	TOTAL	523592		MEAN	1431	MAX	2980	MIN	11	AC-FT	1039000	
WTR YR 1985	TOTAL	656538.9		MEAN	1799	MAX	3070	MIN	4.5	AC-FT	1302000	

PLATTE RIVER BASIN

06793000 LOUP RIVER NEAR GENOA, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°25'05", long 97°43'25", in SW1/4NE1/4 sec.25, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on right bank 12 ft downstream from bridge on State Highway 39, 2 mi south of Genoa, 3 mi upstream from Beaver Creek, and 6 mi downstream from diversion dam of Loup River Public Power District.

DRAINAGE AREA.--14,400 mi², approximately, of which about 5,650 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to June 1932, October 1943 to current year (October 1953 to April 1955, monthly discharge only).

REVISED RECORDS.--WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,540.13 ft above National Geodetic Vertical Datum of 1929, Aug. 17, 1928, to June 30, 1932, nonrecording gage at present site at datum 1.49 ft higher. Oct. 1, 1943, to Sept. 16, 1974, (Apr. 26 to Dec. 22, 1949, wire-weight gage only), at present site and datum. Sept. 17, 1974, to Nov. 21, 1977, at site 300 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 18 to Mar. 2. Records fair except for period of estimated record, which is poor. Natural flow of stream affected by power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Records do not include flow of Loup River power canal (station 06792500) which diverts at point 6 mi upstream and returns to Platte River below mouth of Loup River; diversion began Dec. 2, 1936.

AVERAGE DISCHARGE.--42 years (water years 1944-85), 650 ft³/s, 470,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 129,000 ft³/s Aug. 13, 1966, gage height, 13.93 ft, from rating curve extended above 42,000 ft³/s on basis of indirect measurement of peak flow; no flow at times during 1956, 1959, 1961, 1963, 1970, 1973, 1974, 1975, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,100 ft³/s Sept. 14, gage height, 7.66 ft; maximum gage height, 9.43 ft Feb. 27, backwater from ice; minimum daily discharge, 11 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	149	126	2460	1900	4000	343	3210	114	46	947	12
2	12	262	1400	1370	2200	3500	233	2100	82	45	820	12
3	13	138	2750	903	2100	3130	208	1220	58	39	189	12
4	20	45	2820	1450	2200	4800	220	873	72	33	60	56
5	37	27	2340	2570	2500	5690	252	717	59	29	44	62
6	73	29	2380	2730	2700	3700	267	691	53	28	30	74
7	990	22	2330	3810	2800	1730	277	641	50	24	23	94
8	327	36	2370	4800	2500	1110	262	452	47	22	22	52
9	35	67	2150	4460	2400	1010	186	384	44	20	20	75
10	21	835	2340	3030	2800	706	166	300	43	19	20	82
11	20	1100	675	2260	2500	511	169	259	39	17	19	104
12	19	855	498	1940	2300	784	141	332	39	16	21	622
13	19	571	2320	1570	2600	686	127	551	38	16	18	6240
14	21	533	1780	1860	2400	438	169	5880	38	15	17	8880
15	33	569	1850	2410	2200	305	138	8430	40	15	16	3340
16	377	636	2030	2300	2000	166	118	3380	38	13	16	1160
17	1440	485	1800	2540	2200	221	76	1930	34	12	19	415
18	880	453	2110	2500	2400	178	82	1270	33	18	37	174
19	549	464	1280	2300	2700	271	82	768	36	19	18	135
20	615	479	480	2100	3000	279	88	705	33	19	15	137
21	363	438	695	2200	2800	282	90	514	32	29	15	167
22	136	450	1220	2000	2900	294	1770	264	29	20	15	464
23	155	432	1820	1800	3000	427	2230	205	29	14	15	960
24	93	415	2330	1600	3300	453	2090	155	28	17	14	887
25	56	312	1990	1800	3500	416	860	115	27	14	14	445
26	135	431	932	1900	4000	251	2460	94	53	15	14	133
27	97	762	852	2500	4400	150	4590	80	1020	13	13	109
28	65	1140	1730	2800	4300	244	2250	74	249	13	13	97
29	129	457	4050	3000	---	314	1330	73	66	12	13	453
30	145	343	4750	3100	---	347	1580	77	51	22	12	730
31	86	---	3690	2000	---	538	---	92	---	171	12	---
TOTAL	6972	12935	59888	74063	76600	36931	22854	35836	2574	805	2521	26183
MEAN	225	431	1932	2389	2736	1191	762	1156	85.8	26.0	81.3	873
MAX	1440	1140	4750	4800	4400	5690	4590	8430	1020	171	947	8880
MIN	11	22	126	903	1900	150	76	73	27	12	12	12
AC-FT	13830	25660	118800	146900	151900	73250	45330	71080	5110	1600	5000	51930
CAL YR 1984	TOTAL	739219		MEAN	2020	MAX	40200	MIN	11	AC-FT	1466000	
WTR YR 1985	TOTAL	358162		MEAN	981	MAX	8880	MIN	11	AC-FT	710400	

06793000 LOUP RIVER NEAR GENOA, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976, 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS AS CACO3 (00900)
JAN 03...	1310	1600	335	7.8	.5	--	14	20.0	K28	1600	160
JUN 27...	1415	3060	265	7.6	20.0	732	95	8.4	--	--	120

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB AS CACO3 (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
JAN 03...	0	50	8.2	11	.4	8.9	161	17	3.4	.30	59
JUN 27...	0	39	6.6	9.8	.4	7.6	128	13	2.9	.20	44

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
JAN 03...	251	260	.34	1080	1.2	.100	.60	.280	.240	.230
JUN 27...	194	280	.26	1600	.30	.040	1.6	.920	.110	.090

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
JAN 03...	1310	20	7	160	1.7	<1	1	<3	2	9	<1
JUN 27...	1415	40	7	120	<.5	<1	<1	<3	5	27	1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
JAN 03...	19	7	<.1	<10	6	1	<1	250	7	<3
JUN 27...	16	3	<.1	<10	2	<1	<1	200	8	20

PLATTE RIVER BASIN

06793000 LOUP RIVER NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
JAN 03...	1310	1600	.5	1040	4490	--	--
JUN 27...	1415	3060	20.0	1970	16300	14	16

DATE	SED. SUSP. FALL DIAM. % FINER THAN (70339)	SED. SUSP. FALL DIAM. % FINER THAN (70340)	SED. SUSP. FALL DIAM. % FINER THAN (70342)	SED. SUSP. FALL DIAM. % FINER THAN (70343)	SED. SUSP. FALL DIAM. % FINER THAN (70344)	SED. SUSP. FALL DIAM. % FINER THAN (70345)
JAN 03...	--	--	8	21	91	100
JUN 27...	20	23	58	78	95	100

PLATTE RIVER BASIN

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06793500 BEAVER CREEK AT LORETTO, NE

LOCATION.--Lat 41°45'50", long 98°04'50", in NE1/4SE1/4 sec.26, T.21 N., R.7 W., Boone County, Hydrologic Unit 10210009, on left bank 5 ft downstream from county road bridge, at the west edge of Loretto.

DRAINAGE AREA.--311 mi², of which about 100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1944 to September 1953, October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,785.95 ft above National Geodetic Vertical Datum of 1929. Prior to May 15, 1945, staff gage at bridge 25 ft upstream, May 15, 1945, to Aug. 16, 1946, water-stage recorder at site 85 ft upstream, Aug. 17, 1946, to Sept. 30, 1953, at site 5 ft downstream, all at present datum.

REMARKS.--Estimated daily discharges: Dec. 3-8 and Dec. 14 to Feb. 18. Records fair except for periods of estimated record, which are poor. There are diversions for irrigation above station during the summer period.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--15 years (water years 1945-53, 1980-85), 82.1 ft³/s, 59,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,570 ft³/s June 2, 1950, gage height, 11.74 ft; minimum daily, 12 ft³/s July 8, Aug. 8, 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 23	0900	1190	7.40	May 1	0400	728	6.38
Apr. 26	1700	*2070	*8.88				

Minimum daily discharge, 33 ft³/s Feb. 10-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	68	79	60	45	98	95	486	79	82	84	47
2	48	68	78	65	40	98	91	489	71	77	82	47
3	49	68	70	66	38	98	104	505	68	69	79	48
4	49	68	68	64	37	144	99	361	85	64	77	46
5	66	67	70	62	36	110	95	255	82	60	73	88
6	86	65	48	65	35	102	95	189	74	56	71	59
7	80	65	68	71	34	98	92	159	71	54	66	52
8	66	65	83	70	34	100	88	141	68	52	62	49
9	63	84	80	50	34	98	87	126	62	48	59	49
10	72	185	80	52	33	99	83	115	60	44	56	52
11	68	121	78	50	33	103	82	112	60	43	55	79
12	66	98	78	49	33	99	80	109	60	44	56	122
13	62	95	75	56	33	98	76	126	59	44	56	152
14	63	94	60	64	34	95	75	292	57	43	55	107
15	86	92	64	66	40	95	75	317	58	44	52	94
16	104	86	60	64	50	95	74	306	58	45	50	89
17	107	83	58	67	60	94	72	208	53	46	51	86
18	92	80	56	64	70	94	72	180	52	59	51	85
19	100	78	58	55	81	94	69	160	52	72	52	79
20	101	76	60	50	86	94	80	146	52	64	50	72
21	101	74	64	53	102	94	82	126	53	62	48	71
22	87	74	63	58	117	92	358	110	51	62	49	75
23	82	74	62	64	132	98	728	100	55	59	52	90
24	81	74	60	68	110	102	332	97	57	67	61	83
25	80	74	61	71	103	100	245	104	53	78	56	77
26	81	75	64	68	104	98	1090	90	241	68	52	73
27	81	78	62	68	98	100	638	84	299	64	49	71
28	74	80	80	67	95	103	675	80	195	60	48	68
29	72	77	95	64	---	95	476	80	142	59	51	70
30	69	80	80	62	---	91	370	103	97	77	49	76
31	69	---	65	57	---	92	---	90	---	92	49	---
TOTAL	2353	2466	2127	1910	1747	3071	6678	5846	2524	1858	1801	2256
MEAN	75.9	82.2	68.6	61.6	62.4	99.1	223	189	84.1	59.9	58.1	75.2
MAX	107	185	95	71	132	144	1090	505	299	92	84	152
MIN	48	65	48	49	33	91	69	80	51	43	48	46
AC-FT	4670	4890	4220	3790	3470	6090	13250	11600	5010	3690	3570	4470
CAL YR 1984	TOTAL	42272		MEAN	115	MAX	540	MIN	35	AC-FT	83850	
WTR YR 1985	TOTAL	34637		MEAN	94.9	MAX	1090	MIN	33	AC-FT	68700	

PLATTE RIVER BASIN

06794000 BEAVER CREEK AT GENOA, NE

LOCATION.--Lat 41°26'32", long 97°44'11", in NE1/4SE1/4 sec.14, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on left bank in city park at southwest corner of Genoa, 0.2 mi downstream from Union Pacific Railroad bridge, 0.2 mi upstream from bridge on State Highway 39, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--647 mi², of which about 410 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1310: 1942(M). WDR NE-73: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,542.13 ft above National Geodetic Vertical Datum of 1929. October 1940 to Nov. 5, 1942, nonrecording gage and Nov. 6, 1942, to Nov. 1, 1955, water-stage recorder, at site 0.4 mi upstream at datum 4.62 ft higher.

REMARKS.--Estimated daily discharges: Nov. 25 to Feb. 26. Records fair except for period of estimated record, which is poor. Natural flow affected slightly by ground-water and surface-water withdrawals for irrigation.

AVERAGE DISCHARGE.--45 years, 126 ft³/s, 91,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s July 19, 1950, gage height, 18.70 ft, site and datum then in use, from rating curve extended above 8,500 ft³/s; minimum daily, 0.41 ft³/s July 25, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 27	0030	*1230	*8.76	No other peak greater than base discharge.			

Minimum daily discharge, 52 ft³/s Sept. 3.'

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	103	130	86	88	157	131	652	154	160	114	58
2	65	103	130	88	80	153	137	515	129	132	102	55
3	67	105	125	90	78	154	145	547	120	121	102	52
4	74	105	120	98	76	198	148	516	134	108	122	53
5	81	104	110	100	74	187	136	383	128	94	93	68
6	98	103	92	104	74	158	127	283	146	92	95	164
7	103	104	100	102	74	144	126	223	129	87	89	82
8	120	103	120	98	74	143	122	186	124	84	84	68
9	104	109	140	92	76	144	121	162	118	80	75	63
10	105	126	135	86	76	144	121	148	112	78	71	66
11	110	210	125	82	78	144	115	140	106	77	65	76
12	102	176	110	92	78	139	113	132	104	78	64	191
13	104	148	100	98	78	138	108	141	104	77	61	339
14	104	150	105	100	80	135	104	524	108	77	62	409
15	104	152	110	100	84	134	102	552	122	72	68	180
16	117	144	110	102	90	134	100	435	122	66	64	146
17	152	135	100	104	100	134	96	392	113	63	68	133
18	155	136	88	100	110	134	93	297	98	65	78	127
19	142	128	90	96	130	134	92	256	96	105	77	121
20	141	124	96	94	140	140	91	229	98	82	74	113
21	150	123	100	98	200	141	94	199	101	79	79	105
22	140	123	96	102	230	138	111	186	92	70	74	104
23	129	122	92	108	270	135	411	164	91	72	69	109
24	123	118	88	110	290	138	547	153	93	74	74	140
25	122	115	90	110	250	139	368	146	106	84	78	123
26	121	115	94	110	200	139	817	149	171	94	74	109
27	121	115	100	108	164	141	1110	146	552	86	66	106
28	117	120	105	106	161	143	704	135	323	72	63	104
29	112	130	110	102	---	143	655	133	252	67	59	105
30	108	130	100	98	---	136	658	138	208	76	60	106
31	108	---	94	90	---	132	---	140	---	98	59	---
TOTAL	3463	3779	3305	3054	3503	4473	7803	8402	4354	2670	2383	3675
MEAN	112	126	107	98.5	125	144	260	271	145	86.1	76.9	123
MAX	155	210	140	110	290	198	1110	652	552	160	122	409
MIN	64	103	88	82	74	132	91	132	91	63	59	52
AC-FT	6870	7500	6560	6060	6950	8870	15480	16670	8640	5300	4730	7290

CAL YR 1984	TOTAL	77874	MEAN	213	MAX	2310	MIN	49	AC-FT	154500
WTR YR 1985	TOTAL	50864	MEAN	139	MAX	1110	MIN	52	AC-FT	100900

06794000 BEAVER CREEK AT GENOA, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 10...	1515	103	340	7.8	17.0	9.0	--	830	5300	160	50	7.7
NOV 07...	1815	104	360	8.1	9.0	10.7	16	K290	2000	160	50	8.2
DEC 04...	1410	140	372	7.3	.5	13.4	--	K93	300	160	51	8.6
JAN 03...	1200	90	375	7.8	.0	15.8	--	K730	4300	160	50	8.9
FEB 27...	1205	162	315	--	3.0	12.2	44	K230	2100	130	41	6.4
MAR 28...	1530	142	--	8.2	15.0	9.8	--	970	1400	170	54	8.4
APR 30...	1130	664	--	7.3	15.5	8.0	--	K69000	K360000	120	36	6.4
MAY 22...	1645	178	415	7.4	24.0	8.2	54	2500	1500	180	56	9.3
JUN 19...	1510	95	400	8.3	24.0	11.0	--	K630	840	200	62	10
JUL 18...	1145	67	405	8.2	25.5	8.2	--	5200	5200	200	60	11
AUG 14...	1528	62	359	8.0	24.0	8.8	31	970	880	170	52	8.7
SEP 05...	1400	69	338	8.2	27.0	7.8	--	K7400	10000	150	48	7.9

K Results based on colony count outside acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 10...	9.8	.4	15	5.0	280	.80	.040	1.8	1.8	2.6	.620	12
NOV 07...	9.2	.3	14	3.7	115	.90	.020	.88	.90	1.8	.410	4.4
DEC 04...	11	.4	15	4.1	70	.90	.180	.72	.90	1.8	.310	6.2
JAN 03...	11	.4	18	4.4	25	1.0	.370	.73	1.1	2.1	.300	11
FEB 27...	8.5	.3	13	3.8	323	.70	.300	2.8	3.1	3.8	.990	12
MAR 28...	10	.3	12	3.6	476	.70	.030	1.1	1.1	1.8	.670	9.7
APR 30...	12	.5	18	4.8	2530	.60	.260	1.8	2.1	2.7	.350	40
MAY 22...	14	.5	20	6.5	424	.70	.080	1.9	2.0	2.7	.810	15
JUN 19...	11	.4	15	4.1	75	.40	.050	.95	1.0	1.4	.480	6.4
JUL 18...	11	.4	17	4.7	204	<.10	.030	1.4	1.4	--	.460	13
AUG 14...	9.7	.3	13	3.9	150	.70	.060	.74	.80	1.5	.680	7.9
SEP 05...	9.2	.3	20	3.8	272	.70	.070	1.2	1.3	2.0	.460	10

PLATTE RIVER BASIN

06795500 SHELL CREEK NEAR COLUMBUS, NE

LOCATION.--Lat 41°31'33", long 97°16'55", in NE1/4NW1/4 sec.23, T.18 N., R.1 E., Platte County, Hydrologic Unit 10200201, on right bank 80 ft upstream from county road bridge, 1 mi upstream from Loseke Creek, and 7 mi northeast of Columbus.

DRAINAGE AREA.--270 mi², approximately.

PERIOD OF RECORD.--August 1947 to September 1975, October 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,435 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 2 to Mar. 5. Records fair except for period or estimated record, which is poor.

AVERAGE DISCHARGE.--36 years, 43.7 ft³/s, 31,660 acre-ft/yr; median of yearly mean discharges, 38 ft³/s, 27,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,970 ft³/s June 3, 1950, gage height, 21.38 ft; maximum gage height, 22.11 ft May 20, 1982, backwater from log jam; minimum daily discharge, 0.4 ft³/s July 27, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1947, reached a stage of 21.7 ft, from floodmark, discharge, 4,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 27	1700	*1580	*14.81	June 28	0130	927	10.59
May 15	0200	1030	11.34				

Minimum daily discharge, 10 ft³/s Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	17	21	20	23	36	29	442	31	47	21	23
2	10	18	20	21	25	35	36	157	30	37	20	15
3	10	17	19	23	25	34	38	80	28	34	18	12
4	14	18	21	24	24	50	33	61	28	32	18	12
5	13	19	21	26	24	100	28	51	48	30	22	16
6	17	19	24	28	25	276	27	46	39	28	17	24
7	20	19	30	27	24	200	26	41	33	26	16	26
8	21	19	29	25	25	172	24	37	30	24	16	18
9	17	23	29	24	27	154	23	35	27	22	14	15
10	16	30	28	24	27	99	23	33	25	20	16	14
11	15	39	28	23	27	36	23	32	25	18	17	15
12	16	38	27	22	29	28	23	32	25	17	16	20
13	15	29	27	26	31	26	22	32	25	17	17	71
14	13	26	29	25	30	24	21	434	25	16	15	150
15	15	23	30	24	30	22	21	680	25	16	15	113
16	17	21	28	25	30	23	22	144	25	16	15	41
17	24	20	25	25	31	24	20	73	25	18	16	27
18	26	20	24	26	32	22	18	57	24	18	17	21
19	25	20	24	20	33	21	18	50	24	77	17	18
20	26	20	25	22	34	22	18	90	40	68	15	18
21	23	20	27	24	33	22	18	63	25	24	14	18
22	20	20	25	26	32	23	19	43	24	18	14	18
23	18	20	25	25	33	26	58	38	23	44	15	20
24	17	20	22	26	32	32	271	34	102	44	16	20
25	17	20	24	28	33	26	77	31	42	28	16	25
26	17	21	28	27	35	23	518	29	30	22	16	24
27	17	22	29	27	32	26	1360	28	699	17	16	19
28	17	21	30	26	33	30	334	32	508	17	14	17
29	17	20	60	25	---	31	108	38	99	16	14	19
30	17	20	35	23	---	26	156	34	57	17	14	24
31	16	---	28	22	---	28	---	38	---	20	20	---
TOTAL	538	659	842	759	819	1697	3412	3015	2191	848	507	873
MEAN	17.4	22.0	27.2	24.5	29.3	54.7	114	97.3	73.0	27.4	16.4	29.1
MAX	26	39	60	28	35	276	1360	680	699	77	22	150
MIN	10	17	19	20	23	21	18	28	23	16	14	12
AC-FT	1070	1310	1670	1510	1620	3370	6770	5980	4350	1680	1010	1730
CAL YR 1984	TOTAL	32645.2		MEAN	89.2	MAX	1460	MIN	8.7	AC-FT	64750	
WTR YR 1985	TOTAL	16160		MEAN	44.3	MAX	1360	MIN	10	AC-FT	32050	

06796000 PLATTE RIVER AT NORTH BEND, NE

LOCATION.--Lat 41°27'10", long 96°45'50", in SE1/4 sec.7, T.17 N., R.6 E., Dodge County, Hydrologic Unit 10200201, on left bank 80 ft upstream from bridge on State Highway 79, 1 mi south of North Bend, and 5 mi downstream from Shell Creek.

DRAINAGE AREA.--77,100 mi², approximately, of which about 63,300 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1949 to current year.

REVISED RECORDS.--WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,262.32 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 12, 1951, nonrecording gage and Sept. 12, 1951, to Sept. 30, 1970, water-stage recorder, at present site at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 22 to Mar. 3 and July 13-19. Records good except for periods of estimated record, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--36 years, 4,405 ft³/s, 3,191,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 112,000 ft³/s Mar. 29, 1960, gage height, 10.04 ft, present datum; maximum gage height, 15.55 ft Mar. 19, 1978, ice jam; minimum daily discharge, 36 ft³/s July 29, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,900 ft³/s May 15, gage height, 6.92 ft; maximum gage height, 10.59 ft Feb. 28, backwater from ice; minimum daily discharge, 900 ft³/s July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4900	8010	9260	5400	4200	18000	7040	10600	5720	4370	4150	2530
2	4310	8070	9190	3800	4200	19000	7160	13500	5530	4700	4260	2130
3	4000	8040	8530	3500	4200	15000	6320	8670	4890	4480	4550	2280
4	4300	7860	8320	3500	3900	10500	6640	7830	5390	3600	3980	2480
5	4120	7420	7520	4000	3600	9100	6410	8080	5620	3530	4120	2560
6	4420	7880	8380	5000	3600	9100	6990	7250	5760	2630	4000	3390
7	5820	7600	8410	6400	3600	9110	6720	6820	5420	2410	3720	3890
8	6390	8270	7290	7800	3700	8570	6890	6850	5460	1330	4430	3940
9	6140	8630	8610	8000	3800	8810	6700	6310	4660	1360	4370	3420
10	5100	10300	9540	6000	4000	8210	5520	6580	4580	1310	3680	3660
11	4750	10600	11100	4800	4200	7830	7730	6260	4360	1220	3390	3940
12	4380	10700	10800	4300	4300	8470	4100	6010	3900	1220	3180	4860
13	3890	9770	8470	3600	4400	8720	5890	6580	3730	1140	2900	6620
14	4030	9640	9200	3300	4500	8100	5690	9300	3730	1020	2950	15400
15	4870	9820	8630	3200	4900	7850	5480	23800	4020	960	2640	10500
16	5940	10400	10400	3300	4800	7590	5420	18000	3590	900	2530	7620
17	7590	10200	11500	3700	5000	7790	4770	12600	3330	1000	2880	7010
18	8510	10200	11900	4500	5400	8930	4810	10300	3030	1250	2780	6880
19	9710	9940	9740	4900	5800	7920	4680	9370	2960	1500	3300	6400
20	5890	10600	7170	4700	6000	7580	5550	8940	3310	1780	3130	6120
21	7870	11000	6460	4800	6200	7320	4820	7350	3540	2750	2920	5490
22	7760	9710	6400	4900	6800	7060	6690	7320	3400	3250	2770	5600
23	6680	10300	6400	4600	7400	6100	8100	6040	3040	2860	2740	5640
24	7090	10100	6600	4500	8000	6630	9270	6110	2910	2770	2490	5610
25	7590	9030	6800	4700	8600	6770	8660	5160	2500	2170	2890	6090
26	7630	9840	7000	4900	10000	6400	8490	5470	2680	2400	2470	5660
27	7780	10100	7400	4900	13000	6410	15800	4780	2820	2640	2620	5340
28	7540	10500	8800	4800	17000	5920	11900	4820	7400	2510	2150	4820
29	8000	9840	8200	4800	---	5920	8880	4630	6110	1660	2530	5390
30	8600	9490	10000	4800	---	5850	8940	5380	5290	2130	2390	5300
31	7480	---	8000	4500	---	6310	---	5630	---	2930	2330	---
TOTAL	193080	283860	266020	145900	165100	266870	212060	256340	128680	69780	99240	160570
MEAN	6228	9462	8581	4706	5896	8609	7069	8269	4289	2251	3201	5352
MAX	9710	11000	11900	8000	17000	19000	15800	23800	7400	4700	4550	15400
MIN	3890	7420	6400	3200	3600	5850	4100	4630	2500	900	2150	2130
AC-FT	383000	563000	527700	289400	327500	529300	420600	508500	255200	138400	196800	318500
CAL YR 1984	TOTAL	3970450		MEAN	10850	MAX	60500	MIN	1340	AC-FT	7875000	
WTR YR 1985	TOTAL	2247500		MEAN	6158	MAX	23800	MIN	900	AC-FT	4458000	

PLATTE RIVER BASIN

06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to September 1977.

WATER TEMPERATURES: October 1972 to September 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 790 microsiemens June 25, 1973; minimum daily, 218 microsiemens Sept. 19, 1977.

WATER TEMPERATURE: Maximum, 29.5°C several days during summer periods; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
16...	1530	4840	495	8.2	10.0	10.6	--	600	3800	180	50	13
NOV												
08...	1030	7960	708	8.3	8.0	11.7	23	K130	320	210	55	18
DEC												
04...	1400	8810	740	7.7	.5	14.2	--	67	120	240	65	19
JAN												
04...	1230	3480	760	8.5	.0	17.9	--	K140	620	260	72	19
FEB												
28...	1420	16600	680	--	.5	12.9	34	320	1200	200	57	15
APR												
02...	1200	7740	598	8.3	8.5	11.9	--	540	600	210	60	15
23...	1150	10400	--	8.0	17.0	8.0	--	K2200	5500	190	53	13
MAY												
23...	1300	5810	530	--	22.0	9.8	140	--	240	180	51	12
JUN												
21...	1145	4730	550	8.6	24.0	10.2	--	320	440	180	47	16
JUL												
22...	1140	4990	485	8.3	25.0	9.3	--	1900	3200	160	42	13
AUG												
15...	1100	2700	521	8.0	22.0	9.9	56	300	280	170	47	13
SEP												
05...	1100	2940	358	7.8	24.0	9.1	--	400	410	140	40	9.1

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
16...	31	1	84	12	138	.50	.080	1.2	1.3	1.8	.280	8.4
NOV												
08...	49	2	170	21	103	1.2	.030	1.3	1.3	2.5	.260	5.0
DEC												
04...	54	2	180	21	88	1.4	.040	.76	.80	2.2	.240	5.9
JAN												
04...	50	1	140	19	14	1.5	.180	.32	.50	2.0	.230	4.7
FEB												
28...	47	1	150	19	392	1.1	.090	1.5	1.6	2.7	.510	9.2
APR												
02...	38	1	99	12	118	1.1	.020	2.7	2.7	3.8	.290	5.2
23...	33	1	83	10	1090	.30	.080	3.6	3.7	4.0	1.70	18
MAY												
23...	37	1	88	15	161	.20	.060	1.4	1.5	1.7	.310	12
JUN												
21...	45	1	130	16	89	<.10	.030	1.5	1.5	--	.250	12
JUL												
22...	37	1	95	15	36	.40	.050	2.6	2.6	3.0	.320	15
AUG												
15...	38	1	100	15	65	<.10	.060	1.2	1.3	--	.370	12
SEP												
05...	21	.8	44	7.8	107	<.10	.050	1.2	1.2	--	.170	9.3

06796973 ELKHORN RIVER NEAR ATKINSON, NE

LOCATION.--Lat 42°29'12", long 98°54'42", in SW1/4NW1/4 sec.13, T.29 N., R.14 W, Holt County, Hydrologic Unit 10220001, on left bank 10 ft downstream from county road bridge, 4.0 mi southeast of Atkinson.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,042 ft from topographic map.

REMARKS.--Estimated daily discharges: Dec. 1 to Feb. 26, Mar. 4-7 and May 5-14. Records good except for periods of estimated daily discharges, which are poor. Minor diversions for irrigation above station.

COOPERATION.--Discharge record furnished by Nebraska Department of Water Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft³/s Apr.8, 1984. gage height, 8.41 ft; minimum daily, 5.8 ft³/s Dec. 30, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 435 ft³/s May 16, gage height, 5.76 ft; minimum daily, 12 ft³/s July 28-29, Aug. 10-11, Sept. 8-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	31	45	27	20	83	71	215	57	24	18	15
2	25	32	44	29	21	83	73	192	54	25	19	13
3	26	36	45	31	21	86	71	160	52	23	20	14
4	26	36	46	34	22	60	69	134	50	22	20	14
5	28	35	45	32	21	56	69	114	48	20	19	14
6	30	35	42	32	20	80	68	107	47	20	17	13
7	29	36	46	32	19	85	66	95	47	18	15	13
8	29	36	50	28	20	94	64	78	43	17	14	12
9	30	38	52	25	20	115	63	66	39	16	13	12
10	31	39	51	21	21	123	62	68	37	15	12	13
11	30	39	54	22	20	113	61	200	36	14	12	15
12	30	42	53	22	21	106	57	190	34	14	27	20
13	30	44	52	23	22	100	53	220	33	14	23	27
14	30	45	51	24	23	95	51	300	33	14	20	24
15	35	44	52	23	26	97	50	399	32	13	20	22
16	36	44	52	24	30	94	48	423	30	14	21	22
17	33	45	52	23	35	92	46	360	28	14	26	22
18	39	42	50	22	39	92	45	289	26	20	22	21
19	42	40	48	20	41	90	44	229	27	20	21	19
20	40	40	45	22	44	87	44	186	27	19	23	18
21	38	40	46	23	45	86	48	154	25	19	23	19
22	36	42	40	24	50	84	49	130	24	18	23	20
23	36	42	34	26	60	85	114	122	23	18	23	20
24	36	43	30	27	70	85	107	107	22	16	20	20
25	37	46	32	29	76	85	96	96	21	15	21	21
26	37	48	34	28	77	85	113	88	29	14	21	20
27	37	47	33	27	77	83	205	81	28	13	20	21
28	35	47	32	25	82	81	307	76	27	12	19	19
29	35	46	30	23	---	75	293	72	26	12	18	20
30	34	47	28	21	---	72	238	67	25	18	18	21
31	34	---	30	19	---	71	---	60	---	19	17	---
TOTAL	1019	1227	1344	788	1043	2723	2745	5078	1030	530	605	544
MEAN	32.9	40.9	43.4	25.4	37.3	87.8	91.5	164	34.3	17.1	19.5	18.1
MAX	42	48	54	34	82	123	307	423	57	25	27	27
MIN	25	31	28	19	19	56	44	60	21	12	12	12
AC-FT	2020	2430	2670	1560	2070	5400	5440	10070	2040	1050	1200	1080
CAL YR 1984	TOTAL	63051		MEAN	172	MAX	2290	MIN	21	AC-FT	125100	
WTR YR 1985	TOTAL	18676		MEAN	51.2	MAX	423	MIN	12	AC-FT	37040	

PLATTE RIVER BASIN

06796973 ELKHORN RIVER NEAR ATKINSON, NE--continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 31...	1100	33	230	7.7	5.5	11.8	--	420	2300	95	31	4.2
NOV 27...	1555	47	210	7.7	2.0	12.7	18	1200	540	86	28	3.9
DEC 18...	1610	49	244	7.3	.5	12.4	--	2000	380	98	32	4.5
JAN 22...	1600	24	--	7.1	.5	8.2	--	1800	280	--	--	--
FEB 21...	1050	45	174	7.4	.5	11.8	15	1300	1100	74	24	3.5
MAR 22...	1010	83	238	7.6	8.5	10.9	--	93	84	98	32	4.5
APR 18...	1555	45	234	8.0	23.5	8.5	--	300	K150	100	33	4.5
MAY 14...	1345	344	273	7.6	13.0	8.4	57	1600	1700	120	38	5.3
JUN 12...	1615	34	236	7.9	22.0	9.4	--	290	130	93	30	4.3
JUL 09...	1600	17	246	8.2	30.0	9.4	--	360	120	98	32	4.5
AUG 20...	1140	23	223	7.7	23.5	10.6	26	2000	200	89	29	4.1
SEP 04...	1650	14	229	8.7	28.5	8.3	--	870	720	95	31	4.2

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 31...	9.8	.5	10	3.6	1	2.4	.120	.88	1.0	3.4	.270	2.3
NOV 27...	9.7	.5	12	2.9	20	2.0	.100	.60	.70	2.7	.240	4.5
DEC 18...	11	.5	12	3.8	19	2.5	.170	.63	.80	3.3	.290	4.7
JAN 22...	--	--	--	--	--	2.6	.200	.30	.50	3.1	.280	1.7
FEB 21...	8.4	.4	7.8	2.6	9	1.9	.220	.68	.90	2.8	.220	2.7
MAR 22...	12	.5	14	3.9	25	1.1	.100	.90	1.0	2.1	.230	9.0
APR 18...	11	.5	11	3.2	37	1.9	.080	1.1	1.2	3.1	.340	5.8
MAY 14...	17	.7	12	3.6	20	.10	.090	1.8	1.9	2.0	.230	18
JUN 12...	10	.5	10	3.6	12	2.3	.080	.62	.70	3.0	.200	3.7
JUL 09...	11	.5	10	3.5	19	2.0	.070	.63	.70	2.7	.330	3.7
AUG 20...	9.6	.5	10	3.6	19	2.0	.080	.92	1.0	3.0	.320	3.1
SEP 04...	11	.5	12	3.9	13	1.7	.050	.65	.70	2.4	.300	3.6

PLATTE RIVER BASIN

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06796978 HOLT CREEK NEAR EMMET, NE

LOCATION.--Lat 42°25'19", long 98°51'46", in SE1/4SW1/4 sec.5, T.28 N., R.13 W., Holt County, Hydrologic Unit 10220001, on left bank 12 ft downstream from bridge on county road, 4 mi southwest of Emmet.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,070.12 ft above National Geodetic Vertical Datum of 1929. (Levels by Nebraska Natural Resources Commission.)

REMARKS.--Estimated daily discharges: Dec. 2 to Apr. 1 and Apr. 3-18. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--7 years, 29.6 ft³/s, 21,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 562 ft³/s May 29, 1982, gage height, 6.90 ft; maximum gage height, 7.61 ft Feb. 28, 1979, backwater from ice; minimum daily discharge, 0.10 ft³/s Jan. 24, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 236 ft³/s May 15, gage height, 4.69 ft; minimum daily, 3.2 ft³/s July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	15	29	11	7.0	27	32	117	15	6.6	5.6	11
2	5.3	16	28	11	7.4	26	32	98	13	6.1	5.9	11
3	5.4	16	27	12	7.6	25	31	85	13	5.6	5.7	10
4	5.3	17	27	12	7.8	20	31	72	12	5.1	5.2	9.5
5	6.4	17	29	11	7.6	25	30	60	12	4.9	4.6	9.1
6	8.1	18	28	10	7.4	27	30	50	11	5.1	4.1	9.0
7	7.9	18	27	10	7.6	29	27	44	10	4.7	4.0	8.4
8	7.7	18	26	9.0	8.0	32	26	36	9.9	4.5	3.7	7.5
9	7.9	19	26	9.0	8.0	37	24	32	8.8	4.3	3.3	7.8
10	7.5	22	26	8.0	8.4	45	23	34	8.7	4.0	3.6	8.9
11	7.1	25	28	8.0	9.0	41	22	180	8.6	4.0	3.4	10
12	6.9	24	28	8.0	9.6	39	21	157	8.7	4.0	2.4	12
13	6.9	25	28	8.0	9.0	38	20	138	8.0	4.0	1.9	16
14	7.2	28	29	8.0	9.0	38	19	206	9.4	3.8	1.5	15
15	11	30	29	8.0	10	40	18	225	7.9	4.0	1.2	15
16	10	31	25	8.0	11	39	17	171	7.4	5.8	1.2	17
17	11	30	20	7.0	12	39	16	120	5.9	4.7	2.9	16
18	15	29	15	7.0	13	38	15	97	5.8	7.1	2.3	15
19	18	28	13	6.0	14	38	15	82	6.6	5.4	2.0	16
20	18	23	12	6.6	16	38	16	65	5.6	4.7	1.8	14
21	19	24	12	7.0	18	38	19	54	5.1	4.9	1.6	15
22	19	24	12	7.0	22	37	22	46	5.0	4.2	1.5	16
23	19	23	12	7.0	26	38	77	42	4.6	4.0	2.0	15
24	19	22	11	8.0	29	38	109	34	4.4	4.2	1.7	15
25	19	23	11	9.0	27	38	95	30	5.4	4.2	1.6	15
26	18	26	12	8.8	27	37	103	26	14	3.6	1.5	15
27	17	31	12	8.0	28	37	176	25	11	3.3	1.4	13
28	16	27	11	7.6	28	36	216	23	8.6	3.2	1.2	12
29	15	27	10	7.4	---	35	189	22	7.7	4.1	1.1	12
30	15	28	10	7.0	---	33	146	20	7.0	6.4	1.1	12
31	15	---	10	6.8	---	32	---	17	---	5.7	1.1	---
TOTAL	368.9	704	623	261.2	394.4	1080	1617	2408	260.1	146.2	379.1	378.2
MEAN	11.9	23.5	20.1	8.43	14.1	34.8	53.9	77.7	8.67	4.72	12.2	12.6
MAX	19	31	29	12	29	45	216	225	15	7.1	2.9	17
MIN	5.3	15	10	6.0	7.0	20	15	17	4.4	3.2	3.3	7.5
AC-FT	732	1400	1240	518	782	2140	3210	4780	516	290	752	750
CAL YR 1984	TOTAL	20547.1		MEAN	56.1	MAX	431	MIN	3.3	AC-FT	40760	
WTR YR 1985	TOTAL	8620.1		MEAN	23.6	MAX	225	MIN	3.2	AC-FT	17100	

PLATTE RIVER BASIN

06797500 ELKHORN RIVER AT EWING, NE

LOCATION.--Lat 42°16'03", long 98°20'11", in NW1/4SW1/4 sec.35, T.27 N., R.9 W., Holt County, Hydrologic Unit 10220001, on right bank 800 ft downstream from bridge on State Highway L-45B, 0.8 mi north of Ewing, and 1.5 mi upstream from South Fork Elkhorn River.

DRAINAGE AREA.--1,400 mi², approximately, of which about 740 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--August 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,836.24 ft, above National Geodetic Vertical Datum of 1929, levels by Nebraska Department of Roads. Prior to Oct. 22, 1952, at site 300 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 4-8 and Dec. 16 to Feb. 27. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--38 years, 176 ft³/s, 127,500 acre-ft/yr; median of yearly mean discharges, 118 ft³/s, 85,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s June 10, 1962, gage height, 10.60 ft; minimum daily, 5.2 ft³/s Sept. 6, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 11.32 ft June 23, 24, 1947, from floodmark at site 300 ft upstream, discharge, 6,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 2	0100	641	5.48	May 14	2000	*930	*6.03

Minimum daily discharge, 23 ft³/s Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	88	127	60	52	239	174	637	136	75	42	57
2	53	90	134	70	50	232	177	628	126	68	44	56
3	51	91	84	74	48	208	172	531	122	63	45	53
4	50	91	82	78	50	226	177	444	117	59	43	49
5	55	91	80	86	52	161	181	368	115	54	38	49
6	68	90	82	88	52	171	181	305	111	49	33	45
7	68	89	94	82	50	215	181	257	107	47	31	42
8	68	89	112	80	50	227	178	220	103	45	28	42
9	70	94	137	74	49	212	172	193	97	42	26	40
10	73	106	144	70	48	205	166	173	94	37	24	43
11	71	106	134	68	48	220	158	212	93	34	23	47
12	68	107	132	68	47	228	152	514	90	32	102	61
13	66	113	125	66	45	226	147	664	87	31	101	94
14	67	124	100	62	46	216	140	850	86	29	87	100
15	82	120	121	60	46	207	134	850	83	28	76	94
16	90	116	130	56	46	204	129	814	81	29	72	85
17	94	116	135	56	46	201	125	789	74	34	137	79
18	95	116	145	52	46	199	121	755	72	39	115	71
19	123	113	130	48	46	196	119	678	65	34	104	66
20	129	111	110	44	48	194	120	575	63	37	95	64
21	121	105	98	50	52	191	119	452	61	38	91	63
22	112	106	84	50	56	190	141	368	56	43	89	67
23	107	105	74	52	62	195	260	310	53	36	86	72
24	104	105	82	54	74	193	300	282	49	36	82	71
25	103	107	78	52	84	191	365	252	51	33	81	70
26	101	113	72	52	125	187	485	218	115	29	77	67
27	101	123	78	52	170	185	589	199	126	26	74	66
28	98	122	82	52	223	182	610	186	105	24	70	64
29	96	121	86	54	---	179	630	176	90	25	66	65
30	92	125	74	54	---	174	637	166	81	33	62	65
31	89	---	64	54	---	174	---	148	---	37	61	---
TOTAL	2618	3193	3210	1918	1811	6228	7240	13214	2709	1226	2105	1907
MEAN	84.5	106	104	61.9	64.7	201	241	426	90.3	39.5	67.9	63.6
MAX	129	125	145	88	223	239	637	850	136	75	137	100
MIN	50	88	64	44	45	161	119	148	49	24	23	40
AC-FT	5190	6330	6370	3800	3590	12350	14360	26210	5370	2430	4180	3780
CAL YR 1984	TOTAL	156258	MEAN	427	MAX	4580	MIN	38	AC-FT	309900		
WTR YR 1985	TOTAL	47379	MEAN	130	MAX	850	MIN	23	AC-FT	93980		

06798000 SOUTH FORK ELKHORN RIVER NEAR EWING, NE

LOCATION.--Lat 42°14'29", long 98°23'53", in SE1/4NE1/4 sec.7, T.26 N., R.9 W., Holt County, Hydrologic Unit 10220001, on right bank 17 ft downstream from bridge on county highway, 2.9 mi southwest of intersection with U.S. Highway 275 in Ewing and 5.5 mi upstream from mouth.

DRAINAGE AREA.--314 mi², approximately, of which about 190 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1947 to September 1953, August 1960 to September 1972, October 1977 to current year. Prior to October 1977 station published as "at Ewing" at sites 4.5 mi downstream at different datum.

GAGE.--Water-stage recorder. Elevation of gage is 1,880 ft from topographic map. See WSP 1918 for history of changes prior to June 14, 1963.

REMARKS.--Estimated daily discharges: Oct. 18-31, Dec. 2-8, and Dec. 13 to Feb. 19. Records good except for periods of estimated record, which are poor.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--26 years (water years 1948-53, 1961-72, 1978-85) 67.7 ft³/s, 49,050 acre-ft/yr; median of yearly mean discharges, 53 ft³/s, 37,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft³/s Apr. 1, 1983, gage height, 4.77 ft; maximum gage height, 6.12 ft Mar. 7, 1949, backwater from ice, site then in use; minimum daily discharge, 11 ft³/s Jan. 15, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1947, reached a stage of 7.22 ft, from floodmarks at site and datum then in use; discharge, about 3,400 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 29	0600	*314	*2.11	May 14	1500	300	1.94

Minimum daily discharge, 26 ft³/s Jan. 12, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	46	50	37	27	68	58	185	54	40	39	33
2	37	46	45	38	27	68	58	155	50	40	39	37
3	37	46	38	40	27	68	62	141	44	37	39	44
4	35	42	39	42	27	72	62	122	40	37	39	44
5	42	37	40	46	28	68	62	105	46	35	40	42
6	52	33	35	46	28	66	60	86	48	35	37	42
7	46	33	40	42	27	70	62	77	50	37	33	44
8	48	33	43	38	30	66	60	68	46	37	33	42
9	48	40	46	36	32	64	60	66	42	33	33	42
10	46	44	48	35	33	64	58	66	42	28	32	44
11	38	40	48	31	34	64	58	90	39	32	33	46
12	38	39	52	26	36	64	54	97	37	35	91	56
13	33	40	45	32	40	66	50	93	35	35	54	62
14	40	42	42	33	42	62	50	236	37	35	50	56
15	44	39	46	32	44	62	50	230	38	35	42	52
16	42	42	49	31	54	64	52	209	35	35	49	52
17	40	44	42	30	58	62	50	174	32	30	66	50
18	38	46	37	30	64	62	50	155	28	35	54	50
19	52	46	38	27	70	64	52	141	32	30	54	48
20	50	50	39	28	74	62	48	115	32	28	50	46
21	49	50	38	29	79	60	48	105	32	35	46	46
22	48	50	37	30	60	58	54	83	30	39	42	50
23	47	50	37	30	60	58	72	79	30	35	44	50
24	46	48	36	29	64	58	83	70	32	37	44	48
25	45	48	36	28	72	60	112	64	36	35	42	48
26	46	50	38	29	70	64	125	56	98	33	42	48
27	46	50	38	29	70	62	172	54	60	33	42	48
28	46	52	38	29	72	60	233	56	44	33	40	48
29	47	52	38	29	---	64	290	56	42	33	39	50
30	46	52	37	27	---	56	239	56	40	37	35	50
31	46	---	36	26	---	58	---	56	---	35	35	---
TOTAL	1355	1330	1271	1015	1349	1964	2544	3346	1251	1074	1358	1418
MEAN	43.7	44.3	41.0	32.7	48.2	63.4	84.8	108	41.7	34.6	43.8	47.3
MAX	52	52	52	46	79	72	290	236	98	40	91	62
MIN	33	33	35	26	27	56	48	54	28	28	32	33
CAL YR 1984	TOTAL	43670	MEAN	119	MAX	1110	MIN	32				
WTR YR 1985	TOTAL	19275	MEAN	52.8	MAX	290	MIN	26				

PLATTE RIVER BASIN

06798300 CLEARWATER CREEK NR CLEARWATER, NE

LOCATION.--Lat 42°08'20", long 98°12'10", in SW1/4NW1/4 sec.13, T.25 N., R.8 W., Antelope County, Hydrologic Unit 10220001, on left bank at downstream side of county road bridge, 0.5 mi west and 2 mi south of Clearwater, and about 3 mi upstream from mouth.

DRAINAGE AREA.--210 mi², approximately, of which about 130 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1961 to September 1964, October 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,810 ft from topographic map. Prior to Sept. 7, 1961, wire-weight gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 4-6, Dec. 14 to Feb. 18 and Mar. 3-4. Records fair except for periods of estimated record, which are poor.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--11 years (water years 1962-64, 1978-85), 42.2 ft³/s, 30,570 acre-ft/yr; median of yearly mean discharges, 37 ft³/s, 26,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 770 ft³/s Mar. 31, 1983, gage height, 8.09 ft from rating curve extended above 538 ft³/s; maximum gage height, 9.00 ft Aug. 5, 1981; minimum daily discharge, 4.4 ft³/s Aug. 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 24	1530	148	4.86	May 15	2330	351	6.07
Apr. 28	0200	322	5.85	June 26	1400	180	5.06
May 2	1200	*358	*6.08				

Minimum daily discharge, 21 ft³/s July 14-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	35	45	34	26	51	50	264	36	51	33	30
2	24	38	46	35	27	48	57	335	33	47	33	30
3	24	38	45	38	28	48	66	259	33	42	33	31
4	25	38	42	40	29	47	64	174	33	37	33	32
5	29	38	39	42	30	49	64	118	34	32	31	33
6	41	37	28	41	32	49	66	89	32	29	28	33
7	35	38	42	39	32	47	63	76	32	28	25	30
8	33	38	39	38	32	49	57	63	31	28	23	29
9	34	50	35	29	33	52	52	69	29	25	22	29
10	37	64	35	27	33	50	50	61	29	24	23	32
11	33	63	37	26	32	49	48	59	29	23	22	37
12	32	57	38	26	33	46	46	80	30	23	31	43
13	30	53	43	29	34	46	41	106	31	22	31	47
14	33	57	37	30	34	47	41	181	33	21	27	45
15	52	55	36	30	37	49	41	293	32	21	27	50
16	50	51	38	31	40	49	41	325	32	23	26	52
17	47	49	36	32	41	50	40	218	30	26	43	47
18	44	44	28	31	44	48	38	147	29	38	32	45
19	54	44	26	29	52	48	38	113	30	34	28	43
20	53	44	31	27	50	48	42	94	31	31	28	42
21	46	43	32	29	56	47	44	80	25	30	28	43
22	44	43	35	30	55	47	56	67	25	35	28	43
23	38	41	35	30	56	52	110	62	23	29	44	44
24	37	43	32	31	56	56	138	57	23	36	41	43
25	35	44	33	30	52	57	124	51	24	33	37	41
26	36	45	33	30	51	57	154	45	129	27	38	41
27	36	44	35	29	49	57	264	40	118	24	34	38
28	34	45	39	29	50	53	279	40	111	22	32	36
29	35	45	28	29	---	47	180	39	93	26	33	37
30	34	44	27	27	---	47	157	38	63	34	32	38
31	34	---	32	24	---	46	---	37	---	34	33	---
TOTAL	1145	1368	1107	972	1124	1536	2511	3680	1263	935	959	1164
MEAN	36.9	45.6	35.7	31.4	40.1	49.5	83.7	119	42.1	30.2	30.9	38.8
MAX	54	64	46	42	56	57	279	335	129	51	44	52
MIN	24	35	26	24	26	46	38	37	23	21	22	29
AC-FT	2270	2710	2200	1930	2230	3050	4980	7300	2510	1850	1900	2310
CAL YR 1984	TOTAL	27129		MEAN	74.1	MAX	553	MIN	17	AC-FT	53810	
WTR YR 1985	TOTAL	17764		MEAN	48.7	MAX	335	MIN	21	AC-FT	35230	

06798500 ELKHORN RIVER AT NELIGH, NE

LOCATION.--Lat 42°07'20", long 98°01'40", in SE1/4NE1/4 sec.20, T.25 N., R.6 W., Antelope County, Hydrologic Unit 10220001, on right bank 30 ft downstream from bridge on old State Highway 14 at Neligh.

DRAINAGE AREA.--2,200 mi², approximately, of which about 1,200 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to September 1958, August 1960 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1006: 1935, 1942. WSP 1390: 1931-32, 1937(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,714.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1933, nonrecording gage at site 10 ft downstream at present datum. Apr. 16, 1933, to Jan. 23, 1939, nonrecording gage at bridge 30 ft upstream at present datum. Jan. 24, 1939, to Oct. 9, 1958, and Aug. 8, 1960, to Sept. 8, 1970, water-stage recorder at site 20 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 3 to Feb. 28. Records good except for period of estimated daily record, which is poor.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--53 years, 296 ft³/s, 214,500 acre-ft/yr; median of yearly mean discharges, 235 ft³/s, 170,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,000 ft³/s June 23, 1947, gage height, 12.53 ft, from main channel rating curve extended above 4,900 ft³/s and field estimate of flow through break in highway fill; minimum daily, 12 ft³/s July 2, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1960, reached a stage of 12.24 ft, from floodmark, discharge, 12,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 30	2400	*2380	*6.52	May 14	2300	1940	6.02

Minimum daily discharge, 87 ft³/s Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	227	251	170	135	570	363	1970	239	248	150	155
2	141	218	248	170	138	500	366	1600	233	221	157	141
3	141	221	189	180	138	450	385	1360	233	202	152	150
4	145	230	155	200	140	500	408	1080	236	183	148	148
5	160	227	162	215	140	400	424	849	236	162	136	150
6	216	224	140	230	142	350	420	706	223	157	118	152
7	233	224	190	225	145	389	400	587	213	150	106	141
8	204	224	360	220	145	424	378	494	199	141	93	134
9	202	248	325	220	148	436	365	408	172	132	90	132
10	210	330	300	217	150	416	362	352	165	118	90	138
11	204	303	290	200	150	424	344	352	157	110	87	175
12	199	293	289	160	150	419	330	661	152	108	178	202
13	193	280	250	170	159	420	313	1020	148	106	310	283
14	193	289	200	200	160	412	299	1640	165	104	233	280
15	266	286	210	195	170	396	299	1770	176	104	204	276
16	310	267	230	190	180	396	293	1670	179	108	183	270
17	280	260	210	185	190	400	286	1530	172	116	274	254
18	267	264	190	180	200	404	270	1360	144	148	310	227
19	337	264	200	170	210	400	267	1040	138	170	248	204
20	359	254	210	155	230	393	286	884	138	155	230	193
21	337	254	220	160	270	389	296	755	132	152	218	188
22	306	239	230	160	330	385	405	651	123	152	216	196
23	280	236	215	165	330	385	804	556	120	155	230	210
24	264	236	185	170	320	385	976	498	112	148	245	206
25	264	236	170	180	310	385	1010	452	123	157	213	204
26	264	242	185	170	540	397	1390	400	520	134	207	199
27	251	254	190	165	520	444	1730	352	806	116	191	185
28	242	248	205	153	600	436	1770	316	533	110	174	162
29	234	251	210	150	---	385	1700	316	396	132	180	165
30	236	251	195	145	---	352	1760	299	306	143	167	180
31	227	---	185	135	---	359	---	254	---	148	160	---
TOTAL	7303	7580	6789	5605	6440	12801	18699	26182	6889	4490	5698	5700
MEAN	236	253	219	181	230	413	623	845	230	145	184	190
MAX	359	330	360	230	600	570	1770	1970	806	248	310	283
MIN	138	218	140	135	135	350	267	254	112	104	87	132
AC-FT	14490	15030	13470	11120	12770	25390	37090	51930	13660	8910	11300	11310
CAL YR 1984	TOTAL	269315	MEAN	736	MAX	6120	MIN	112	AC-FT	534200		
WTR YR 1985	TOTAL	114176	MEAN	313	MAX	1970	MIN	87	AC-FT	226500		

PLATTE RIVER BASIN

06799000 ELKHORN RIVER AT NORFOLK, NE

LOCATION.--Lat 42°00'14", long 97°25'31", in SW1/4SW1/4 sec.34, T.24 N., R.1 W., Madison County, Hydrologic Unit 10220001, on left bank 200 ft downstream from U.S. Highway 81 bridge, 1 mi south of intersection of U.S. Highways 81 and 275, and 3.6 mi upstream from North Fork Elkhorn River.

DRAINAGE AREA.--2,790 mi², approximately, of which about 1,790 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1896 to November 1903 (no winter records), October 1945 to current year. Gage height records collected at site 200 ft upstream from May 10, 1941 to Sept. 26, 1945 are contained in reports of U.S. Weather Bureau. Published as "near Norfolk" from October 1957 to September 1977.

REVISED RECORDS.--WSP 1390: 1898-1900. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,504.95 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Aug. 30, 1958. Aug. 30, 1958, to July 27, 1978, water-stage recorder at site 3.2 mi upstream at datum 17.88 ft higher.

REMARKS.--Estimated daily discharges: Dec. 5-10, Dec. 16 to Feb. 28, and June 2. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--40 years, 504 ft³/s, 365,100 acre-ft/yr; median of yearly mean discharges, 418 ft³/s, 302,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s June 14, 1967, gage height, 8.52 ft, site and datum then in use; maximum gage height observed, 13.63 ft Mar. 11, 1949, at site 200 ft upstream at present datum, backwater from ice; minimum daily discharge, 33 ft³/s Aug. 3, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 13, 1944, reached a stage of 11.8 ft, at site 200 ft upstream at present datum, discharge, 14,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 23	1030	3400	3.76	May 1	----	2800	unknown
Apr. 26	1700	*3490	*3.82	May 15	0945	2210	3.14

Minimum daily discharge, 138 ft³/s Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	380	380	280	270	642	568	2380	612	536	214	250
2	257	354	359	300	280	612	646	1560	520	394	216	241
3	258	362	298	350	270	632	643	1230	492	374	223	232
4	253	372	258	390	260	642	640	961	484	347	221	228
5	274	374	230	450	270	536	657	839	461	326	215	265
6	311	376	210	460	270	314	642	693	450	300	206	250
7	346	423	195	400	260	378	645	557	432	274	193	241
8	374	428	215	370	250	409	631	565	434	262	177	228
9	371	509	270	360	250	462	545	701	414	231	155	224
10	390	837	400	350	245	489	518	664	389	214	145	235
11	392	710	453	340	250	557	484	606	368	195	138	252
12	386	592	507	310	260	589	492	580	348	178	141	283
13	367	517	443	320	260	577	484	942	339	163	147	432
14	344	499	380	310	260	522	484	1710	344	161	297	561
15	381	455	247	300	270	516	476	2040	349	155	257	502
16	479	433	270	280	270	488	468	1570	352	153	223	439
17	522	415	310	270	280	477	468	1420	321	159	244	427
18	510	404	290	260	290	478	438	1260	303	191	260	387
19	528	409	250	250	310	490	431	1130	267	214	360	349
20	548	399	290	235	330	508	416	984	257	224	311	313
21	517	366	320	240	360	502	446	911	246	220	301	300
22	477	365	380	250	400	511	936	935	231	208	287	302
23	428	352	340	260	450	571	2300	1030	217	202	354	352
24	405	354	330	260	520	566	1210	1000	206	216	460	348
25	381	388	340	260	620	576	911	936	193	215	338	332
26	385	408	360	250	700	593	2380	851	595	216	286	324
27	392	391	380	245	860	608	2360	748	1470	206	274	322
28	377	393	420	250	780	637	1580	759	990	195	265	314
29	377	389	480	260	---	563	1630	748	863	182	262	319
30	378	389	370	270	---	542	1630	804	641	196	255	334
31	375	---	300	280	---	555	---	632	---	202	268	---
TOTAL	12027	13043	10275	9410	10095	16542	26159	31746	13588	7309	7693	9586
MEAN	388	435	331	304	361	534	872	1024	453	236	248	320
MAX	548	837	507	460	860	642	2380	2380	1470	536	460	561
MIN	244	352	195	235	245	314	416	557	193	153	138	224
AC-FT	23860	25870	20380	18660	20020	32810	51890	62970	26950	14500	15260	19010
CAL YR 1984	TOTAL	349179		MEAN	954	MAX	7520	MIN	183	AC-FT	692600	
WTR YR 1985	TOTAL	167473		MEAN	459	MAX	2380	MIN	138	AC-FT	332200	

PLATTE RIVER BASIN

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06799000 ELKHORN RIVER AT NORFOLK, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-69, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 17...	1800	538	340	8.2	8.0	11.4	--	K25000	16000	160	50	7.8
NOV 27...	1420	522	--	--	2.0	12.6	--	220	210	150	48	7.5
DEC 27...	1250	514	380	8.0	.0	13.3	--	K360	K290	160	50	8.0
JAN 09...	1030	358	342	7.5	.5	14.2	--	870	480	150	47	7.5
FEB 12...	1430	256	380	8.0	.0	11.4	14	970	310	170	54	8.3
MAR 05...	1700	370	295	7.5	1.0	13.2	--	K460	17000	130	43	6.6
APR 09...	1600	553	340	7.7	12.0	11.2	--	K77	K260	160	51	8.0
MAY 01...	1730	2690	--	8.1	18.0	9.1	76	--	--	150	46	8.1
JUN 05...	1430	458	353	8.5	22.0	11.9	--	K120	92	170	52	9.0
25...	1700	53	--	9.1	30.0	9.1	--	K240	2700	160	52	8.2
AUG 21...	1130	301	305	7.5	22.0	8.1	25	600	2000	130	42	6.4
SEP 04...	1200	240	332	8.5	24.0	9.2	--	200	860	150	47	7.2

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 17...	9.9	.4	13	15	124	.80	.120	1.2	1.3	2.1	.360	8.5
NOV 27...	10	.4	11	3.7	47	1.0	.080	.72	.80	1.8	.240	4.9
DEC 27...	10	.4	14	4.5	25	1.2	.200	.20	.40	1.6	.240	3.2
JAN 09...	9.4	.4	16	3.7	19	1.2	.150	.75	.90	2.1	.230	3.5
FEB 12...	10	.3	12	3.9	2	1.3	.190	.71	.90	2.2	.200	2.1
MAR 05...	9.1	.4	11	4.1	192	1.0	.260	1.5	1.8	2.8	.430	9.8
APR 09...	12	.4	13	4.0	48	.70	.030	.97	1.0	1.7	.260	6.4
MAY 01...	18	.7	15	5.2	456	.50	.160	2.2	2.4	2.9	.380	30
JUN 05...	12	.4	14	4.2	47	.30	.050	1.4	1.4	1.7	.270	5.7
25...	11	.4	11	3.9	37	<.10	.040	1.2	1.2	--	.300	10
AUG 21...	9.3	.4	11	3.6	50	<.10	.060	1.1	1.2	--	.330	8.9
SEP 04...	9.7	.4	11	3.7	41	<.10	.040	1.5	1.5	--	.250	12

PLATTE RIVER BASIN

06799080 WILLOW CREEK NEAR FOSTER, NE

LOCATION.--Lat 42°10'38", long 97°40'02" in NW1/4NE1/4 sec.4, T.25 N., R.3 W., Pierce County, Hydrologic Unit 10220002, on left downstream bank at county road bridge, 6.8 mi south of Foster and 7.2 mi southwest of Pierce.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1975 (monthly discharge only) to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 21 to Dec. 9, Dec. 11 to Feb. 24, Mar. 10-12, and Apr. 11-23. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--10 years, 14.2 ft³/s, 10,290 acre-ft/yr; median of yearly mean discharges, 9.4 ft³/s, 6,800 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 442 ft³/s Apr. 13, 1984, gage height, 7.41 ft, from floodmark; maximum gage height, 8.28 ft Feb. 24, 1983, backwater from ice; minimum daily discharge, 1.5 ft³/s Feb. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
a	unknown	381	b7.50	May 1	2400	*406	*7.64
Apr. 27	1800	273	6.76				

a Sometime during period Apr. 23-24.

b From floodmark

Minimum daily discharge, 6.2 ft³/s Jan. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	15	17	7.2	10	15	29	254	13	17	8.7	8.8
2	10	15	16	7.4	11	14	36	331	12	15	8.5	8.7
3	10	16	14	7.8	11	17	34	192	12	14	8.7	8.1
4	11	16	13	8.0	10	25	30	72	12	13	8.4	8.1
5	11	16	13	8.0	9.4	26	32	49	12	12	7.7	9.0
6	13	18	13	7.8	9.8	27	34	36	11	12	7.3	8.0
7	11	18	13	7.6	9.0	20	31	30	12	11	7.3	7.3
8	11	19	14	7.4	9.4	21	29	25	11	11	7.2	7.2
9	13	25	15	7.0	10	21	27	22	10	11	6.9	7.3
10	12	19	17	6.8	10	21	25	20	10	9.9	7.3	8.2
11	11	16	16	6.4	9.6	21	24	19	11	9.9	7.1	9.5
12	10	14	13	6.2	9.4	20	23	17	10	9.8	8.3	11
13	9.6	14	12	7.2	9.4	20	22	18	11	9.4	7.8	12
14	10	15	11	10	9.8	20	22	44	11	9.3	7.3	11
15	14	14	12	9.4	10	20	22	55	11	9.1	7.5	10
16	14	14	11	9.8	11	20	21	58	11	9.0	7.6	10
17	14	14	11	11	11	21	21	47	10	9.0	13	10
18	13	13	10	10	12	21	21	34	9.8	9.5	9.4	9.8
19	15	13	9.0	8.6	12	21	21	26	10	9.3	9.2	9.4
20	13	13	9.8	9.4	13	21	23	22	10	8.9	9.0	9.0
21	12	14	9.8	10	13	22	27	19	10	9.0	9.0	9.4
22	12	15	9.4	11	14	23	50	18	9.8	8.4	9.3	10
23	12	16	9.0	11	16	27	130	16	9.9	8.1	9.5	13
24	12	16	8.4	12	18	29	312	15	9.9	8.9	8.9	11
25	13	17	8.4	11	21	27	184	15	9.9	8.8	8.8	11
26	14	17	8.6	12	18	26	202	14	22	8.2	8.8	10
27	15	17	9.0	12	20	27	243	14	23	7.8	8.7	10
28	14	16	9.4	13	15	34	212	13	20	7.4	8.5	10
29	15	17	8.8	13	---	33	124	14	24	7.7	8.5	11
30	15	17	8.4	12	---	29	78	14	21	8.3	8.3	12
31	15	---	7.2	9.4	---	28	---	13	---	8.7	8.6	---
TOTAL	384.3	479	356.2	289.4	341.8	717	2089	1536	379.3	310.4	261.1	289.8
MEAN	12.4	16.0	11.5	9.34	12.2	23.1	69.6	49.5	12.6	10.0	8.42	9.66
MAX	15	25	17	13	21	34	312	331	24	17	13	13
MIN	9.6	13	7.2	6.2	9.0	14	21	13	9.8	7.4	6.9	7.2
AC-FT	762	950	707	574	678	1420	4140	3050	752	616	518	575
CAL YR 1984	TOTAL	13082.6		MEAN	35.7	MAX	400	MIN	6.9	AC-FT	25950	
WTR YR 1985	TOTAL	7433.3		MEAN	20.4	MAX	331	MIN	6.2	AC-FT	14740	

06799100 NORTH FORK ELKHORN RIVER NEAR PIERCE, NE

LOCATION.--Lat 42°10'44", long 97°29'04", in SW1/4 sec.31, T.26 N., R.1 W., Pierce County, Hydrologic Unit 10220002, on left downstream wingwall of county road bridge, 2.5 mi southeast of Pierce.

DRAINAGE AREA.--700 mi², approximately, of which about 30 mi² is noncontributing.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,553.07 ft above National Geodetic Vertical Datum of 1929 (U.S. Weather Bureau levels).

REMARKS.--Estimated daily discharges: Dec. 3-8 and Dec. 13 to Feb. 17. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--25 years, 90.0 ft³/s, 65,200 acre-ft/yr; median of yearly mean discharges, 68 ft³/s, 49,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s Feb. 19, 1971, gage height, 15.10 ft; minimum daily, 3.8 ft³/s July 24, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 870 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 23	1830	*1910	*12.57	May 1	0900	1770	12.25
Apr. 26	1930	1570	11.72				

Minimum daily discharge, 24 ft³/s Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	54	70	47	37	93	125	1590	95	118	28	41
2	34	52	65	49	39	93	154	1150	89	103	30	39
3	34	56	64	54	40	95	164	679	86	93	35	38
4	34	56	62	56	41	237	153	494	83	86	38	35
5	35	56	60	60	39	122	179	395	82	76	31	36
6	40	57	58	60	41	179	180	322	79	67	30	36
7	42	56	64	58	40	163	161	265	78	62	28	35
8	41	55	68	56	41	137	148	228	74	56	26	33
9	46	60	69	54	42	123	136	200	68	52	24	33
10	58	96	86	52	43	112	126	180	66	46	26	33
11	49	73	82	48	44	107	120	166	67	45	26	36
12	45	75	73	45	44	101	112	172	66	42	31	38
13	44	79	80	49	44	100	106	165	64	40	50	39
14	43	78	100	50	45	92	105	337	64	42	81	40
15	52	75	94	46	45	92	103	448	63	39	70	42
16	71	68	86	48	49	90	96	348	62	40	47	43
17	84	66	84	49	56	89	90	238	58	43	55	43
18	84	65	80	31	43	89	84	200	56	44	89	42
19	106	60	76	33	41	92	79	179	54	44	90	42
20	108	59	76	38	51	92	81	196	52	41	64	42
21	93	60	80	40	82	93	89	235	50	41	52	41
22	74	63	82	41	78	95	281	176	48	37	56	41
23	64	66	80	43	96	109	1440	146	44	34	81	42
24	59	66	54	45	81	119	1520	132	43	35	72	42
25	58	68	62	40	81	112	767	124	43	34	54	50
26	59	70	66	43	88	108	1120	115	161	27	52	53
27	60	67	64	46	76	117	1280	110	540	26	46	49
28	57	63	58	40	87	172	874	105	428	26	42	46
29	56	66	54	41	---	157	609	106	301	26	41	48
30	55	69	54	37	---	132	648	116	158	26	41	53
31	55	---	50	35	---	126	---	105	---	27	41	---
TOTAL	1774	1954	2201	1434	1534	3638	11130	9422	3222	1518	1477	1231
MEAN	57.2	65.1	71.0	46.3	54.8	117	371	304	107	49.0	47.6	41.0
MAX	108	96	100	60	96	237	1520	1590	540	118	90	53
MIN	34	52	50	31	37	89	79	105	43	26	24	33
AC-FT	3520	3880	4370	2840	3040	7220	22080	18690	6390	3010	2930	2440
CAL YR 1984	TOTAL	89840	MEAN	245	MAX	2210	MIN	29	AC-FT	178200		
WTR YR 1985	TOTAL	40535	MEAN	111	MAX	1590	MIN	24	AC-FT	80400		

PLATTE RIVER BASIN

06799230 UNION CREEK AT MADISON, NE

LOCATION.--Lat 41°49'52", long 97°27'19", in SW1/4SE1/4 sec.32, T.22 N., R.1 W., Madison County, Hydrologic Unit 10220003, on left bank 12 ft downstream from bridge on U.S. Highway 81, in Madison.

DRAINAGE AREA.--174 mi².

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,549.70 ft, above National Geodetic Vertical Datum of 1929, levels by Nebraska Natural Resources Commission.

REMARKS.--Estimated daily discharges: Oct. 7-9. Records good.

AVERAGE DISCHARGE.--7 years, 38.3 ft³/s, 27,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,630 ft³/s June 17, 1984, gage height, 22.90 ft; minimum daily, 3.6 ft³/s July 30, 31, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,500 ft³/s April 26, gage height, 16.44 ft; minimum daily, 13.0 ft³/s July 17, Aug. 11, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	23	23	28	19	30	37	192	26	25	16	18
2	14	22	22	27	18	30	45	60	25	24	16	17
3	14	23	21	27	18	34	39	44	25	24	18	17
4	14	23	22	28	18	38	31	39	29	23	18	16
5	16	23	22	29	18	32	27	37	28	21	18	22
6	17	22	20	30	18	32	26	36	29	21	15	18
7	18	22	21	30	18	30	26	34	28	20	15	18
8	18	22	22	30	18	29	28	33	25	18	16	18
9	20	41	23	28	18	30	28	32	25	18	15	18
10	22	78	23	27	18	30	27	31	25	17	15	19
11	22	37	24	27	19	29	26	35	26	15	13	21
12	23	28	24	26	20	29	25	29	24	16	14	23
13	21	27	23	26	20	29	24	43	23	16	14	37
14	22	27	23	25	21	28	23	531	25	15	14	59
15	28	25	25	25	20	28	23	216	25	15	13	40
16	29	23	32	25	21	28	23	51	24	15	14	26
17	30	23	29	24	22	29	22	41	24	13	21	22
18	31	22	26	24	22	30	22	37	23	16	17	20
19	35	22	24	24	23	31	21	35	23	16	16	19
20	34	22	24	24	25	32	21	34	22	16	16	19
21	29	22	25	22	29	30	25	32	22	16	15	19
22	26	22	24	20	28	30	60	31	21	23	16	20
23	26	22	25	20	31	33	111	32	22	17	28	22
24	26	24	24	21	30	35	66	29	44	21	21	20
25	26	24	23	20	29	33	43	28	24	19	18	20
26	26	25	23	20	30	35	1030	28	137	16	18	20
27	26	23	25	20	28	35	563	28	971	15	18	19
28	27	23	41	20	29	37	64	27	119	15	18	19
29	25	23	48	20	---	35	50	31	32	15	19	24
30	23	23	39	19	---	35	87	28	26	17	18	25
31	23	---	29	20	---	36	---	27	---	16	17	---
TOTAL	725	786	799	756	628	982	2643	1911	1922	554	520	675
MEAN	23.4	26.2	25.8	24.4	22.4	31.7	88.1	61.6	64.1	17.9	16.8	22.5
MAX	35	78	48	30	31	38	1030	531	971	25	28	59
MIN	14	22	20	19	18	28	21	27	21	13	13	16
AC-FT	1440	1560	1580	1500	1250	1950	5240	3790	3810	1100	1030	1340
CAL YR 1984	TOTAL	25103	MEAN	68.6	MAX	1950	MIN	11	AC-FT	49790		
WTR YR 1985	TOTAL	12901	MEAN	35.3	MAX	1030	MIN	13	AC-FT	25590		

06799350 ELKHORN RIVER AT WEST POINT, NE

LOCATION.--Lat 41°50'22", long 96°43'38", in SW1/4NW1/4 sec.34, T.22 N., R.6 E., Cuming county, Hydrologic Unit 10220003, on right bank near right downstream wingwall of bridge on State Highway 32 and 1 mi west of West Point.

DRAINAGE AREA.--5,100 mi², approximately, of which about 4,100 mi² contributes directly to surface runoff.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. March 1960 to September 1972 (no winter records 1960-68) in files of Corps of Engineers. Gage-height records collected since 1940 are in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,291.26 ft above National Geodetic Vertical Datum of 1929. Prior to May 18, 1976, at site on left bank 50 ft upstream from bridge at same datum.

REMARKS.--Estimated daily discharges: Dec. 5 to Mar. 2. Records fair except for periods of estimated record, which is poor. Some small diversions above station for irrigation.

AVERAGE DISCHARGE.--17 years (water years 1969-85), 837 ft³/s, 606,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, 33,000 ft³/s June 25, 1969, gage height, 13.21 ft; maximum gage height, 16.09 ft Mar. 18, 1978, ice jam; minimum daily, 41 ft³/s Aug. 31, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1960 reached a stage of 19.09 ft, backwater from ice; observed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 22	1500	5900	8.55	Apr. 26	1700	*13400	*10.64
Apr. 23	1500	9780	9.76	May 2	0400	5540	8.53

Minimum daily discharge, 286 ft³/s Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	403	594	633	580	450	1800	874	4250	1080	1340	383	444
2	432	583	606	620	440	1950	924	5020	953	913	388	432
3	414	583	593	660	430	1550	1120	3090	850	740	395	409
4	420	589	578	680	420	2000	1140	1490	837	659	400	397
5	449	577	520	680	430	1460	1120	1000	874	596	416	444
6	514	570	440	700	430	1070	1120	805	868	541	394	518
7	574	570	490	700	440	1060	1120	753	847	501	364	480
8	591	563	580	680	440	1070	1020	765	834	461	341	414
9	614	604	740	680	450	1060	967	804	786	440	323	392
10	636	948	720	660	450	1140	967	800	748	408	303	386
11	638	1110	560	640	450	1210	983	806	733	382	286	409
12	640	941	820	620	460	1170	951	794	718	364	293	480
13	663	817	700	560	460	1150	904	743	688	350	307	706
14	679	794	600	580	470	1120	840	1520	681	340	342	1670
15	727	786	540	580	480	1130	825	3690	733	323	362	1020
16	773	748	740	600	500	1120	811	3890	710	322	425	935
17	893	740	720	600	520	1070	794	2870	674	325	464	763
18	898	725	640	580	540	1020	773	2320	610	343	495	667
19	852	718	580	540	580	1030	758	1820	576	382	466	631
20	845	718	560	440	640	1010	773	1910	576	392	510	582
21	783	725	580	450	780	1010	766	1510	563	399	522	551
22	757	748	580	470	860	998	3390	1470	537	420	498	551
23	704	763	600	480	1080	1050	6370	1400	524	412	505	580
24	663	771	620	490	1250	1110	5860	1320	518	407	583	650
25	649	771	600	490	1450	1080	4130	1290	477	403	631	662
26	632	779	560	480	1800	1060	9030	1120	510	404	550	624
27	641	779	620	460	2050	1100	9810	1010	1230	397	480	605
28	618	688	720	470	1500	1140	5680	963	1900	374	450	573
29	615	613	680	470	---	1100	3310	939	1930	353	456	591
30	592	656	560	470	---	1060	2530	992	1680	364	492	663
31	591	---	490	460	---	982	---	1020	---	378	450	---
TOTAL	19900	21571	18970	17570	20250	36880	69660	52174	25245	14433	13274	18229
MEAN	642	719	612	567	723	1190	2322	1683	842	466	428	608
MAX	898	1110	820	700	2050	2000	9810	5020	1930	1340	631	1670
MIN	403	563	440	440	420	982	758	743	477	322	286	386
AC-FT	39470	42790	37630	34850	40170	73150	138200	103500	50070	28630	26330	36160
CAL YR 1984	TOTAL	723018		MEAN	1975	MAX	18100	MIN	354	AC-FT	1434000	
WTR YR 1985	TOTAL	328156		MEAN	899	MAX	9810	MIN	286	AC-FT	650900	

PLATTE RIVER BASIN

06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-69, October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
17...	1355	960	520	8.1	8.0	11.2	--	K100000	K200000	230	67	15
NOV												
27...	1030	798	500	7.4	2.5	13.0	--	500	1700	230	69	14
DEC												
27...	0920	5200	580	7.9	.0	12.3	--	390	6600	330	74	36
JAN												
08...	1220	686	511	7.7	.0	13.4	--	K170	1100	220	66	14
FEB												
12...	1100	414	535	7.9	.0	11.9	14	1200	570	240	74	14
MAR												
05...	1310	1470	435	7.5	.5	16.2	--	1100	38000	190	56	12
APR												
09...	0920	1290	500	8.0	7.0	12.3	--	K400	960	250	73	16
MAY												
01...	1445	5080	--	8.0	17.5	8.4	100	--	--	180	55	11
JUN												
05...	0930	703	480	8.5	16.0	9.9	--	K420	310	230	70	14
25...	1045	475	378	8.4	27.0	10.4	--	670	1500	150	40	13
AUG												
22...	0930	502	390	8.4	22.0	--	68	2400	560	180	52	11
SEP												
04...	0940	381	372	--	23.5	9.0	--	260	K520	140	38	12

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
17...	18	.5	44	11	278	1.6	.170	2.0	2.2	3.8	.570	11
NOV												
27...	18	.5	46	10	88	2.2	.100	.70	.80	3.0	.310	5.7
DEC												
27...	18	.4	40	9.5	28	2.4	.310	.59	.90	3.3	.260	3.5
JAN												
08...	16	.5	40	9.0	38	2.3	.330	.47	.80	3.1	.260	3.3
FEB												
12...	15	.4	32	8.3	18	2.1	.330	.57	.90	3.0	.230	2.4
MAR												
05...	15	.5	39	9.2	458	1.7	.370	2.7	3.1	4.8	.670	18
APR												
09...	23	.7	48	11	90	1.6	.040	1.3	1.3	2.9	.200	7.8
MAY												
01...	17	.6	37	7.2	892	1.3	.200	2.1	2.3	3.6	.310	32
JUN												
05...	18	.5	38	8.8	92	1.3	.070	1.0	1.1	2.4	.300	6.9
25...	18	.7	35	10	89	<.10	.050	2.3	2.3	--	.290	12
AUG												
22...	16	.5	35	9.5	120	<.10	.060	2.4	2.5	--	.620	18
SEP												
04...	16	.6	33	8.4	58	<.10	.030	1.9	1.9	--	.150	14

06799385 PEBBLE CREEK AT SCRIBNER, NE

LOCATION.--Lat 41°39'34", long 96°41'00", in NW1/4SE1/4 sec.36, T.20 N., R.6 E., Dodge County, Hydrologic Unit 10220003, on right bank 12 ft downstream from bridge on county road, 1 mi southwest of Scribner and 3 mi upstream from mouth.

DRAINAGE AREA.--204 mi².

PERIOD OF RECORD.--October 1978 to current year.

REVISED RECORDS.--WRD NE-82-1: 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,234.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 4 to Mar. 5 and Apr. 27-29. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--7 years, 69.0 ft³/s, 49,990 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s June 16, 1984, gage height, 23.75 ft; minimum daily, 0.29 ft³/s July 20, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,820 ft³/s sometime during Apr. 26, 27, gage height, 20.21 ft from floodmark; minimum daily, 13 ft³/s Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	33	30	17	19	18	29	124	55	22	19	17
2	23	34	27	18	20	17	72	81	48	22	17	17
3	23	34	26	21	20	33	113	68	44	22	16	15
4	26	36	24	23	20	290	46	63	193	21	18	15
5	31	35	21	27	18	31	34	59	80	20	17	105
6	42	33	20	26	20	34	31	55	58	18	15	40
7	46	36	26	26	19	43	30	52	53	18	15	25
8	59	36	27	25	19	30	27	50	50	18	14	19
9	51	42	26	24	20	31	26	47	41	18	13	19
10	57	82	23	22	20	31	24	46	39	17	15	21
11	34	49	22	22	21	38	24	47	55	16	14	24
12	34	46	20	26	22	28	23	44	41	16	14	23
13	29	48	21	30	22	28	22	61	39	16	17	49
14	30	42	22	33	23	25	23	331	58	21	23	53
15	79	40	24	35	22	23	25	132	251	17	21	35
16	74	37	24	35	21	27	25	79	57	16	17	25
17	139	37	21	36	22	23	24	62	43	17	21	24
18	72	37	19	34	25	26	25	57	28	18	24	22
19	69	35	20	32	30	26	26	53	28	19	18	20
20	49	34	20	29	35	25	39	85	28	21	16	21
21	43	33	21	24	40	26	34	54	26	20	16	22
22	40	35	21	25	35	28	40	48	24	19	16	21
23	38	36	18	26	25	39	57	46	26	18	18	28
24	37	34	17	28	21	35	55	45	26	20	22	29
25	36	35	17	29	18	32	79	44	24	18	19	25
26	36	35	19	27	18	34	2580	41	27	18	17	23
27	36	35	20	28	19	48	1000	141	44	16	16	21
28	34	31	21	29	19	37	450	49	26	15	16	22
29	33	31	20	27	---	26	150	56	24	15	22	26
30	33	32	19	25	---	25	90	378	23	17	22	49
31	33	---	18	18	---	23	---	67	---	19	18	---
TOTAL	1389	1143	674	827	633	1180	5223	2565	1559	568	546	855
MEAN	44.8	38.1	21.7	26.7	22.6	38.1	174	82.7	52.0	18.3	17.6	28.5
MAX	139	82	30	36	40	290	2580	378	251	22	24	105
MIN	23	31	17	17	18	17	22	41	23	15	13	15
AC-FT	2760	2270	1340	1640	1260	2340	10360	5090	3090	1130	1080	1700
CAL YR 1984	TOTAL	64335		MEAN	176	MAX	9100	MIN	17	AC-FT	127600	
WTR YR 1985	TOTAL	17162		MEAN	47.0	MAX	2580	MIN	13	AC-FT	34040	

PLATTE RIVER BASIN

06799450 LOGAN CREEK AT PENDER, NE

LOCATION.--Lat 42°06'40", long 96°42'00", in NW1/4 sec.26, T.25 N., R.6 E., Thurston County, Hydrologic Unit 10220004, on right bank 200 ft downstream from bridge on Nebraska State Highway 94 at Pender and 0.7 mi downstream from Rattlesnake Creek.

DRAINAGE AREA.--731 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,300.96 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1966, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 3 to Mar. 4. Records fair except for period of estimated record, which is poor.

AVERAGE DISCHARGE.--20 years, 157 ft³/s, 113,700 acre-ft/yr; median of yearly mean discharges, 122 ft³/s, 88,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,900 ft³/s Feb. 19, 1971, gage height, 23.11 ft; minimum daily, 12 ft³/s Aug. 11, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 22	0730	4150	11.42	May 1	0315	1050	9.88
Apr. 23	1700	*10800	*17.74	June 27	0315	6130	13.72
Apr. 26	1545	6070	13.65				

Minimum daily discharge, 84 ft³/s Jan. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	172	187	116	94	210	172	1880	214	333	115	128
2	150	170	178	120	100	200	264	631	205	305	107	123
3	152	173	140	125	104	330	392	490	199	283	107	118
4	152	176	130	130	104	680	270	424	198	263	113	112
5	156	170	120	140	102	221	265	385	199	245	112	125
6	192	165	114	150	108	228	241	363	199	228	104	138
7	270	170	112	145	100	217	209	330	195	216	102	128
8	219	171	110	138	100	181	195	304	193	204	100	117
9	210	191	125	120	110	164	189	283	181	194	98	113
10	249	423	140	110	106	165	181	268	179	182	98	111
11	235	273	145	100	100	175	182	262	191	165	100	111
12	210	223	140	94	96	175	176	261	192	156	111	121
13	203	228	160	120	94	166	175	252	188	149	130	193
14	194	232	165	140	96	164	175	616	185	141	138	568
15	240	214	175	135	100	164	179	734	186	137	130	290
16	293	193	180	140	110	159	175	415	182	134	124	191
17	335	191	175	145	120	154	168	340	179	132	154	167
18	289	195	170	150	135	156	163	305	163	129	184	156
19	394	190	165	102	140	162	163	290	163	134	150	150
20	373	187	175	98	150	161	177	387	166	130	127	137
21	253	187	180	100	160	159	503	300	164	126	132	132
22	220	191	185	122	160	157	2380	265	156	127	177	133
23	206	199	160	130	170	179	6510	265	151	121	174	145
24	198	199	135	134	180	185	2160	259	150	121	307	173
25	197	203	140	120	200	165	919	244	147	127	190	169
26	209	205	145	116	200	167	3880	232	625	121	149	155
27	205	200	145	114	400	217	1850	222	3280	114	139	147
28	187	187	150	100	220	218	817	220	909	107	131	142
29	173	184	155	102	---	191	617	223	491	106	133	147
30	172	191	124	90	---	181	563	248	375	112	154	201
31	172	---	120	84	---	171	---	242	---	117	133	---
TOTAL	6858	6053	4645	3730	3859	6222	24310	11940	10205	5159	4223	4841
MEAN	221	202	150	120	138	201	810	385	340	166	136	161
MAX	394	423	187	150	400	680	6510	1880	3280	333	307	568
MIN	150	165	110	84	94	154	163	220	147	106	98	111
AC-FT	13600	12010	9210	7400	7650	12340	48220	23680	20240	10230	8380	9600
CAL YR 1984	TOTAL	181783		MEAN	497	MAX	6780	MIN	80	AC-FT	360600	
WTR YR 1985	TOTAL	92045		MEAN	252	MAX	6510	MIN	84	AC-FT	182600	

06799450 LOGAN CREEK AT PENDER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-68, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
17...	1620	344	900	7.9	7.5	10.6	--	K200000	K400000	440	120	33
NOV												
27...	1215	201	931	8.2	3.0	12.2	--	1400	2000	460	130	33
DEC												
27...	1030	503	910	7.9	.0	11.4	--	K500	4400	450	130	31
JAN												
08...	1315	106	910	7.8	.0	12.4	--	K700	460	450	130	30
FEB												
12...	1215	226	925	7.8	.0	13.4	17	1200	1200	190	54	14
MAR												
05...	1525	219	600	7.6	1.0	13.2	--	4900	K210000	260	74	18
APR												
09...	1100	184	885	7.5	8.0	12.0	--	K360	K640	450	120	36
MAY												
01...	1155	1890	--	8.1	15.0	6.8	460	--	--	220	64	14
JUN												
05...	1100	182	863	8.1	15.0	9.2	--	1300	230	430	120	32
25...	1345	143	792	8.4	28.5	7.9	--	700	K400	430	120	31
AUG												
21...	1500	138	845	7.6	21.0	7.6	22	7000	8800	390	110	28
SEP												
04...	1040	105	845	8.0	22.5	8.0	--	1000	880	390	110	29

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
17...	34	.7	170	13	290	3.8	.410	3.5	3.9	7.7	.740	13
NOV												
27...	35	.7	170	13	27	4.6	.200	1.1	1.3	5.9	.540	4.8
DEC												
27...	27	.6	160	47	111	5.1	.170	.43	.60	5.7	.260	3.6
JAN												
08...	27	.6	160	9.5	138	4.7	.140	.66	.80	5.5	.270	3.7
FEB												
12...	120	4	160	10	47	4.0	.230	.77	1.0	5.0	.200	2.7
MAR												
05...	18	.5	110	11	1530	6.0	.790	6.7	7.5	14	1.80	49
APR												
09...	34	.7	170	12	262	4.4	.060	1.9	2.0	6.4	.430	8.5
MAY												
01...	14	.4	67	5.2	2120	2.3	.240	1.5	1.7	4.0	.290	>80
JUN												
05...	28	.6	160	8.6	86	4.7	.080	.52	.60	5.3	.170	3.7
25...	27	.6	150	7.6	124	3.0	.060	.64	.70	3.7	.300	58
AUG												
21...	27	.6	160	9.0	94	2.7	.330	.97	1.3	4.0	.610	4.7
SEP												
04...	28	.6	150	12	119	2.9	.040	.56	.60	3.5	.240	5.2

PLATTE RIVER BASIN

06799500 LOGAN CREEK NEAR UEHLING, NE

LOCATION.--Lat 41°42'50", long 96°31'15", on south line of SE1/4SE1/4 sec.9, T.20 N., R.8 E., Dodge County, Hydrologic Unit 10220004, near right bank on downstream side of bridge on county road, 2 mi southwest of Uehling and 8 mi upstream from mouth.

DRAINAGE AREA.--1,030 mi², approximately.

PERIOD OF RECORD.--March 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,208.73 ft above National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to July 15, 1963.

REMARKS.--Estimated daily discharges: Dec. 3 to Feb. 27. Records good except for period of estimated record, which is poor.

AVERAGE DISCHARGE.--44 years, 197 ft³/s, 142,700 acre-ft/yr; median of yearly mean discharges, 166 ft³/s, 120,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,200 ft³/s Feb. 20, 1971, gage height, 20.15 ft, from floodmark; maximum gage height, 20.15 ft, Mar. 27, 1962, present datum, in addition to Feb. 20, 1971; minimum daily discharge, 6.1 ft³/s July 26, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1940, reached a stage of 20.6 ft, present datum, from floodmarks, discharge, 22,200 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 22	1830	3880	10.87	May 1	1600	2050	7.82
Apr. 24	0030	*9650	*17.19	June 27	1200	5640	13.17
Apr. 27	0230	5960	13.55				

Minimum daily discharge, 90 ft³/s Jan. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	243	239	180	100	243	278	1450	295	398	154	146
2	179	233	230	185	110	239	334	1100	272	343	145	140
3	177	234	195	195	115	275	453	782	260	318	146	137
4	180	237	190	240	109	704	436	649	264	300	153	134
5	180	232	180	270	105	691	393	577	264	286	167	171
6	200	222	175	290	110	346	394	536	253	267	144	155
7	230	219	165	280	105	329	353	503	252	244	133	153
8	260	216	175	240	120	300	318	458	241	237	129	138
9	266	236	195	230	125	267	304	421	239	229	124	132
10	274	356	210	210	115	256	296	395	224	219	123	135
11	275	407	215	180	115	260	287	380	240	203	123	137
12	263	304	200	150	110	262	284	376	248	193	129	144
13	242	289	210	200	130	256	280	381	244	196	136	183
14	236	288	220	236	130	245	277	560	240	234	171	348
15	339	279	225	220	150	242	274	1060	243	192	155	543
16	308	260	235	225	170	239	266	761	241	177	133	282
17	368	248	230	230	180	236	264	537	240	171	153	226
18	348	248	225	235	180	237	252	453	235	166	182	207
19	333	244	220	140	210	238	250	413	225	167	183	186
20	417	234	236	125	220	241	269	460	206	163	150	170
21	333	234	240	130	230	241	406	523	205	161	146	159
22	291	240	250	180	220	244	1910	391	202	158	156	163
23	281	244	220	190	240	266	3400	351	201	153	196	187
24	261	251	180	200	245	286	4440	351	196	151	206	198
25	256	246	200	175	260	278	1060	337	194	156	301	225
26	258	247	220	170	250	274	2570	314	208	152	183	195
27	261	247	240	165	500	294	3320	309	2800	150	155	176
28	254	241	260	135	249	342	1130	291	1200	141	145	166
29	245	238	270	140	---	316	975	286	840	134	147	180
30	237	241	200	110	---	296	848	445	454	141	153	223
31	238	---	190	90	---	293	---	337	---	155	164	---
TOTAL	8170	7658	6640	5946	4903	9236	26321	16187	11426	6355	4885	5739
MEAN	264	255	214	192	175	298	877	522	381	205	158	191
MAX	417	407	270	290	500	704	4440	1450	2800	398	301	543
MIN	177	216	165	90	100	236	250	286	194	134	123	132
AC-FT	16210	15190	13170	11790	9730	18320	52210	32110	22660	12610	9690	11380
CAL YR 1984	TOTAL	268218		MEAN	733	MAX	8970	MIN	130	AC-FT	532000	
WTR YR 1985	TOTAL	113466		MEAN	311	MAX	4440	MIN	90	AC-FT	225100	

PLATTE RIVER BASIN

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06800000 MAPLE CREEK NEAR NICKERSON, NE

LOCATION.--Lat 41°32'44", long 96°30'09", in NE1/4SW1/4 sec.10, T.18 N., R.8 E., Dodge County, Hydrologic Unit 10220003, on right bank 120 ft upstream from bridge on U.S. Highways 77 and 275, 1.5 mi northwest of Nickerson, and 4 mi upstream from mouth.

DRAINAGE AREA.--450 mi², approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1630: 1957-58.

GAGE.--Water-stage recorder. Datum of gage is 1,194.56 ft above National Geodetic Vertical Datum of 1929. Prior to July 28, 1960, nonrecording gage at site 120 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 3 to Feb. 24. Records fair except for period of estimated record, which is poor.

AVERAGE DISCHARGE.--34 years, 65.9 ft³/s, 47,740 acre-ft/yr; median of yearly mean discharges, 52 ft³/s, 37,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s June 21, 1960, gage height, 14.67 ft; maximum gage height, 16.54 ft June 18, 1983; minimum daily discharge, 0.1 ft³/s Jan. 15, 16, 1956, Aug. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since 1944, 35,000 ft³/s June 11, 1944, from indirect measurement of peak flow; gage height, 16.28 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 4	1130	1180	10.07	May 14	unknown	918	a9.27
Apr. 27	unknown	*3480	*a14.62	June 15	unknown	1040	a9.62

a From floodmark.

Minimum daily discharge, 24 ft³/s Aug. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	71	65	35	33	97	70	362	100	74	43	34
2	44	75	61	44	35	96	104	210	87	64	41	32
3	44	70	36	45	35	90	161	187	80	58	39	30
4	46	72	40	50	34	520	130	166	100	55	37	30
5	64	72	34	54	30	208	103	149	291	51	38	42
6	95	64	32	56	32	111	92	135	133	47	36	72
7	147	66	70	54	31	107	88	126	108	45	32	55
8	88	69	68	50	32	107	83	117	99	44	28	37
9	92	86	128	38	40	104	78	107	88	43	25	34
10	117	159	132	35	38	99	77	101	76	42	24	34
11	104	147	134	32	32	96	78	100	80	38	24	36
12	78	89	50	30	35	89	76	97	82	38	24	41
13	81	83	49	45	40	82	73	94	76	38	26	80
14	76	85	49	51	39	72	73	396	75	37	33	222
15	92	83	54	46	38	64	73	398	448	39	53	126
16	133	73	52	48	45	60	73	199	141	35	33	69
17	223	69	49	50	50	58	73	153	98	32	31	58
18	158	69	48	54	52	60	69	133	76	36	38	53
19	159	66	49	28	54	65	69	124	68	46	38	48
20	137	64	50	30	56	68	72	161	68	44	30	44
21	99	65	52	35	60	68	83	186	67	42	28	47
22	85	65	52	40	64	68	79	114	58	42	29	45
23	76	67	49	39	70	73	236	105	94	46	32	48
24	72	65	47	42	78	84	389	101	189	43	47	50
25	72	68	52	44	87	75	153	96	72	53	52	51
26	75	71	56	43	94	72	1390	90	60	46	36	47
27	80	69	65	42	85	79	1840	153	299	37	31	45
28	79	63	90	40	85	113	366	204	166	34	31	43
29	72	60	180	40	---	91	256	113	103	33	30	43
30	69	65	80	33	---	77	222	156	86	36	36	58
31	70	---	50	30	---	75	---	180	---	40	39	---
TOTAL	2870	2290	2023	1303	1404	3128	6729	5013	3568	1358	1064	1654
MEAN	92.6	76.3	65.3	42.0	50.1	101	224	162	119	43.8	34.3	55.1
MAX	223	159	180	56	94	520	1840	398	448	74	53	222
MIN	43	60	32	28	30	58	69	90	58	32	24	30
AC-FT	5690	4540	4010	2580	2780	6200	13350	9940	7080	2690	2110	3280
CAL YR 1984	TOTAL	99282		MEAN	271	MAX	6030	MIN	32	AC-FT	196900	
WTR YR 1985	TOTAL	32404		MEAN	88.8	MAX	1840	MIN	24	AC-FT	64270	

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°17'25", long 96°17'05", in SW1/4 sec.3, T.15 N., R.10 E., Douglas County, Hydrologic Unit 10220003, on right bank 100 ft upstream from bridge at north edge of Waterloo and 3.5 mi downstream from Rawhide Creek.

DRAINAGE AREA.--6,900 mi², approximately, of which about 5,870 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1899 to November 1903, May 1911 to September 1915, August 1928 to current year.
Published as "at Arlington" 1899-1903, July 1913 to September 1915. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1914(M), 1915, 1936, 1943(M). WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,104.73 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1960, to June 28, 1978, at datum 2.00 ft higher. See WSP 1918 for history of changes prior to Oct. 1, 1960.

REMARKS.--Estimated daily discharges: Dec. 25-28 and Jan. 1 to Mar. 2. Records good except for periods of estimated record, which are poor. Some small diversions above station for irrigation.

AVERAGE DISCHARGE.--65 years, 1,190 ft³/s, 862,200 acre-ft/yr; median of yearly mean discharges, 1,010 ft³/s, 732,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft³/s June 12, 1944, gage height, 16.6 ft from floodmark in gage well, site and datum then in use, from rating curve extended above 22,000 ft³/s on basis of current-meter measurement of peak flow in main channel and velocity-area studies of overflow section; minimum observed, 50 ft³/s Nov. 12, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage and discharge of the flood of June 12, 1944, are the greatest known since at least 1880.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 24	1200	15600	10.69	May 15	0600	6540	6.73
Apr. 27	1500	*18500	*11.71	June 27	2245	8470	7.76
May 2	0600	8790	7.92				

Minimum daily discharge, 458 ft³/s Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	728	1100	1400	1300	900	2240	1850	5630	1890	2280	660	832
2	728	1120	1390	1500	830	2490	1780	7670	1760	1940	671	714
3	734	1120	1290	1940	840	1940	2050	5540	1620	1700	659	671
4	780	1120	1160	2000	840	3530	2440	4160	1580	1510	671	637
5	822	1140	1160	2050	840	4070	2190	3600	1830	1350	690	824
6	884	1140	677	2100	840	2660	2000	3180	1810	1240	673	1060
7	998	1120	728	2100	820	2160	1870	2840	1610	1150	656	966
8	1110	1130	808	1800	820	2050	1790	2540	1560	1060	580	870
9	1240	1210	1100	1540	820	1900	1690	2330	1520	1020	531	728
10	1360	1500	1300	1450	830	1800	1600	2170	1460	963	500	665
11	1380	2200	1890	1280	860	1810	1550	2070	1460	907	464	668
12	1300	2330	2120	1120	870	1870	1510	2000	1470	849	458	688
13	1180	1820	1610	1200	870	1890	1510	2000	1420	807	480	852
14	1120	1620	1080	1120	880	1850	1430	3340	1340	858	515	1160
15	1520	1540	801	1100	880	1810	1400	6340	1360	931	655	2160
16	1890	1480	1700	1120	920	1800	1360	5970	1850	803	666	1930
17	1840	1420	2430	1100	950	1790	1310	4430	1400	752	704	1460
18	2140	1330	1930	1080	980	1770	1260	3930	1240	761	832	1240
19	1990	1310	1380	1040	1030	1720	1210	3520	1150	2270	910	1100
20	1860	1290	1180	980	1110	1740	1170	3390	1080	1380	888	988
21	1840	1250	1280	980	1320	1720	1270	3570	1040	866	761	947
22	1580	1270	1250	920	1570	1720	1630	2790	1010	818	831	908
23	1420	1300	1290	900	1480	1750	7000	2600	1120	832	868	913
24	1320	1330	1330	920	1500	1860	13200	2390	1480	753	926	973
25	1250	1350	1360	940	1760	1910	6980	2200	1060	728	977	1000
26	1240	1380	1630	900	2420	1810	8010	2040	1090	695	1210	1070
27	1210	1410	1760	920	2640	1800	17300	2040	3240	636	1070	1000
28	1220	1430	1930	880	1940	1910	12100	2160	6110	600	865	926
29	1190	1410	2870	920	---	2030	6930	1920	4010	573	795	908
30	1130	1400	2320	940	---	1890	5400	2040	2830	582	779	965
31	1100	---	1730	950	---	1900	---	2840	---	646	809	---
TOTAL	40104	41570	45884	39090	32360	63190	112790	103240	53400	32260	22754	29823
MEAN	1294	1386	1480	1261	1156	2038	3760	3330	1780	1041	734	994
MAX	2140	2330	2870	2100	2640	4070	17300	7670	6110	2280	1210	2160
MIN	728	1100	677	880	820	1720	1170	1920	1010	573	458	637
AC-FT	79550	82450	91010	77540	64190	125300	223700	204800	105900	63990	45130	59150
CAL YR 1984	TOTAL	1413137		MEAN	3861	MAX	41000	MIN	668	AC-FT	2803000	
WTR YR 1985	TOTAL	616465		MEAN	1689	MAX	17300	MIN	458	AC-FT	1223000	

PLATTE RIVER BASIN

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06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1981.

WATER TEMPERATURES: November 1977 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 750 microsiemens Jan. 10, 1979; minimum daily, 235 microsiemens Mar. 15, 1979.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 19, 1979; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT										
11...	1050	1380	630	7.8	15.5	736	--	--	--	>6000
NOV										
15...	1100	1550	680	8.2	6.5	743	55	11.0	53	1800
DEC										
12...	1130	2120	590	7.7	.5	735	--	16.4	--	2200
JAN										
16...	1200	1120	715	8.1	.5	--	--	13.5	--	200
31...	1100	952	670	7.5	.0	--	20	13.5	--	--
FEB										
13...	1050	869	682	7.8	.5	--	--	14.5	--	1700
MAR										
13...	1500	1880	700	8.1	7.5	743	170	13.0	30	1400
APR										
11...	1200	1560	645	8.0	14.5	733	--	9.3	--	1000
MAY										
16...	1130	6340	496	8.1	13.0	740	650	8.0	400	K300000
JUN										
11...	1025	1450	560	8.4	19.0	732	--	8.5	--	K1300
JUL										
09...	1120	1010	525	8.7	27.0	740	50	11.0	45	1300
AUG										
30...	1300	1050	530	8.4	25.0	345	--	11.2	--	--
SEP										
12...	1110	760	560	8.3	19.0	747	36	12.8	--	1300

K Results based on colony count outside the acceptable range (non-ideal colony count).

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT										
11...	25000	260	--	73	20	25	.7	--	--	72
NOV										
15...	4900	310	24	86	22	25	.6	9.3	272	78
DEC										
12...	19000	270	--	78	19	22	.6	--	--	61
JAN										
16...	4000	--	--	--	--	--	--	--	--	--
31...	--	320	49	94	21	26	.7	6.5	273	66
FEB										
13...	5200	310	--	91	19	24	.6	--	--	64
MAR										
13...	33000	290	48	83	19	23	.6	8.1	221	64
APR										
11...	K560	270	--	74	21	26	.7	--	--	71
MAY										
16...	K200000	210	0	60	14	18	.6	9.5	176	54
JUN										
11...	1600	250	--	69	20	25	.7	--	--	67
JUL										
09...	740	230	0	61	18	24	.7	8.0	187	74
AUG										
30...	--	210	--	58	17	24	.7	--	--	65
SEP										
12...	740	240	29	63	19	25	.7	8.8	210	61

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT										
11...	14	--	--	--	--	--	--	191	3.1	--
NOV										
15...	11	.30	25	421	430	.57	1760	281	4.0	4.0
DEC										
12...	11	--	--	--	--	--	--	523	3.6	--
JAN										
16...	--	--	--	--	--	--	--	57	4.5	4.5
31...	13	.30	33	452	420	.61	1160	--	--	--
FEB										
13...	12	--	--	--	--	--	--	64	3.9	--
MAR										
13...	11	.40	26	371	380	.50	1880	492	3.4	3.4
APR										
11...	11	--	--	--	--	--	--	116	3.1	--
MAY										
16...	8.9	.30	19	309	310	.42	5290	800	2.9	2.9
JUN										
11...	11	--	--	--	--	--	--	248	2.0	--
JUL										
09...	11	.30	21	341	480	.46	930	159	1.1	1.1
AUG										
30...	12	--	--	--	--	--	--	132	.70	--
SEP										
12...	15	.40	20	346	340	.47	710	133	.90	.88

PLATTE RIVER BASIN

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06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 11...	.280	--	2.4	2.7	5.8	.760	--	--	12
NOV 15...	.130	.170	2.0	2.1	6.1	.550	.240	.240	11
DEC 12...	.180	--	2.0	2.2	5.8	.690	--	--	16
JAN 16...	.310	.300	.99	1.3	5.8	.350	.260	.260	4.4
31...	--	--	--	--	--	--	--	--	--
FEB 13...	.310	--	.79	1.1	5.0	.370	--	--	3.0
MAR 13...	.130	.100	2.0	2.1	5.5	.710	.250	.220	14
APR 11...	.090	--	1.9	2.0	5.1	.560	--	--	9.2
MAY 16...	.240	.280	3.5	3.7	6.6	2.00	.260	.190	>80
JUN 11...	.110	--	2.2	2.3	4.3	.540	--	--	15
JUL 09...	.060	.040	2.3	2.4	3.5	.530	.170	.140	14
AUG 30...	.040	--	3.0	3.0	3.7	.220	--	--	15
SEP 12...	.060	.030	2.2	2.3	3.2	.520	.160	.120	6.2

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 15...	1100	20	5	4	200	<.0	<1	<1	19	9
MAR 13...	1500	10	8	3	170	1.9	2	<1	28	<1
MAY 16...	1130	30	15	3	150	<.5	<1	2	20	<1
JUL 09...	1120	20	8	7	140	<.5	--	<1	10	<1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
NOV 15...	<3	24	4	16	10	5	26	10	.1	.1
MAR 13...	<3	22	2	13	17	5	23	8	.1	<.1
MAY 16...	<3	100	6	17	40	7	17	3	.6	<.1
JUL 09...	<3	8	2	5	3	<1	27	2	<.1	<.1

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 15...	<10	4	--	6	1	<1	420	<6	30	8
MAR 13...	<10	2	--	5	4	<1	380	<6	70	25
MAY 16...	<10	10	5	4	1	<1	280	<6	310	35
JUL 09...	<10	1	10	10	1	2	340	9	30	22

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV 15...	1100	1550	5.5	795	3330	--	--
JAN 16...	1200	1120	.5	232	702	--	--
MAR 13...	1500	1880	7.5	1090	5530	--	--
MAY 16...	1130	6340	13.0	4470	76500	32	37
JUL 09...	1120	1010	27.0	368	1000	--	--
SEP 12...	1110	760	19.0	176	361	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 15...	--	--	54	68	100	--	--
JAN 16...	--	--	--	--	--	--	83
MAR 13...	--	--	--	--	--	--	77
MAY 16...	43	49	84	92	99	100	--
JUL 09...	--	--	74	81	99	100	--
SEP 12...	--	--	--	--	--	--	77

PLATTE RIVER BASIN

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06803000 SALT CREEK AT ROCA, NE

LOCATION.--Lat 40°39'29", long 96°39'55", in NW1/4SW1/4 sec.17, T.8 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 15 ft downstream from highway bridge at west edge of Roca.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,192.50 ft above National Geodetic Vertical Datum of 1929, Kansas City supplementary adjustment of 1943. Prior to May 16, 1956, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 5, 6, and Dec. 19 to Feb. 23. Records fair except for periods of estimated record, which are poor. Flood flow affected by several detention dams.

AVERAGE DISCHARGE.--34 years, 44.7 ft³/s, 32,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s July 10, 1958, gage height, 22.70 ft; minimum daily, 0.2 ft³/s July 23, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 8, 1950, reached a stage of 26.0 ft, from floodmark established by Corps of Engineers, discharge, 67,000 ft³/s, but may have been exceeded by flood of July 5, 1908.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	1000	*1280	*11.97	May 14	1430	984	10.53

Minimum daily discharge, 2.5 ft³/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	12	12	15	14	64	31	66	18	4.2	5.3	3.2
2	5.9	12	13	14	13	56	40	46	16	4.1	5.3	3.0
3	6.4	11	11	15	12	63	55	36	14	4.0	5.4	2.5
4	5.9	11	11	18	12	75	44	30	12	3.9	6.0	3.5
5	6.1	9.6	11	20	13	51	36	26	13	4.0	5.7	3.6
6	9.4	9.1	11	20	15	43	31	24	18	4.3	5.7	2.9
7	8.4	10	11	19	15	43	30	23	13	4.5	5.6	2.9
8	6.6	9.8	11	17	14	41	26	20	13	4.0	5.1	4.9
9	6.1	9.7	14	15	13	38	24	18	11	3.9	4.4	4.1
10	15	11	14	13	13	36	23	16	9.9	3.8	4.0	3.2
11	6.5	11	15	12	14	36	23	15	11	3.8	4.0	2.8
12	6.9	11	13	13	14	33	25	14	9.5	4.2	3.8	2.7
13	6.2	11	12	17	15	31	34	23	9.4	4.3	3.8	10
14	5.3	13	12	16	17	30	31	560	8.2	4.1	3.7	44
15	23	13	83	15	19	27	30	263	8.7	4.3	3.6	6.2
16	51	11	907	15	24	25	28	130	7.8	4.3	3.6	3.9
17	30	10	249	16	25	23	25	89	7.3	3.8	4.8	3.4
18	22	11	147	17	32	23	22	67	6.5	3.5	6.2	3.7
19	14	11	70	16	36	22	19	54	6.4	4.6	5.2	3.4
20	9.6	12	88	14	95	21	18	54	6.4	6.1	4.4	3.6
21	8.7	12	77	15	250	20	18	42	5.8	3.8	3.8	4.7
22	8.3	13	65	16	200	20	16	35	7.1	3.8	3.7	5.7
23	8.3	13	50	16	155	22	15	31	11	3.4	3.5	9.2
24	7.8	14	40	17	125	22	16	28	12	3.4	3.5	7.1
25	8.2	14	35	17	94	19	16	26	10	4.6	3.3	5.9
26	9.9	14	40	16	89	19	24	23	8.5	4.5	3.3	5.5
27	9.3	16	74	14	70	23	34	23	11	4.1	3.5	5.2
28	8.6	14	96	13	63	23	31	27	9.4	3.9	3.2	5.1
29	8.4	12	62	14	---	20	31	23	7.4	3.9	3.9	6.1
30	8.9	12	28	15	---	19	39	22	5.4	4.7	5.5	10
31	8.4	---	17	15	---	26	---	20	---	5.6	3.8	---
TOTAL	345.3	353.2	2299	485	1471	1014	835	1874	306.7	129.4	136.6	182.0
MEAN	11.1	11.8	74.2	15.6	52.5	32.7	27.8	60.5	10.2	4.17	4.41	6.07
MAX	51	16	907	20	250	75	55	560	18	6.1	6.2	44
MIN	5.3	9.1	11	12	12	19	15	14	5.4	3.4	3.2	2.5
AC-FT	685	701	4560	962	2920	2010	1660	3720	608	257	271	361
CAL YR 1984	TOTAL	53692.5		MEAN	147	MAX	4000	MIN	5.3	AC-FT	106500	
WTR YR 1985	TOTAL	9431.2		MEAN	25.8	MAX	907	MIN	2.5	AC-FT	18710	

PLATTE RIVER BASIN

06803500 SALT CREEK AT LINCOLN, NE

LOCATION.--Lat 40°50'49", long 96°40'54", in NW1/4SW1/4 sec.7, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203 on right bank 135 ft downstream from bridge on North 27th Street at north edge of Lincoln, 1 mi downstream from Oak Creek.

DRAINAGE AREA.--684 mi².

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,113.90 ft above National Geodetic Vertical Datum of 1929. Prior to July 27, 1979, water-stage recorder for stages above 6.2 ft on downstream side of bridge pier, 135 ft upstream at same datum, and nonrecording gage read twice daily.

REMARKS.--No estimated daily discharges. Records good. Flood flow affected by several detention dams.

AVERAGE DISCHARGE.--36 years, 223 ft³/s, 161,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft³/s June 2, 1951, gage height, 26.15 ft; minimum daily, 21 ft³/s July 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1951, may have been equaled or exceeded in discharge by flood of July 6, 1908, which reached a stage of 33.6 ft. Channel changes since 1908 have materially altered the stage-discharge relation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 23	2230	7470	14.42	July 19	0900	*12900	*19.10

Minimum daily discharge, 63 ft³/s July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	149	109	129	121	255	213	667	214	129	187	126
2	93	153	106	161	130	249	222	401	198	113	174	121
3	90	149	101	181	131	249	246	290	189	107	211	119
4	90	143	91	184	131	268	218	248	242	96	153	200
5	112	141	96	182	121	260	194	219	192	88	149	130
6	162	137	119	173	130	231	177	206	183	83	147	127
7	160	133	108	161	120	217	160	196	176	76	132	116
8	128	129	112	165	122	216	150	181	164	78	129	107
9	111	127	113	145	117	206	144	169	166	79	121	103
10	137	127	113	140	117	199	146	162	148	71	111	112
11	130	127	113	136	117	198	146	165	143	68	101	106
12	124	129	113	143	117	193	144	162	137	68	98	137
13	113	126	109	154	117	192	150	535	132	66	134	390
14	121	120	85	157	122	180	147	2400	146	68	711	232
15	266	119	521	160	124	170	147	1740	138	64	315	181
16	283	118	1920	162	136	172	140	787	130	63	226	141
17	299	116	956	165	151	165	134	544	125	64	984	133
18	258	112	293	165	163	165	132	441	116	72	483	128
19	220	108	285	148	196	162	138	405	107	6620	323	123
20	192	107	268	127	276	161	132	523	98	1010	272	134
21	169	106	387	148	504	155	119	381	97	843	239	163
22	153	105	291	151	725	153	218	316	94	476	221	150
23	146	104	253	151	482	170	140	290	1430	369	203	238
24	141	103	265	151	411	160	121	287	1500	378	185	162
25	140	103	162	154	343	151	199	251	214	394	168	156
26	141	103	139	146	306	146	286	237	472	264	161	125
27	138	103	160	142	278	180	341	237	293	226	151	115
28	138	104	224	142	250	160	214	242	189	206	144	107
29	137	107	279	142	---	147	234	270	158	194	143	219
30	134	109	209	131	---	165	441	253	138	290	139	273
31	137	---	172	123	---	220	---	226	---	195	134	---
TOTAL	4751	3617	8272	4719	6058	5915	5593	13431	7729	12918	7049	4674
MEAN	153	121	267	152	216	191	186	433	258	417	227	156
MAX	299	153	1920	184	725	268	441	2400	1500	6620	984	390
MIN	88	103	85	123	117	146	119	162	94	63	98	103
AC-FT	9420	7170	16410	9360	12020	11730	11090	26640	15330	25620	13980	9270
CAL YR 1984	TOTAL	224015	MEAN	612	MAX	13000	MIN	85	AC-FT	444300		
WTR YR 1985	TOTAL	84726	MEAN	232	MAX	6620	MIN	63	AC-FT	168100		

06803510 LITTLE SALT CREEK NEAR LINCOLN, NE

LOCATION.--Lat 40°53'36", long 96°40'52", in NW1/4SW1/4 sec.30, T.11 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 10 ft downstream from county road bridge and 0.4 mi north of intersection of Interstate Highway 80 and North 27th Street north of Lincoln.

DRAINAGE AREA.--43.6 mi².

PERIOD OF RECORD.--January 1969 to current year.

REVISED RECORDS.--WDR NE-77-1: 1969-73(M).

GAGE.--Water-stage recorder. Datum of gage is 1,114.73 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 10, 1980, water-stage recorder at present site and datum 3.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 29 to Nov. 17, Jan. 10 to Feb. 19, Apr. 8-9, Apr. 20 to May 5, May 7, May 28 to June 17, July 17, 25-29, and Aug. 12-27. Records fair except for periods of estimated record and period of beaver activity, prior to Jan. 10, which are poor.

AVERAGE DISCHARGE.--16 years, 14.1 ft³/s, 10,220 acre-ft/yr; median of yearly mean discharges, 14 ft³/s, 10,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s July 19, 1985, gage height, 18.24 ft, from floodmark, from rating curve extended above 3,710 ft³/s; minimum daily, 0.20 ft³/s Sept. 29, 30, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 23	2100	1320	11.60	June 26	1630	564	8.82
July 19	0600	*8000	*a18.24				

a From floodmark.

Minimum daily discharge, 3.5 ft³/s July 11, 12, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	8.8	7.5	8.0	7.4	13	16	66	7.5	7.3	8.5	5.9
2	5.0	8.0	7.6	7.1	7.2	12	22	24	7.4	6.5	8.3	5.7
3	5.3	8.2	7.9	6.2	7.4	19	19	20	7.8	6.2	10	5.8
4	5.8	8.4	7.6	6.7	7.0	18	13	17	8.0	5.6	10	7.7
5	7.5	7.8	7.9	7.1	6.6	13	11	18	9.0	5.4	8.9	7.1
6	9.8	7.0	7.6	7.7	6.8	12	9.9	12	8.0	5.0	7.8	6.5
7	6.0	7.2	8.1	8.1	6.2	13	10	12	7.2	4.6	7.4	5.9
8	5.5	7.0	7.9	7.5	6.2	12	9.4	11	6.0	4.2	7.2	5.6
9	6.0	6.6	8.4	7.3	6.5	12	9.4	9.9	6.9	4.2	7.2	5.5
10	8.2	7.6	7.8	7.2	6.9	10	9.4	9.4	6.8	3.8	7.2	6.1
11	6.9	6.4	8.1	7.0	6.7	13	9.4	14	7.1	3.5	7.1	6.4
12	6.4	6.2	8.8	8.9	6.4	10	9.2	9.5	7.0	3.5	7.2	7.0
13	6.2	5.8	13	9.4	6.1	11	9.1	38	7.0	3.8	7.9	42
14	7.7	6.0	15	10	6.5	9.8	9.0	164	6.8	3.7	30	14
15	20	5.6	30	9.0	6.9	9.5	8.9	34	6.4	3.5	12	8.2
16	11	5.4	92	7.9	7.6	9.4	8.9	18	6.2	4.0	11	7.2
17	9.8	5.6	35	7.8	8.4	9.4	8.8	14	6.0	9.2	50	7.2
18	6.7	5.4	25	8.5	10	9.2	8.7	13	6.3	34	20	6.9
19	6.2	5.3	14	7.4	14	9.0	8.7	17	6.5	2420	14	6.5
20	6.1	5.6	12	7.1	18	8.9	8.6	56	6.8	61	11	7.1
21	6.5	6.0	27	7.7	82	8.9	9.1	15	7.1	33	9.8	12
22	6.6	6.1	20	8.7	29	9.1	10	11	7.4	23	8.8	13
23	7.1	6.2	10	10	19	11	9.3	9.9	192	18	8.4	27
24	7.8	6.1	9.0	9.6	15	9.2	9.5	9.5	68	15	8.0	12
25	9.2	6.5	8.6	8.4	14	8.3	13	8.9	16	22	7.7	13
26	8.9	7.4	8.2	7.6	14	7.9	18	8.2	129	17	6.8	9.7
27	9.0	7.0	12	7.2	11	10	39	8.4	28	14	6.3	9.2
28	8.2	7.4	24	10	12	8.8	34	8.9	13	11	5.9	8.3
29	8.0	7.4	11	10	---	7.3	20	8.4	9.8	13	6.0	29
30	8.0	7.4	7.4	10	---	8.5	109	8.4	8.3	13	6.0	27
31	8.6	---	6.8	9.0	---	13	---	8.2	---	8.6	6.2	---
TOTAL	239.0	201.4	475.2	254.1	354.8	335.2	489.3	681.6	619.3	2786.6	332.6	334.5
MEAN	7.71	6.71	15.3	8.20	12.7	10.8	16.3	22.0	20.6	89.9	10.7	11.1
MAX	20	8.8	92	10	82	19	109	164	192	2420	50	42
MIN	5.0	5.3	6.8	6.2	6.1	7.3	8.6	8.2	6.0	3.5	5.9	5.5
AC-FT	474	399	943	504	704	665	971	1350	1230	5530	660	663
CAL YR 1984	TOTAL	12738.8		MEAN	34.8	MAX	2820	MIN	3.7	AC-FT	25270	
WTR YR 1985	TOTAL	7103.6		MEAN	19.5	MAX	2420	MIN	3.5	AC-FT	14090	

PLATTE RIVER BASIN

06803520 STEVENS CREEK NEAR LINCOLN, NE

LOCATION.--Lat 40°51'25", long 96°35'42", in NW1/4NE1/4 sec.11, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 20 ft upstream from county road bridge on Havelock Avenue and 1.6 mi east of 70th Street at east edge of Lincoln.

DRAINAGE AREA.--47.8 mi².

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,125.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 11-20, Dec. 4-6, 12-14, 18-26, Dec. 30 to Jan. 3, Jan. 8-15, and Jan. 17 to Feb. 19. Records fair except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--17 years, 16.5 ft³/s, 11,950 acre-ft/yr; median of yearly mean discharges, 12 ft³/s, 8,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft³/s June 13, 1984, gage height, 19.57 ft; no flow July 31, Aug. 2-4, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	1000	692	7.88	July 19	0730	*1040	*9.34
June 23	2400	1000	9.16				

Minimum daily discharge, 1.8 ft³/s July 17, 18, Sept. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	14	4.3	4.5	3.7	10	14	38	5.0	3.2	4.1	2.5
2	4.2	9.9	4.0	5.0	3.8	10	24	15	4.4	3.0	4.1	2.2
3	4.1	5.7	3.7	5.4	4.1	14	59	11	4.2	2.9	4.5	2.8
4	4.9	5.3	3.5	6.4	3.9	21	18	9.7	4.6	2.7	5.4	2.8
5	6.3	5.0	3.3	6.9	3.5	9.0	14	8.6	5.5	2.2	4.6	3.6
6	8.8	4.7	3.0	7.8	3.8	8.8	11	8.0	4.6	2.0	4.2	3.2
7	7.5	4.7	3.4	8.3	3.5	9.6	11	7.3	3.9	2.0	3.9	2.2
8	6.2	4.7	14	7.2	3.6	9.6	9.4	7.0	4.0	2.0	3.6	1.8
9	6.2	4.8	4.5	6.8	3.7	9.2	9.0	6.2	3.3	2.0	3.3	1.8
10	6.9	6.8	4.7	5.8	4.0	9.5	9.0	5.8	3.0	2.2	3.0	1.9
11	6.8	4.5	4.5	4.5	4.2	11	8.8	5.8	3.2	2.1	3.1	2.4
12	6.5	4.8	3.5	4.4	4.4	10	8.3	5.3	3.2	2.2	2.9	2.9
13	5.5	5.0	3.2	5.2	4.5	9.9	8.3	21	3.2	2.1	2.8	8.6
14	5.8	5.4	3.1	6.4	4.6	9.9	8.3	187	3.0	2.2	3.1	7.1
15	16	5.2	28	6.6	3.5	9.0	8.1	36	3.6	2.1	3.1	3.1
16	15	4.6	440	7.5	3.5	8.4	7.7	15	3.4	1.9	2.9	2.9
17	24	4.8	61	7.4	5.0	8.0	7.1	11	3.3	1.8	32	2.9
18	12	4.4	15	7.2	9.0	8.0	6.8	9.7	2.6	1.8	5.9	3.1
19	7.3	4.3	6.0	4.0	15	7.8	6.6	9.0	2.1	365	4.3	2.9
20	6.3	4.4	7.0	4.3	58	7.3	7.5	15	2.2	15	3.5	3.4
21	5.0	4.5	6.4	5.0	199	7.1	7.1	11	2.4	54	3.0	4.1
22	4.8	4.6	6.0	5.0	61	7.2	9.9	7.7	2.2	6.3	3.0	4.5
23	4.7	4.6	5.6	5.0	27	8.4	9.1	6.7	132	4.6	2.7	9.8
24	4.6	4.9	4.5	5.4	19	8.3	8.4	8.3	262	13	2.8	8.9
25	4.7	4.8	4.5	5.0	11	7.4	9.3	6.7	11	96	2.8	5.2
26	5.3	8.4	5.0	5.0	11	7.5	26	5.9	96	6.4	2.6	4.5
27	6.0	5.0	10	5.2	7.1	9.6	66	5.7	21	4.8	2.3	3.9
28	5.0	4.5	37	5.2	8.7	11	19	5.9	6.0	3.8	2.1	4.3
29	4.8	4.5	18	5.4	---	9.2	13	6.1	4.5	3.5	2.1	7.9
30	4.5	4.4	8.0	5.2	---	8.9	48	6.2	3.7	4.7	2.2	14
31	4.7	---	5.2	4.6	---	12	---	5.4	---	5.1	2.5	---
TOTAL	217.0	163.2	729.9	177.6	493.1	296.6	471.7	507.0	613.1	622.6	132.4	131.2
MEAN	7.00	5.44	23.5	5.73	17.6	9.57	15.7	16.4	20.4	20.1	4.27	4.37
MAX	24	14	440	8.3	199	21	66	187	262	365	32	14
MIN	2.6	4.3	3.0	4.0	3.5	7.1	6.6	5.3	2.1	1.8	2.1	1.8
AC-FT	430	324	1450	352	978	588	936	1010	1220	1230	263	260
CAL YR 1984	TOTAL	17842.8		MEAN	48.8	MAX	2200	MIN	1.4	AC-FT	35390	
WTR YR 1985	TOTAL	4555.4		MEAN	12.5	MAX	440	MIN	1.8	AC-FT	9040	

06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE

LOCATION.--Lat 40°54'18", long 96°35'09", in NW1/4SW1/4 sec.24, T.11 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, at bridge 0.5 mi north of Interstate Highway 80 and 3 mi southwest of Waverly.

DRAINAGE AREA.--815 mi².

PERIOD OF RECORD.--Water year 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
31...	1320	210	4330	7.6	8.0	--	18000	7800	330	58	89
NOV											
20...	1200	135	5200	7.9	5.5	13.7	K96000	2100	370	71	100
DEC											
18...	1330	348	2090	7.6	.5	12.7	K20000	K21000	250	68	67
JAN											
15...	1340	215	4550	8.3	.5	15.2	K8700	5200	370	63	100
FEB											
13...	1425	180	4700	8.7	.5	12.8	23000	2800	340	189	93
MAR											
12...	1145	240	3800	7.9	7.0	10.6	25000	7500	330	22	88
APR											
09...	0930	181	4500	7.9	7.5	9.0	K360	400	360	79	93
MAY											
07...	1005	248	3320	8.0	17.5	7.0	240	700	340	65	92
JUN											
04...	0900	275	4200	8.6	17.0	6.2	1200	4700	370	111	100
JUL											
01...	1330	165	5500	7.8	26.0	6.4	390	400	370	84	100
AUG											
27...	1430	180	4390	7.7	25.0	7.1	830	230	340	88	91
SEP											
25...	1230	229	4000	7.5	14.0	7.9	K6200	1100	280	45	76

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
OCT											
31...	26	830	21	9.9	272	220	1200	.60	23	2600	3.5
NOV											
20...	30	1000	23	11	303	280	1500	.60	23	3100	4.3
DEC											
18...	19	340	10	10	178	130	460	.40	15	1100	1.6
JAN											
15...	30	840	20	10	311	240	1200	.60	25	2600	3.6
FEB											
13...	27	900	22	9.2	155	270	1400	.60	26	2800	3.8
MAR											
12...	26	660	16	9.2	305	220	940	.50	19	2100	2.9
APR											
09...	30	770	18	9.5	277	240	1200	.60	16	2500	3.4
MAY											
07...	27	600	15	12	276	200	900	.60	20	2000	2.7
JUN											
04...	30	780	18	10	263	230	1200	.50	19	2500	3.4
JUL											
01...	30	1100	26	14	290	270	1500	.60	22	3200	4.4
AUG											
27...	28	900	22	12	255	240	1200	.60	16	2600	3.6
SEP											
25...	22	720	19	9.8	236	180	990	.50	18	2200	2.9

PLATTE RIVER BASIN

06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BIARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)
OCT 31...	1450	1.6	1.6	2.00	1.0	3.0	4.6	1.30	--	--
NOV 20...	1140	1.9	1.9	3.00	.90	3.9	5.8	2.20	4	<100
DEC 18...	1080	4.6	2.9	.030	--	--	--	.900	--	--
JAN 15...	1530	2.1	2.1	2.80	.80	3.6	5.7	1.60	--	--
FEB 13...	1370	2.0	1.9	3.30	1.2	4.5	6.5	1.70	3	200
MAR 12...	1390	1.6	1.6	2.00	1.5	3.5	5.1	2.00	--	--
APR 09...	1230	1.4	--	2.80	2.1	4.9	6.3	.080	--	--
MAY 07...	1350	1.8	3.4	1.70	1.4	3.1	4.9	1.60	5	400
JUN 04...	1880	2.0	2.2	2.40	.90	3.3	5.3	1.30	--	--
JUL 01...	1430	1.8	1.8	4.80	-1.2	3.6	5.4	2.40	--	--
AUG 27...	1280	1.6	3.3	1.60	1.1	2.7	4.3	1.60	--	100
SEP 25...	1330	1.8	1.8	1.50	1.2	2.7	4.5	1.60	--	--

[illegible]

06803530 ROCK CREEK NEAR CERESCO, NE

LOCATION.--Lat 41°00'56", long 96°32'39", in NE1/4NE1/4 sec.17, T.12 N., R.8 E., Lancaster County, Hydrologic Unit 10200203, on right bank 20 ft downstream from bridge on east-west county road and 5.7 mi southeast of Ceresco.

DRAINAGE AREA.--119 mi².

PERIOD OF RECORD.--April 1970 to current year.

REVISED RECORDS.--WDR NE-76-1: 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 1,112.18 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1980, at present site at datum 3.0 ft higher. July 14, 1981 to Feb. 29, 1984, on left bank 30 ft downstream from bridge at present datum.

REMARKS.--Estimated daily discharges: Dec. 5, 6, 17-25, Dec. 30 to Jan. 4, and Jan. 10 to Feb. 19. Records fair except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--15 years, 34.9 ft³/s, 25,290 acre-ft/yr; median of yearly mean discharges, 31 ft³/s, 22,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s June 15, 1982, gage height, 18.84 ft, present datum, from floodmark; minimum daily, 0.25 ft³/s July 13, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	1400	922	7.86	July 19	0730	*3160	*13.41
May 14	1030	1400	9.24				

Minimum daily discharge, 8.8 ft³/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	15	13	17	10	21	36	234	18	14	23	12
2	9.2	13	11	15	10	18	61	60	17	14	21	12
3	9.3	13	13	16	12	36	70	37	17	14	22	10
4	11	14	11	17	13	55	35	29	20	13	25	15
5	16	13	15	18	13	28	26	32	24	12	22	14
6	27	12	16	20	12	21	23	31	18	12	27	11
7	16	13	18	20	11	24	23	26	18	12	18	9.9
8	11	13	14	15	14	23	21	21	17	10	17	9.7
9	12	14	15	13	15	21	19	20	16	12	17	8.8
10	16	17	15	12	14	22	19	19	15	10	15	9.4
11	14	14	15	11	14	25	19	36	18	10	15	11
12	12	13	15	11	14	22	19	30	17	11	15	11
13	11	13	13	14	15	24	19	115	17	11	16	146
14	14	14	11	15	16	22	18	922	17	9.4	76	55
15	106	13	35	16	16	20	18	235	17	9.7	26	17
16	46	12	445	17	16	19	18	59	17	10	16	14
17	63	13	84	18	20	18	17	40	15	9.7	140	14
18	29	12	50	17	40	18	16	33	14	14	62	12
19	30	12	30	14	50	18	16	75	15	2300	19	11
20	17	12	20	12	58	17	17	239	14	289	15	11
21	15	12	80	14	443	17	16	48	14	50	15	14
22	14	13	50	15	123	17	20	32	13	29	15	19
23	13	13	25	16	47	24	17	27	34	24	13	68
24	13	13	15	17	30	20	17	33	83	22	13	28
25	14	14	17	15	23	18	26	25	17	92	13	25
26	15	16	21	13	24	17	74	23	188	26	12	19
27	15	15	44	13	15	24	93	55	140	19	12	15
28	13	13	195	12	17	21	41	25	22	19	12	14
29	13	13	47	13	---	17	31	33	17	19	12	51
30	13	14	20	11	---	17	244	28	15	26	12	108
31	13	---	15	10	---	28	---	20	---	25	12	---
TOTAL	629.7	401	1388	457	1105	692	1089	2642	884	3147.8	748	774.8
MEAN	20.3	13.4	44.8	14.7	39.5	22.3	36.3	85.2	29.5	102	24.1	25.8
MAX	106	17	445	20	443	55	244	922	188	2300	140	146
MIN	9.2	12	11	10	10	17	16	19	13	9.4	12	8.8
AC-FT	1250	795	2750	906	2190	1370	2160	5240	1750	6240	1480	1540
CAL YR 1984	TOTAL	26756.2		MEAN	73.1	MAX	2280	MIN	7.9	AC-FT	53070	
WTR YR 1985	TOTAL	13958.3		MEAN	38.2	MAX	2300	MIN	8.8	AC-FT	27690	

PLATTE RIVER BASIN

06803555 SALT CREEK AT GREENWOOD, NE

LOCATION.--Lat 40°57'56", long 96°27'01", at center of sec.31, T.12 N., R.9 E., Cass County, Hydrologic Unit 10200203, on right bank just downstream from county road bridge, 0.5 mi west of Greenwood.

DRAINAGE AREA.--1,051 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1951 to current year. Records furnished by Corps of Engineers prior to Oct. 1, 1972.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,068.14 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 5, 1964, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 6-9, 13-15, Dec. 25 to Jan. 6, and Jan. 10 to Feb. 18. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--33 years (water years 1953-85), 321 ft³/s, 232,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,800 ft³/s June 13, 1984, gage height, 26.50 ft; minimum daily, 14 ft³/s Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 16	1615	4430	8.75	July 19	0930	*26100	*20.60
May 14	1415	5180	9.43	Sept. 13	1245	3510	7.84
June 24	0230	8510	12.01				

Minimum daily discharge, 113 ft³/s July 17.*

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	261	165	245	190	341	361	1240	285	187	279	187
2	148	240	166	270	200	341	399	604	264	177	260	183
3	145	233	159	320	205	376	447	422	250	162	315	180
4	146	214	167	360	200	451	375	352	281	153	297	250
5	198	200	169	380	185	349	324	317	291	140	266	220
6	274	201	160	350	195	312	243	305	259	135	268	194
7	231	196	155	269	180	294	232	293	248	126	247	186
8	188	184	150	256	190	292	242	275	237	122	232	178
9	175	183	160	230	200	288	227	254	227	130	192	170
10	238	200	195	210	210	281	220	246	222	124	208	175
11	198	195	192	190	215	286	215	267	213	119	195	192
12	185	182	191	180	220	292	208	263	202	118	193	179
13	172	185	180	200	235	285	207	536	194	120	199	1480
14	180	173	170	220	240	280	206	3880	188	121	698	569
15	649	173	400	240	250	276	202	2750	230	117	470	317
16	463	169	3910	240	260	264	202	1000	204	115	337	254
17	579	168	1720	240	280	259	194	664	191	113	1120	232
18	399	164	556	245	310	258	192	532	178	126	752	220
19	344	161	396	220	336	247	191	463	173	16100	407	209
20	288	160	400	180	401	240	220	925	169	2490	342	223
21	252	156	771	205	1080	255	193	524	165	1530	302	251
22	225	157	498	230	1130	251	310	411	164	662	277	242
23	220	158	379	250	623	274	239	371	424	454	260	478
24	218	163	310	250	512	263	213	374	3620	389	247	338
25	228	163	300	245	411	266	268	339	399	746	228	301
26	229	178	310	245	395	233	434	316	592	382	213	253
27	221	171	600	245	351	282	697	338	1010	312	207	231
28	214	167	500	250	326	282	385	306	290	284	199	216
29	212	171	360	250	---	250	305	340	234	265	196	323
30	206	166	280	215	---	244	1010	348	205	375	194	666
31	218	---	255	195	---	306	---	308	---	320	192	---
TOTAL	7791	5492	14324	7625	9530	8918	9161	19563	11609	26714	9792	9097
MEAN	251	183	462	246	340	288	305	631	387	862	316	303
MAX	649	261	3910	380	1130	451	1010	3880	3620	16100	1120	1480
MIN	145	156	150	180	180	233	191	246	164	113	192	170
AC-FT	15450	10890	28410	15120	18900	17690	18170	38800	23030	52990	19420	18040
CAL YR 1984	TOTAL	360923		MEAN	986	MAX	37100	MIN	127	AC-FT	715900	
WTR YR 1985	TOTAL	139616		MEAN	383	MAX	16100	MIN	113	AC-FT	276900	

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1971 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to October 1984.

WATER TEMPERATURES: October 1980 to October 1984.

SUSPENDED SEDIMENT DISCHARGE: October 1971 to September 1976.

REMARKS.--Prior to July 1, 1971, sediment records were obtained by the U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 9,100 microsiemens Sep. 22, 1981; minimum daily, 170 microsiemens June 13, 1984.

WATER TEMPERATURES: Maximum, 36.0°C June 25, 1981; minimum, 0.0°C on many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 15,900 mg/L May 18, 1974; minimum daily, 5 mg/L Oct. 9, 1971.

SEDIMENT LOADS: Maximum daily, 492,000 tons Oct. 11, 1973; minimum daily, 1.0 ton Oct. 9, 1971.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
31...	1210	270	3800	7.7	7.5	11.6	--	30000	12000	330	89
NOV											
20...	1030	160	4410	8.1	4.0	13.1	32	K36000	1000	350	95
DEC											
18...	1225	396	1380	7.6	.0	13.9	--	K16000	K27000	200	57
JAN											
15...	1215	266	3750	8.4	.0	14.9	--	K10000	3700	350	97
FEB											
13...	1325	233	4180	--	.5	12.4	14	K45000	K26000	330	89
MAR											
12...	1045	285	3350	7.7	7.0	10.2	--	20000	5700	330	90
APR											
09...	1100	227	3750	7.5	10.0	8.8	--	K710	K400	340	90
MAY											
07...	1145	301	3280	7.9	21.0	6.6	70	480	450	310	84
JUN											
04...	1100	256	3800	8.2	18.0	6.2	--	K1000	5500	320	86
JUL											
01...	1215	195	4500	7.7	24.0	5.7	--	530	760	370	100
AUG											
27...	1242	212	3920	7.5	24.0	6.4	35	330	500	310	81
SEP											
25...	1100	320	3600	7.4	13.0	7.7	--	5600	K15000	270	73

K Results based on colony count outside the acceptable range (non-ideal colony count).

PLATTE RIVER BASIN

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT 31...	26	620	15	200	930	148	2.6	1.40	1.6	3.0	5.6
NOV 20...	28	800	19	240	1100	17	2.7	2.40	1.3	3.7	6.4
DEC 18...	15	190	6	97	260	356	4.6	.390	--	--	--
JAN 15...	27	680	16	200	920	34	2.6	2.80	.80	3.6	6.2
FEB 13...	27	700	17	240	1100	14	2.5	3.30	1.2	4.5	7.0
MAR 12...	25	550	14	200	800	72	2.2	1.50	1.6	3.1	5.3
APR 09...	27	600	15	220	910	35	2.1	1.90	1.3	3.2	5.3
MAY 07...	25	430	11	170	720	456	2.5	.990	1.5	2.5	5.0
JUN 04...	26	560	14	210	990	86	2.9	1.30	.80	2.1	5.0
JUL 01...	29	810	19	230	1200	104	2.6	1.20	1.0	2.2	4.8
AUG 27...	25	580	15	220	1100	95	2.4	1.40	1.2	2.6	5.0
SEP 25...	22	640	17	170	820	75	2.6	1.50	1.5	3.0	5.6

[illegible]

06804000 WAHOO CREEK AT ITHACA, NE

LOCATION.--Lat 41°08'40", long 96°32'10", in NW1/4NW1/4 sec.33, T.14 N., R.8 E., Saunders County, Hydrologic Unit 10200203, on right bank 16 ft downstream from bridge on State Highway 63 and 0.5 mi south of Ithaca.

DRAINAGE AREA.--271 mi², of which 268 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WDR NE-71-1: Drainage area. WDR NE-78-1: 1977(P).

GAGE.--Water-stage recorder. Datum of gage is 1,110.48 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1959, nonrecording gages at same site and datum. Oct. 28, 1959, to Feb. 22, 1961, nonrecording gage at site 1.5 mi upstream at datum 8.21 ft higher.

REMARKS.--Estimated daily discharges: Dec. 3-6, 14, 18-21, 25, 26, and Dec. 30 to Feb. 17. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--36 years, 84.1 ft³/s, 60,930 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,400 ft³/s June 24, 1963, gage height, 22.93 ft, from rating curve extended above 13,000 ft³/s on basis of indirect measurement of peak flow; minimum daily, 3.3 ft³/s June 11, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since about 1910, 23.22 ft, from floodmark, Aug. 2, 1959, discharge, 45,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 22	0030	*1570	*13.59	May 27	1000	1560	13.57
May 20	1400	1540	13.47				

Minimum daily discharge, 32 ft³/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	56	55	60	58	80	80	438	72	61	59	41
2	43	56	53	55	58	75	86	149	69	60	57	40
3	44	55	44	60	58	80	121	111	64	59	57	40
4	50	57	47	62	58	288	86	96	68	57	60	40
5	66	56	45	66	56	89	75	90	93	55	58	41
6	102	54	40	66	56	82	69	95	73	54	55	42
7	67	54	81	62	54	94	66	83	68	54	53	41
8	54	54	68	56	54	77	62	77	64	53	52	39
9	54	61	57	56	56	70	59	73	57	53	50	38
10	60	171	59	54	56	70	60	69	54	53	52	38
11	59	79	57	56	52	74	59	74	160	55	52	42
12	52	64	57	58	54	73	58	85	88	54	51	43
13	50	62	50	60	56	71	99	96	60	56	58	155
14	107	62	100	60	56	67	61	832	57	51	149	216
15	209	60	95	62	60	65	57	383	155	53	91	52
16	128	56	288	64	64	64	55	150	90	53	53	46
17	147	54	216	66	70	61	53	114	77	52	48	46
18	122	56	70	66	79	61	53	102	66	51	78	45
19	91	56	65	60	84	60	51	95	61	602	41	42
20	65	54	70	56	99	60	52	728	66	221	46	41
21	60	55	72	60	534	59	54	201	63	77	44	44
22	58	56	73	64	638	57	52	107	61	64	44	49
23	56	56	72	64	184	68	53	91	61	61	44	62
24	56	58	51	64	130	67	54	82	78	77	199	69
25	59	58	60	64	96	59	64	78	65	107	67	50
26	58	60	70	60	97	59	123	76	109	59	36	48
27	58	58	79	60	76	60	143	650	99	55	33	46
28	56	56	540	60	79	63	95	134	69	54	32	45
29	54	55	226	60	---	57	78	100	63	56	35	50
30	53	57	66	60	---	55	198	120	61	63	42	105
31	53	---	60	56	---	65	---	85	---	68	42	---
TOTAL	2234	1846	2986	1877	3072	2330	2276	5664	2291	2548	1838	1696
MEAN	72.1	61.5	96.3	60.5	110	75.2	75.9	183	76.4	82.2	59.3	56.5
MAX	209	171	540	66	638	288	198	832	160	602	199	216
MIN	43	54	40	54	52	55	51	69	54	51	32	38
AC-FT	4430	3660	5920	3720	6090	4620	4510	11230	4540	5050	3650	3360
CAL YR 1984	TOTAL	73897		MEAN	202	MAX	3500	MIN	36	AC-FT	146600	
WTR YR 1985	TOTAL	30658		MEAN	84.0	MAX	832	MIN	32	AC-FT	60810	

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°00'55", long 96°09'28", in NW1/4NW1/4 sec.14, T.12 N., R.11 E., Sarpy County, Hydrologic Unit 10200202, on the left bank at the upstream side of bridge on Nebraska Highway 50, 1 mi north of Louisville.

DRAINAGE AREA.--85,800 mi², approximately, of which about 71,000 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1953 to current year. October 1961 to September 1973 published as Platte River at South Bend.

REVISED RECORDS.--WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,007.10 ft above National Geodetic Vertical Datum of 1929. Dec. 5, 1961, to Sept. 30, 1973, at site 7 mi upstream at datum 31.43 feet higher.

REMARKS.--Estimated daily discharges: Jan. 17 to Feb. 27. Records good except for period of estimated record, which is poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--32 years, 6,385 ft³/s, 4,626,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 144,000 ft³/s June 14, 1984, gage height, 11.34 ft; maximum gage height, 12.45 ft Mar. 30, 1960; minimum daily discharge, 131 ft³/s Sept. 3, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since at least 1881, 144,000 ft³/s June 14, 1984, gage height, 11.34 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41,100 ft³/s May 16, gage height, 7.91 ft; minimum daily discharge, 1,920 ft³/s July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6070	8890	10800	10400	5000	27200	9810	18200	7440	8540	3930	3110
2	6560	8890	11000	5300	5200	30100	10200	22000	7380	7240	4960	3180
3	6440	9070	10700	3650	5400	26000	10400	21200	6670	7320	7220	3030
4	6140	9290	10400	4540	5200	24400	10100	14300	6640	6870	5890	2800
5	6270	9370	9780	5040	5000	21700	10100	12100	6890	5910	5710	3030
6	6530	8880	9080	6650	4800	16000	9530	12000	7480	5670	5830	3530
7	6470	9220	9600	8370	4800	17000	9760	9940	7320	4820	4770	4000
8	7640	8900	9310	11100	4800	16000	9350	9130	7180	4450	5110	4540
9	8100	9400	8750	12500	5000	14400	9160	8740	7150	3720	5010	4540
10	8410	10900	10700	10300	5600	14500	8890	7650	6410	3330	5400	4130
11	7630	12300	12200	7110	5800	13700	8100	7860	6350	2910	5000	4250
12	7250	13200	14200	5670	5800	13000	9870	7430	6340	2880	4600	4470
13	6710	12900	13100	5020	5800	14000	7540	7640	5660	2750	4440	6540
14	6350	11300	10800	4650	5800	13800	8010	13400	5590	2590	4770	8980
15	7380	11100	10900	3700	6600	12300	7550	29300	5580	1980	4930	19400
16	8220	10900	16900	3850	6400	11800	7390	33700	6070	2060	4470	12600
17	9000	11200	17000	4500	6600	11300	7260	23200	5750	1920	4640	9960
18	11000	11000	13800	6000	6800	11200	6810	18900	4920	1990	5870	9010
19	12200	10900	12900	6800	7200	13000	6350	16300	4720	15900	4510	8630
20	13000	10600	9750	7000	7800	11200	6410	16400	4440	14800	4540	8130
21	9270	10700	8830	6400	8400	10800	6210	15400	4480	6370	5040	7920
22	10700	11200	8080	7400	9000	10400	6400	10600	4720	6090	4510	7230
23	10100	10400	7750	6000	10000	10300	10900	10200	4650	5860	4410	7670
24	8910	10800	8280	5400	11000	9180	21300	8640	9120	5040	4350	7090
25	9080	10600	8310	6200	12000	9390	19000	8580	5480	5370	4160	7030
26	9230	9870	9710	6400	13000	9510	15800	7080	4190	4840	3780	7370
27	9080	10400	9880	6200	15000	9750	27600	8180	6490	4390	4270	6780
28	9210	10600	9390	6200	19200	9310	31500	7060	9570	3690	3600	6660
29	8910	11200	11400	6200	---	9290	20200	7240	12700	4060	3300	6210
30	9070	11100	11200	6000	---	9220	16800	6680	10500	3940	3260	7710
31	9630	---	13600	5600	---	9660	---	7690	---	3750	3150	---
TOTAL	260560	315080	338100	200150	213000	439410	348300	406740	197880	161050	145430	199530
MEAN	8405	10500	10910	6456	7607	14170	11610	13120	6596	5195	4691	6651
MAX	13000	13200	17000	12500	19200	30100	31500	33700	12700	15900	7220	19400
MIN	6070	8880	7750	3650	4800	9180	6210	6680	4190	1920	3150	2800
AC-FT	516800	625000	670600	397000	422500	871600	690900	806800	392500	319400	288500	395800
CAL YR 1984	TOTAL	6219750		MEAN	16990	MAX	123000	MIN	2560	AC-FT12337000		
WTR YR 1985	TOTAL	3225230		MEAN	8836	MAX	33700	MIN	1920	AC-FT 6397000		

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1974 to September 1981.

WATER TEMPERATURES: November 1974 to September 1981.

SUSPENDED SEDIMENT DISCHARGE: October 1971 to September 1981.

REMARKS.--Prior to July 1, 1971, sediment records were obtained by the U.S. Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,450 microsiemens Sept. 1, 1976; minimum daily, 254 microsiemens Aug. 7, 1981.

WATER TEMPERATURES: Maximum, 36.0°C July 24, 1977, Aug. 19, 1979; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily, 11,600 mg/L May 19, 1974; minimum daily, 60 mg/L July 19, 1976.

SEDIMENT LOADS: Maximum daily, 1,180,000 tons Mar. 21, 1978; minimum daily, 64 tons July 19, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 30...	1200	9100	885	7.7	9.0	740	--	12.2	--	K1400
NOV 14...	1130	11000	830	8.3	7.0	734	55	11.3	43	1100
DEC 11...	1130	11600	740	8.0	2.0	732	--	13.3	--	200
JAN 08...	1130	10800	698	8.2	.5	--	--	17.1	--	120
FEB 07...	1200	4870	--	7.8	.0	--	6.7	16.2	19	80
MAR 06...	1300	14600	712	7.5	1.0	--	--	15.4	--	3200
APR 04...	1420	9940	650	8.2	11.5	732	--	10.2	--	K1800
MAY 15...	1230	25300	488	7.9	13.5	740	1100	7.4	200	K250000
JUN 11...	1355	7390	700	8.6	20.0	733	--	9.8	--	K500
JUL 08...	1300	3830	655	8.6	27.0	740	--	10.9	--	370
AUG 07...	1055	4340	575	8.8	27.0	75.0	70	7.7	61	280
SEP 03...	1100	2680	650	8.5	25.0	731	--	9.8	--	K36

K Results based on colony count outside the acceptable range (non-ideal colony count).

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 30...	1400	250	--	68	20	80	2	--	--	160
NOV 14...	6800	240	71	64	19	79	2	8.2	184	150
DEC 11...	900	280	--	76	21	57	2	--	--	160
JAN 08...	K2000	270	--	76	20	48	1	--	--	130
FEB 07...	K15	280	71	79	20	75	2	8.7	216	130
MAR 06...	K54000	210	--	59	15	63	2	--	--	120
APR 04...	1200	250	--	69	18	52	1	--	--	110
MAY 15...	K250000	170	0	47	12	19	.7	8.4	164	53
JUN 11...	K680	210	--	56	17	64	2	--	--	130
JUL 08...	940	200	--	54	16	55	2	--	--	110
AUG 07...	320	150	0	41	12	54	2	9.3	139	58
SEP 03...	370	160	--	44	13	70	2	--	--	67

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT 30...	65	--	--	--	--	--	--	108	1.7	--
NOV 14...	62	.50	29	522	510	.71	15500	228	1.5	1.5
DEC 11...	26	--	--	--	--	--	--	132	1.9	--
JAN 08...	21	--	--	--	--	--	--	30	2.2	--
FEB 07...	61	.40	39	564	540	.77	7420	15	1.9	1.9
MAR 06...	48	--	--	--	--	--	--	912	1.8	--
APR 04...	35	--	--	--	--	--	--	280	2.0	--
MAY 15...	9.6	.40	16	262	270	.36	17900	428	2.5	2.5
JUN 11...	51	--	--	--	--	--	--	243	.20	--
JUL 08...	43	--	--	--	--	--	--	171	<.10	--
AUG 07...	54	.30	29	361	360	.49	4230	196	<.10	<.10
SEP 03...	82	--	--	--	--	--	--	95	<.10	--

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 30...	.030	--	1.3	1.3	3.0	.370	--	--	6.1
NOV 14...	.060	.070	1.4	1.5	3.0	.420	.190	.190	11
DEC 11...	.070	--	1.2	1.3	3.2	.360	--	--	8.4
JAN 08...	.170	--	.83	1.0	3.2	.260	--	--	4.0
FEB 07...	.200	.200	.50	.70	2.6	.240	.220	.220	3.2
MAR 06...	.220	--	4.6	4.8	6.6	1.00	--	--	22
APR 04...	.120	--	1.6	1.7	3.7	.460	--	--	5.6
MAY 15...	.310	.360	3.3	3.6	6.1	5.30	.200	.150	69
JUN 11...	.100	--	2.1	2.2	2.4	.440	--	--	7.5
JUL 08...	.060	--	1.9	2.0	--	.390	--	--	6.8
AUG 07...	.090	.030	2.4	2.5	--	.430	.120	.100	15
SEP 03...	.050	--	1.8	1.8	--	.230	--	--	10

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 14...	1130	<10	5	4	120	<.0	<1	<1	12	8
FEB 07...	1200	<10	4	5	130	<.5	3	<1	4	5
MAY 15...	1230	50	32	3	130	<.5	<2	2	2	<1
AUG 07...	1055	10	10	8	110	<.5	1	<1	19	<1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
NOV 14...	<3	15	5	6	6	3	30	2	<.1	<.1
FEB 07...	<3	11	4	5	1	1	29	81	--	<.1
MAY 15...	<3	160	9	40	120	4	15	5	.4	.3
AUG 07...	<3	24	4	6	13	<1	21	<1	.2	.1

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 14...	<10	1	--	2	--	1	540	<6	30	10
FEB 07...	<10	3	--	3	<1	<1	550	<6	<10	16
MAY 15...	<10	6	2	4	<2	<1	240	<6	610	28
AUG 07...	<10	4	2	2	1	<1	310	12	50	10

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)
NOV 14...	1130	11000	7.0	224	6650	--	--	--
FEB 07...	1200	4870	.0	206	2710	--	--	--
MAY 15...	1230	25300	13.5	6040	413000	42	49	56
AUG 07...	1055	4340	27.0	378	4430	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 14...	--	43	50	79	99	100	--
FEB 07...	--	--	--	--	--	--	77
MAY 15...	65	91	94	98	100	--	--
AUG 07...	--	75	78	88	99	100	--

06806500 WEEPING WATER CREEK AT UNION, NE

LOCATION.--Lat 40°47'37", long 95°54'42", in SE1/4NE1/4 sec.35, T.10 N., R.13 E., Cass County, Hydrologic unit 10240001, on left bank 100 ft upstream from bridge on U.S. Highways 73 and 75, 1.5 mi southeast of Union and 2.8 mi downstream from South Branch Weeping Water Creek.

DRAINAGE AREA.--241 mi².

PERIOD OF RECORD.--February 1950 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 926.72 ft above National Geodetic Vertical Datum of 1929. Prior to May 14, 1951, nonrecording gage at site 2 mi upstream at different datum. May 15, 1951, to Aug. 22, 1968, water-stage recorder for stages above 7.9 ft and nonrecording gage, Aug. 23, 1968 to Aug. 22, 1980, water-stage recorder on downstream side of bridge pier, Aug. 23, 1980 to Nov. 4, 1980 near left downstream bridge wingwall all at datum 3.00 ft higher. Nov. 5, 1980 to Aug. 23, 1984 near left downstream bridge wingwall at present datum.

REMARKS.--Estimated daily discharges: Dec. 4-7, 18-26, Jan. 1 to Feb. 19, June 6-11, 13 and Sept. 29. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--35 years, 93.8 ft³/s, 67,960 acre-ft/yr; median of yearly mean discharges, 70 ft³/s, 50,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft³/s May 9, 1950, gage height, 29.80 ft, from floodmark, present site and datum, from rating curve extended above 12,000 ft³/s on basis of measurement of peak flow through bridges and over highway embankment; minimum daily, 0.1 ft³/s Sept. 10-12, 14, 15, 17, 18, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 19	1230	*5980	*20.54	July 21	1215	5770	20.26

Minimum daily discharge, 6.7 ft³/s July 10.

 DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	71	50	48	44	58	56	51	38	14	60	26
2	55	69	49	48	46	61	56	50	36	12	51	26
3	56	69	47	52	48	66	59	45	34	11	59	24
4	57	66	44	54	56	79	60	43	33	11	78	23
5	61	63	42	56	60	61	51	42	35	9.8	65	22
6	65	62	45	58	54	53	48	44	33	9.7	114	22
7	65	61	48	60	57	54	47	44	32	9.3	100	21
8	65	60	49	56	55	54	45	44	31	7.9	61	20
9	66	61	52	53	62	52	44	45	30	7.1	54	18
10	68	63	54	53	62	51	44	43	28	6.7	51	18
11	70	61	52	49	57	54	44	45	26	7.2	50	19
12	72	59	49	49	58	53	44	45	24	7.8	48	20
13	72	59	44	49	61	53	47	55	26	8.6	46	36
14	76	59	44	54	61	52	45	111	27	9.3	51	109
15	94	57	61	53	58	50	43	122	27	10	51	37
16	112	55	309	53	65	49	42	76	26	11	45	26
17	101	55	267	54	71	48	41	63	25	12	108	23
18	96	55	78	56	109	48	41	57	22	12	86	22
19	82	55	56	52	212	48	40	55	22	3170	54	22
20	75	54	60	43	233	47	43	92	21	614	43	22
21	71	55	62	45	399	46	43	84	20	3060	40	23
22	69	55	64	52	643	46	44	58	19	618	39	220
23	67	55	64	58	136	49	44	51	17	70	37	314
24	66	56	54	59	102	48	47	48	17	44	41	67
25	68	56	52	57	70	47	48	46	24	47	37	53
26	70	56	56	49	65	45	54	45	23	44	34	43
27	70	54	57	51	57	47	66	45	23	41	32	42
28	66	51	106	51	54	48	63	49	18	40	31	38
29	64	51	90	50	---	46	49	48	17	40	29	37
30	64	50	59	51	---	45	46	50	16	47	28	58
31	63	---	48	45	---	53	---	41	---	197	28	---
TOTAL	2199	1753	2212	1618	3055	1611	1444	1737	770	8208.4	1651	1451
MEAN	70.9	58.4	71.4	52.2	109	52.0	48.1	56.0	25.7	265	53.3	48.4
MAX	112	71	309	60	643	79	66	122	38	3170	114	314
MIN	53	50	42	43	44	45	40	41	16	6.7	28	18
AC-FT	4360	3480	4390	3210	6060	3200	2860	3450	1530	16280	3270	2880
CAL YR 1984	TOTAL	102280		MEAN	279	MAX	25000	MIN	38	AC-FT	202900	
WTR YR 1985	TOTAL	27709.4		MEAN	75.9	MAX	3170	MIN	6.7	AC-FT	54960	

06807000 MISSOURI RIVER AT NEBRASKA CITY, NE

LOCATION.--Lat 40°40'55", long 95°50'48". in NW1/4NE1/4 sec.9. T.8 N., R.14 E., Otoe County, Hydrologic Unit 10240001. on right bank 0.7 mi upstream from Waubonsie Highway Bridge at Nebraska City, and at mile 562.6.

DRAINAGE AREA.--410,000 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--August 1929 to current year. Gage-height records collected in this vicinity from August 1878 to December 1899 are contained in reports of Missouri River Commission.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE--Water-stage recorder. Datum of gage is 905.36 ft above NGVD, supplementary adjustment of 1954. See WSP 1918 or 1919 for history of changes prior to Apr. 1, 1963.

REMARKS.--Estimated daily discharges: Dec. 13-16, 19-22 and 26, 31. Records good except for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. U.S. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers rain-gage and gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--56 years, 36.690 ft³/s, 26,580,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 414,000 ft³/s Apr. 19, 1952; maximum gage height, 27.66 ft Apr. 18, 1952; minimum discharge, 1,600 ft³/s Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft Dec. 24, 1960, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 83,900 ft³/s April 25, gage height, 17.55 ft; minimum daily, 21,800 ft³/s Jan 23; minimum gage height, 5.41 ft Jan. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52900	64700	61700	35900	31000	45200	46700	54900	48600	47900	36700	41100
2	52100	63500	61700	32500	30000	49200	46300	57500	48300	46600	37300	37700
3	52700	62000	60200	28500	29000	48400	46100	61700	48800	45600	38300	37900
4	52400	61700	56300	29500	29200	46700	45900	56400	49800	44500	38600	38200
5	52000	60700	52200	30300	29600	57700	46200	52000	49000	43100	39700	38100
6	53400	59500	48200	31900	29000	48700	47400	51200	48100	41500	40100	38800
7	54000	59400	46100	33200	28700	42400	47000	49200	46100	40600	39100	38300
8	55100	59300	44400	33900	28400	41700	47400	47600	46000	39200	39000	39000
9	56300	59800	43000	34800	28300	39700	47400	46800	46700	39000	38600	39800
10	57200	62300	41400	33400	28600	41300	47500	45700	46500	38300	38800	40500
11	56700	63600	41500	31400	28800	42900	45900	45300	45500	38100	38700	40100
12	55900	63700	43000	29500	29100	43300	45000	45200	45200	37600	38000	39500
13	55600	63200	43400	28300	28400	43900	45600	45900	44100	37300	38000	39500
14	55600	62400	41200	27400	29000	45400	43600	49200	43100	37100	39200	42000
15	57300	62500	41400	27700	29500	45400	43400	61100	42200	36500	39800	47700
16	60700	63300	50800	28800	29600	46100	42200	75700	43600	36100	38600	47300
17	62900	63000	60600	27600	29900	46800	41200	65100	46000	36300	39300	44200
18	63400	61400	51000	28300	30700	46300	40900	60400	44600	36400	39600	44100
19	64800	60700	47100	30400	31600	46400	40900	56600	43900	44700	39800	43500
20	66200	60600	43600	30500	32100	47000	41500	58000	43200	53700	38600	42800
21	65400	61100	42600	27500	35300	46800	41300	58500	42900	44400	38300	43100
22	65100	60700	42100	24100	43500	46800	44300	55800	42400	42800	38200	43100
23	64900	61400	39400	21800	39600	46400	51800	52700	42300	39900	38800	43200
24	63900	60700	37200	25300	37700	46100	71000	51300	45300	39100	38900	42600
25	63400	60500	35100	30000	38200	45200	79100	49700	45400	38900	39000	41800
26	63500	61100	33900	32000	39200	45300	67000	49200	42600	38500	38800	41400
27	63000	61500	34400	31400	40400	46700	66500	49500	43000	37400	38800	41400
28	64500	62500	42600	29500	41400	46700	77200	49700	48600	36400	38000	41100
29	64400	62400	48100	29600	---	47000	67300	48800	53200	35900	37400	40700
30	64000	62000	44600	30900	---	46300	57300	48000	51700	36900	37300	41800
31	63900	---	39700	30800	---	46700	---	48100	---	37200	41600	---
TOTAL	1843200	1851200	1418500	925700	905800	1424500	1520900	1647300	1376700	1247500	1200900	1240300
MEAN	59460	61710	45760	29860	32350	45950	50700	53140	45890	40240	38740	41340
MAX	66200	64700	61700	35900	43500	57700	79100	75700	53200	53700	41600	47700
MIN	52000	59300	33900	21800	28300	39700	40900	45300	42200	35900	36700	37700
AC-FT	3656000	3672000	2814000	1836000	1797000	2825000	3017000	3267000	2731000	2474000	2382000	2460000
CAL YR 1984	TOTAL 23716500			MEAN 64800	MAX 180000	MIN 29300	AC-FT47042000					
WTR YR 1985	TOTAL 16602500			MEAN 45490	MAX 79100	MIN 21800	AC-FT32931000					

06811500 LITTLE NEMAHA RIVER AT AUBURN, NE

LOCATION.--Lat 40°23'33", long 95°48'46", in NE1/4NW1/4 sec.23, T.5 N., R.14 E., Nemaha County, Hydrologic Unit 10240006, on left bank at downstream side of bridge on U.S. Highway 136, 1 mi downstream from Longs Creek and Willow Creek and 1 mi east of Auburn.

DRAINAGE AREA.--793 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1949 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.87 ft above National Geodetic Vertical Datum of 1929. See WSP 2119 for history of changes prior to July 24, 1967.

REMARKS.--Estimated daily discharges: Dec. 5-10, 13-15, and Dec. 19 to Feb. 24. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--36 years, 288 ft³/s, 208,700 acre-ft/yr; median of yearly mean discharges, 200 ft³/s, 145,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 164,000 ft³/s May 9, 1950, gage height, 27.65 ft, from floodmark, from rating curve extended above 49,000 ft³/s on basis of computations of peak flow through bridge and culvert openings and over highway and railway embankments at gage heights 24.96 ft and 27.65 ft; minimum daily, 0.87 ft³/s July 6-8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 26	2400	*4260	*10.97	No peak greater than base discharge.			

Minimum daily discharge, 16 ft³/s July 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	146	92	140	86	259	132	230	76	76	241	44
2	107	141	91	116	90	246	129	165	70	66	92	45
3	105	144	90	122	88	254	135	115	69	57	70	44
4	106	132	78	130	86	310	203	99	72	53	74	47
5	111	125	74	130	84	309	152	92	70	49	66	46
6	119	121	70	135	84	258	139	88	72	45	361	44
7	120	119	74	140	88	244	130	82	70	39	145	41
8	119	117	82	135	96	228	126	77	64	35	75	39
9	121	114	92	130	104	211	119	74	64	31	60	37
10	120	113	102	112	120	204	114	76	68	27	61	37
11	124	111	116	90	114	198	112	74	70	25	50	39
12	125	115	96	80	130	193	108	70	68	23	47	42
13	122	112	60	80	150	183	107	92	61	22	43	973
14	132	112	45	90	160	167	110	161	62	22	280	1200
15	161	109	100	86	150	150	112	524	59	21	154	227
16	251	106	1220	92	170	133	104	232	59	18	93	140
17	227	101	1320	94	200	121	97	146	55	16	199	113
18	224	101	341	96	240	120	92	113	48	16	247	97
19	180	100	290	90	320	118	92	98	43	626	124	85
20	158	101	250	80	440	114	93	115	39	1050	84	83
21	146	100	260	88	960	109	92	175	39	283	69	89
22	136	99	230	92	960	105	89	118	35	434	63	93
23	132	102	200	94	500	105	88	94	40	160	59	1750
24	130	101	180	92	420	105	86	84	445	101	72	475
25	132	100	150	86	460	103	88	82	278	300	63	216
26	139	101	170	80	325	102	95	85	353	116	56	160
27	140	100	190	84	287	101	121	83	1440	67	53	126
28	133	97	190	86	269	101	129	83	276	53	51	107
29	130	94	180	90	---	100	107	85	134	47	49	183
30	126	95	170	90	---	98	117	86	93	63	47	543
31	120	---	160	88	---	118	---	81	---	110	46	---
TOTAL	4303	3329	6763	3138	7181	5167	3418	3779	4392	4051	3194	7165
MEAN	139	111	218	101	256	167	114	122	146	131	103	239
MAX	251	146	1320	140	960	310	203	524	1440	1050	361	1750
MIN	105	94	45	80	84	98	86	70	35	16	43	37
AC-FT	8540	6600	13410	6220	14240	10250	6780	7500	8710	8040	6340	14210
CAL YR 1984	TOTAL	229382		MEAN	627	MAX	21500	MIN	45	AC-FT	455000	
WTR YR 1985	TOTAL	55880		MEAN	153	MAX	1750	MIN	16	AC-FT	110800	

LITTLE NEMAH RIVER BASIN

06811500 LITTLE NEMAH RIVER AT AUBURN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
16...	1315	303	572	7.6	11.0	12.4	--	9700	K15000	230	67	16
NOV												
20...	1200	100	610	8.0	3.0	14.5	18	--	--	260	76	18
DEC												
26...	0945	320	--	7.9	.0	11.7	--	K860	2700	260	73	18
JAN												
23...	1400	95	750	8.0	1.0	12.9	--	4200	12000	310	91	21
FEB												
20...	1045	437	395	7.8	1.0	17.3	42	1400	K22000	160	45	11
MAR												
19...	1250	116	603	7.6	14.5	10.0	--	K710	840	250	72	18
APR												
16...	1055	109	540	7.7	18.0	10.2	--	K4700	1000	230	62	18
MAY												
15...	1230	626	400	7.6	15.0	7.5	210	K110000	K120000	210	70	9.5
JUN												
12...	1330	70	618	8.5	20.0	10.7	--	K7200	K1100	240	70	17
JUL												
09...	1015	31	615	8.0	27.0	9.5	--	K600	K430	230	65	17
AUG												
06...	1630	222	323	--	29.0	5.9	120	K89000	K180000	110	31	7.6
SEP												
03...	1320	45	--	8.4	29.5	9.0	--	K64	1500	240	68	17

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
16...	30	.9	50	11	351	1.8	.060	1.8	1.9	3.7	.470	8.8
NOV												
20...	35	1	60	13	8	2.7	.140	1.2	1.3	4.0	.230	2.1
DEC												
26...	32	.9	60	12	198	3.7	.330	1.2	1.5	5.2	.420	5.5
JAN												
23...	42	1	70	16	28	3.8	.290	1.3	1.6	5.4	.350	3.2
FEB												
20...	21	.8	36	8.6	228	3.0	.490	2.3	2.8	5.8	.510	11
MAR												
19...	38	1	62	13	86	2.0	.090	.91	1.0	3.0	.320	3.5
APR												
16...	37	1	54	12	55	.80	.040	.76	.80	1.6	.220	4.2
MAY												
15...	23	.7	33	8.0	1470	3.6	.290	2.0	2.3	5.9	3.10	44
JUN												
12...	37	1	59	14	28	1.3	.270	.93	1.2	2.5	.460	4.9
JUL												
09...	37	1	68	16	37	<.10	.060	.64	.70	--	.340	3.7
AUG												
06...	14	.6	24	5.5	2760	1.4	.100	2.6	2.7	4.1	.650	57
SEP												
03...	38	1	58	18	12	.20	.130	1.1	1.2	1.4	.280	4.1

06813500 MISSOURI RIVER AT RULO, NE

LOCATION.--Lat 40°03'13", long 95°25'19". in NW1/4NW1/4 sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on right bank at downstream side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Big Nemaha River, and at mile 498.0.

DRAINAGE AREA.--414.900 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--October 1949 to current year in reports of Geological Survey. Gage-height record collected at site 80 ft upstream January 1886 to December 1899 published in reports of Missouri River Commission September 1929 to September 1950 in files of Kansas City office of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft above NGVD. Oct. 1949 to Sept. 12, 1950. nonrecording gage at site 80 ft upstream and Sept. 13, 1950 to Apr. 19, 1983, recording gage on downstream end of middle pier, all at same datum.

REMARKS.--Estimated daily discharges: Dec. 26 to Jan. 31. Records good except those for estimated daily discharges, which are poor. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers gage-height satellite data collection platform at station.

AVERAGE DISCHARGE.--36 years, 41,100 ft³/s, 29,780,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s Apr. 22, 1952, gage height, 25.60 ft; minimum daily, 4,420 ft³/s Jan. 13, 1957; minimum gage height, 0.65 ft Jan. 7, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 88,800 ft³/s April 25, gage height, 16.76 ft; minimum daily, 24,500 ft³/s Jan. 23; minimum gage height not determined, occurred during period of no gage-height record Jan. 23, 24.

DISCHARGE. IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53900	66200	64000	36000	32000	44800	47000	59800	50800	48900	38200	44600
2	53300	65600	63700	32000	31600	50500	46500	58800	50200	46400	38000	39800
3	53800	64600	63200	29000	30100	51700	46300	62000	50300	45100	39100	37700
4	53600	63900	59800	31500	29700	49100	46600	61000	50800	44400	42300	38800
5	52800	62600	55200	31000	30400	55200	47200	55500	51000	43100	41200	38800
6	53700	61600	49700	32500	30100	59000	48400	52600	49700	41600	43700	39100
7	55300	61400	46500	33500	29600	45400	49000	52000	48000	40300	43100	39400
8	55600	61700	44200	34000	29300	43100	48900	49400	46300	39400	40900	39100
9	57500	61300	42600	34500	29200	42000	48900	47900	47400	38400	40200	40400
10	58000	62600	41300	35000	29100	40700	48700	48100	47900	38100	42200	41200
11	58900	64800	40600	33000	29400	42800	47400	47500	47000	37700	42300	40700
12	57700	65400	41300	31000	29500	43900	45700	48800	46300	37600	40400	39400
13	57700	64900	42300	28500	29500	44700	46900	49900	46500	37700	39400	40500
14	56600	63600	41200	28000	29100	45900	46100	53600	45000	37900	40800	47900
15	57000	62700	38400	28600	29900	47100	45500	61300	44200	38100	44300	46700
16	60700	63900	41400	29700	30200	47000	44600	77700	43900	37500	40900	52200
17	64300	64500	61400	28500	30500	47400	43700	76200	48900	37300	39400	45100
18	65200	64100	54400	29200	30900	48300	43000	65300	46500	37200	41500	43800
19	64900	62700	45600	30800	32100	47700	42900	61200	45100	39300	42300	44000
20	65400	61800	43000	30500	33400	48400	44000	60700	43700	61300	42100	43000
21	67000	61700	41700	28500	36500	48000	44200	63000	42800	51900	39700	42500
22	65700	61700	41800	26000	52700	47900	44900	61400	42400	46400	39100	43800
23	66000	62000	41000	24500	47300	48000	50600	56500	42100	43000	39100	45200
24	65400	61200	38400	29000	44000	47600	66800	54600	45100	41000	40000	45300
25	64400	61100	36400	31500	40900	46800	85600	52000	50400	42500	40100	42900
26	65300	61900	34700	34900	41300	46400	75700	51500	45700	41600	39000	42000
27	64600	61700	33000	35200	42000	46800	67100	52700	45600	39700	38500	41900
28	64700	63100	43000	33000	42700	47700	76100	52300	46900	38300	38700	41200
29	65200	64100	52000	31500	---	47200	77900	50400	52300	37000	38000	42300
30	65000	64400	46000	32500	---	47000	65300	50400	53300	37500	37600	48100
31	65000	---	41000	33000	---	46700	---	50500	---	38600	39400	---
TOTAL	1874200	1892800	1428800	966400	953000	1464800	1581500	1744600	1416100	1284800	1251500	1277400
MEAN	60460	63090	46090	31170	34040	47250	52720	56280	47200	41450	40370	42580
MAX	67000	66200	64000	36000	52700	59000	85600	77700	53300	61300	44300	52200
MIN	52800	61100	33000	24500	29100	40700	42900	47500	42100	37000	37600	37700
AC-FT	3717000	3754000	2834000	1917000	1890000	2905000	3137000	3460000	2809000	2548000	2482000	2534000
CAL YR 1984	TOTAL	25226900	MEAN	68930	MAX	216000	MIN	29800	AC-FT50038000			
WTR YR 1985	TOTAL	17135900	MEAN	46950	MAX	85600	MIN	24500	AC-FT33989000			

MISSOURI RIVER BASIN

BIG NEMAHA RIVER BASIN

06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat39°56'52", long 96°06'30", in SW1/4 NW1/4 SW1/4 sec.20, T.1 S., R.12 E., Nemaha County, Hydrologic Unit 10240007, on left bank at downstream side of highway bridge, 2.0 mi downstream from Clear Creek, 5.0 mi upstream from Big Nemaha River, and 8.0 mi northwest of Seneca.

DRAINAGE AREA.--276 mi².

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,037.53 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 6-8, 18, 19, 22, 23, 25, Dec. 31 to Feb. 24, and July 3 to Aug. 14. Estimated mean daily discharges: Dec. 5-12, Dec. 17 to Feb. 24, and July 3 to Aug. 15. Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--37 years, 127 ft³/s, 92,010 acre-ft per yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s Oct. 11, 1973, gage height, 24.77 ft; no flow at times in 1956-57, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 4	unknown	3,240	a18.0	Sep. 13	1600	* 3,500	*18.79
a From floodmark							

Minimum daily discharge, 3.0 ft³/s July 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	12	14	12	12	71	24	49	38	11	1000	33
2	5.1	16	9.5	10	12	66	20	36	25	8.8	100	32
3	4.8	13	9.9	9.0	12	54	18	19	21	8.5	770	30
4	5.1	11	10	9.0	12	97	30	16	20	8.0	2500	32
5	6.0	10	11	10	12	49	18	14	19	7.5	500	37
6	8.4	9.6	10	13	12	38	16	15	16	7.0	250	29
7	9.6	8.8	10	15	13	32	14	13	15	6.5	800	25
8	6.4	8.4	13	14	14	31	13	11	13	6.0	400	23
9	6.7	8.1	19	13	15	26	12	9.9	14	5.5	190	20
10	6.7	9.6	17	12	14	24	12	8.9	16	5.0	1600	20
11	6.7	8.8	16	11	13	24	12	8.8	14	4.5	800	20
12	6.4	9.9	14	10	14	23	12	8.4	9.9	4.0	200	21
13	5.7	10	12	10	15	22	15	215	8.3	3.5	100	2270
14	7.4	9.6	15	10	16	21	15	266	7.3	3.2	150	1130
15	14	9.6	21	10	17	19	13	59	7.0	3.1	350	214
16	21	9.9	101	10	18	18	12	36	12	3.0	107	130
17	27	9.2	81	11	20	16	11	26	301	3.0	329	99
18	17	9.6	70	12	22	16	9.8	21	59	3.0	301	76
19	13	11	60	13	25	16	9.5	17	30	3.2	1090	60
20	10	9.9	55	11	40	16	13	42	22	3.5	391	52
21	9.6	9.6	43	10	150	15	11	19	16	100	145	191
22	9.6	11	35	10	200	15	9.9	16	14	500	100	123
23	8.8	10	30	11	150	15	9.9	13	15	100	77	104
24	8.1	11	22	12	250	16	9.9	12	196	50	123	140
25	13	11	20	13	208	15	9.2	11	35	100	169	80
26	12	11	22	14	131	14	11	463	23	60	70	61
27	9.9	10	25	15	69	13	45	244	52	50	54	55
28	9.2	9.9	26	15	65	13	26	34	37	45	47	50
29	9.2	10	26	14	---	13	17	22	23	40	43	401
30	8.4	10	18	13	---	13	20	569	15	50	40	942
31	8.8	---	15	12	---	21	---	84	---	100	36	---
TOTAL	299.0	307.5	850.4	364.0	1551	842	468.2	2378.0	1093.5	1302.8	12832	6500
MEAN	9.65	10.3	27.4	11.7	55.4	27.2	15.6	76.7	36.5	42.0	414	217
MAX	27	16	101	15	250	97	45	569	301	500	2500	2270
MIN	4.8	8.1	9.5	9.0	12	13	9.2	8.4	7.0	3.0	36	20
AC-FT	593	610	1690	722	3080	1670	929	4720	2170	2580	25450	12890
CAL YR 1984	TOTAL	84551.3	MEAN	231	MAX	6790	MIN	1.0	AC-FT	167700		
WTR YR 1985	TOTAL	28788.4	MEAN	78.9	MAX	2500	MIN	3.0	AC-FT	57100		

06814500 NORTH FORK BIG NEMAHA RIVER AT HUMBOLDT, NE

LOCATION.--Lat 40°09'25", long 95°56'40", in NW1/4NE1/4 sec.10, T.2 N., R.13 E., Richardson County, Hydrologic Unit 10240008, on right pile bent of bridge on State Highway 105 at south edge of Humboldt, 800 ft downstream from Long Branch Creek.

DRAINAGE AREA.--548 mi².

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1967 published as North Fork Nemaha River at Humboldt.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder for stages above 4.95 ft Oct. 1 to Sept. 5, complete stage record Sept. 6-30; nonrecording gage read twice daily. Datum of gage is 944.44 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1968, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 3-7, 19-27, and Dec. 30 to Feb. 25. Records fair except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--33 years, 198 ft³/s, 143,500 acre-ft/yr; median of yearly mean discharges, 169 ft³/s, 122,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft³/s Aug. 13, 1982, gage height, 31.25 ft, from floodmark; maximum gage height, 31.70 ft July 10, 1958; minimum daily, 0.07 ft³/s July 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 13	1130	*5750	*9.96	No other peak greater than base discharge.			
Minimum daily discharge, 14 ft ³ /s July 11, 12, 17.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	104	57	36	54	146	87	86	42	35	85	50
2	42	77	54	44	52	134	87	75	38	32	58	49
3	34	57	50	48	50	131	85	64	37	28	266	42
4	44	75	50	54	52	211	110	48	39	27	139	48
5	49	49	48	56	48	131	89	52	38	24	73	55
6	57	57	42	60	50	146	84	55	38	21	416	44
7	47	54	50	64	54	107	73	53	40	21	377	38
8	42	54	66	62	58	96	73	51	41	21	143	36
9	49	49	86	60	64	89	63	45	39	21	102	28
10	37	57	84	60	64	89	60	43	39	18	354	30
11	44	49	77	56	60	86	60	42	45	14	88	34
12	42	49	77	50	60	82	54	42	38	14	62	39
13	47	54	75	58	68	79	77	294	32	19	51	1740
14	44	57	82	62	72	75	60	212	29	18	1260	460
15	69	54	91	56	80	69	60	250	46	52	494	167
16	131	47	586	60	90	66	52	140	86	24	126	103
17	112	54	974	62	100	60	47	86	525	14	768	82
18	91	57	355	62	110	63	49	68	62	15	269	72
19	79	49	53	56	140	65	38	55	43	44	859	60
20	63	52	50	46	245	57	69	152	38	47	189	63
21	57	47	54	50	660	60	52	98	33	52	100	122
22	60	52	58	52	580	57	38	91	37	43	82	95
23	54	57	64	54	400	60	39	82	80	34	73	309
24	57	57	72	56	420	60	37	63	275	23	234	301
25	57	57	66	54	247	62	52	47	64	53	129	129
26	63	66	72	56	179	56	52	44	56	38	84	90
27	75	60	84	58	149	62	110	47	510	25	60	75
28	57	60	123	58	131	67	72	47	136	24	53	64
29	57	57	137	58	---	60	62	47	60	24	52	621
30	52	60	80	56	---	61	84	56	42	89	52	672
31	52	---	45	54	---	102	---	51	---	103	53	---
TOTAL	1808	1728	3862	1718	4337	2689	1975	2586	2628	1017	7151	5718
MEAN	58.3	57.6	125	55.4	155	86.7	65.8	83.4	87.6	32.8	231	191
MAX	131	104	974	64	660	211	110	294	525	103	1260	1740
MIN	34	47	42	36	48	56	37	42	29	14	51	28
AC-FT	3590	3430	7660	3410	8600	5330	3920	5130	5210	2020	14180	11340
CAL YR 1984	TOTAL	134269		MEAN	367	MAX	6600	MIN	24	AC-FT	266300	
WTR YR 1985	TOTAL	37217		MEAN	102	MAX	1740	MIN	14	AC-FT	73820	

BIG NEMAHA RIVER BASIN

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE

LOCATION.--Lat 40°02'08", long 95°35'45", in NE1/4SE1/4 sec.22, T.1 N., R.16 E., Richardson County, Hydrologic Unit 10240008, on right bank near upstream side of bridge on U.S. Highway 73, 1 mi south of Falls City and 13 mi upstream from mouth.

DRAINAGE AREA.--1,340 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1944 to current year. Prior to October 1967, published as Nemaha River at Falls City.

REVISED RECORDS.--WSP 1086: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 861.24 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 16, 1952, nonrecording gage and Oct. 17, 1952 to Aug. 24, 1982, water-stage recorder for stages above 6.1 ft and nonrecording gage read twice daily at site 150 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 3-16 and Dec. 18 to Feb. 23. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--41 years, 597 ft³/s, 432,500 acre-ft/yr; median of yearly mean discharges, 530 ft³/s, 384,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,600 ft³/s Oct. 11, 1973, gage height, 31.40 ft; minimum daily discharge, 3.0 ft³/s July 9, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 14	0600	*12500	*14.17	No peaks greater than base discharge.			
Minimum daily discharge, 25 ft ³ /s July 18.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	161	121	122	96	291	155	252	354	90	153	149
2	114	157	123	120	106	302	155	234	217	76	183	142
3	114	145	90	124	110	276	140	202	180	67	388	134
4	115	127	94	130	110	310	141	154	165	61	4880	128
5	124	117	92	135	110	305	142	136	158	55	1090	130
6	137	112	84	140	112	239	126	135	158	51	976	134
7	130	108	100	135	125	204	116	129	146	46	2640	120
8	130	107	110	130	130	191	114	118	136	42	1260	109
9	124	112	110	125	135	178	110	108	133	41	439	102
10	122	109	108	120	140	165	112	103	123	39	3700	98
11	125	106	104	112	130	159	114	104	136	35	1350	99
12	124	107	102	108	130	154	122	116	126	30	477	107
13	120	111	100	123	140	152	134	131	115	30	306	2900
14	127	113	108	130	150	146	123	1300	104	32	1570	8290
15	153	112	110	122	140	138	119	678	106	32	1930	1200
16	193	110	300	125	160	127	114	421	120	43	690	631
17	239	108	1210	125	170	123	105	247	1230	30	579	452
18	220	108	430	130	200	126	99	182	724	25	979	371
19	178	109	230	110	310	115	94	150	254	35	4090	311
20	152	110	170	94	600	120	118	158	157	51	3580	275
21	140	109	160	100	1060	118	122	269	120	50	786	379
22	128	108	150	108	1100	116	111	180	103	56	470	895
23	121	108	150	110	900	119	104	129	95	73	359	479
24	117	111	140	115	1060	119	101	111	591	46	302	799
25	130	115	140	120	838	117	100	103	483	37	683	496
26	133	119	150	110	470	114	109	146	177	46	407	338
27	144	117	150	120	350	110	247	1920	342	48	261	271
28	130	116	145	120	276	114	559	587	372	43	211	236
29	124	114	140	120	---	109	258	283	185	36	190	1090
30	118	116	130	120	---	113	222	580	117	54	174	6740
31	116	---	125	100	---	135	---	1320	---	91	162	---
TOTAL	4257	3482	5476	3703	9358	5105	4386	10686	7427	1491	35265	27605
MEAN	137	116	177	119	334	165	146	345	248	48.1	1138	920
MAX	239	161	1210	140	1100	310	559	1920	1230	91	4880	8290
MIN	114	106	84	94	96	109	94	103	95	25	153	98
AC-FT	8440	6910	10860	7340	18560	10130	8700	21200	14730	2960	69950	54750
CAL YR 1984	TOTAL	451839		MEAN	1235	MAX	28900	MIN	84	AC-FT	896200	
WTR YR 1985	TOTAL	118241		MEAN	324	MAX	8290	MIN	25	AC-FT	234500	

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 16...	1850	227	642	7.8	10.0	10.2	--	4000	4300	270	74	20
NOV 20...	1545	110	720	8.3	4.5	15.6	11	<10	K10	300	83	23
DEC 26...	1125	439	790	8.1	.0	12.6	--	260	3300	340	98	23
JAN 23...	1700	110	--	7.8	.0	13.4	--	K120	K150	440	130	28
FEB 21...	0900	1060	525	7.8	1.5	15.9	43	1900	K28000	200	55	15
MAR 19...	1515	128	682	7.9	16.5	11.1	--	K21	K100	300	83	22
APR 16...	1342	114	628	7.9	24.0	10.4	--	1200	K280	250	67	21
MAY 15...	0905	718	380	7.5	19.0	7.8	200	19000	22000	130	40	8.4
JUN 12...	1845	129	625	8.6	22.0	10.5	--	K190	100	260	69	21
JUL 09...	1300	41	723	8.5	32.5	8.3	--	K500	K320	270	74	20
AUG 06...	1515	600	310	--	26.5	6.3	140	58000	K160000	93	28	5.7
SEP 03...	1540	134	560	8.1	29.5	.0	--	4000	K130	210	53	20

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE D (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 16...	33	.9	79	25	109	1.1	.070	1.0	1.1	2.2	.230	9.4
NOV 20...	42	1	92	32	1	1.1	.010	.19	.20	1.3	.060	3.1
DEC 26...	39	1	97	32	211	3.5	.270	1.0	1.3	4.8	.340	6.2
JAN 23...	47	1	110	33	3	3.5	.130	1.2	1.3	4.8	.200	1.9
FEB 21...	26	.8	59	17	352	2.7	.360	2.2	2.6	5.3	.500	12
MAR 19...	42	1	94	29	26	.80	.050	.55	.60	1.4	.190	3.7
APR 16...	44	1	85	32	24	<.10	.040	.76	.80	--	.150	3.4
MAY 15...	17	.7	33	11	600	3.7	.440	1.9	2.3	6.0	.570	70
JUN 12...	37	1	89	26	61	<.10	.070	1.2	1.3	--	.210	8.4
JUL 09...	42	1	110	36	25	<.10	.530	.07	.60	--	.210	6.7
AUG 06...	16	.7	27	19	2040	1.3	.250	3.7	3.9	5.2	.660	57
SEP 03...	33	1	79	22	40	<.10	.030	.87	.90	--	.100	7.6

BIG NEMAHA RIVER BASIN

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 20...	1545	--	--	--	--	--	<.1	--	--	--
FEB 21...	0900	4	<1	11	13	16	<.1	--	<1	40
MAY 15...	0905	15	<1	37	80	70	.4	1	<1	330
AUG 06...	1515	13	1	25	76	66	.4	<1	1	290

06821500 ARIKAREE RIVER AT HAIGLER, NE

LOCATION.--Lat 40°01'45", long 101°58'10", in NE1/4NE1/4 sec.29, T.1 N., R.41 W., Dundy County, Hydrologic Unit 10250001, on right bank at downstream side of bridge on U.S. Highway 34, 1.3 mi upstream from Burlington Northern Inc. bridge, 1.8 mi upstream from confluence with North Fork Republican River, 2 mi northwest of Haigler, and 3.2 mi downstream from Kansas-Nebraska State line.

DRAINAGE AREA.--1,640 mi², approximately, of which about 980 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1919: 1951, 1954, 1956, 1960. WSP 2119: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,250.98 ft above National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Sept. 29, 1964. Sept. 29, 1964 to Apr. 25, 1982 on left bank 57 ft downstream from bridge at present datum.

REMARKS.--Estimated daily discharge: Dec. 4-9, Dec. 14 to Jan. 24, Jan. 31 to Feb. 17, Feb. 22, 24, Mar. 4, Mar. 31 to Apr. 2. Records fair except for periods of estimated record, which are poor. Natural flow affected by ground-water withdrawals and diversions for irrigation of about 1,500 ft³/s in Colorado and by return flow from Pioneer Canal.

AVERAGE DISCHARGE.--54 years, 22.5 ft³/s, 16,300 acre-ft/yr; median of yearly mean discharges, 18 ft³/s, 13,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s May 31, 1935, gage height, 11.2 ft, site and datum then in use, from floodmarks, from rating curve extended above 3,800 ft³/s on basis of slope-area measurement of peak flow; no flow for some periods in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 31	1430	*1350	*9.47	No other peak greater than base discharge.			

Minimum daily discharge, 0.15 ft³/s, Dec. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	.96	.44	.60	3.2	18	10	16	15	1.3	74	3.0
2	3.5	.96	.49	.70	3.2	17	13	19	11	1.1	21	3.7
3	5.6	.98	.52	.80	3.3	18	13	29	9.6	.86	9.1	4.1
4	8.0	.85	.40	1.0	3.5	17	13	19	17	.94	7.5	5.0
5	7.9	.80	.50	1.2	3.9	15	14	22	14	1.9	7.4	6.5
6	6.3	.82	.60	1.1	4.8	23	12	20	13	2.1	13	7.6
7	6.2	.81	.70	1.0	6.4	13	11	15	6.1	2.3	12	9.6
8	7.3	.73	.80	.88	8.6	10	9.9	19	6.4	2.0	9.2	9.6
9	6.8	.71	.90	.80	10	12	11	19	5.9	2.6	6.6	9.5
10	6.8	.66	.99	.70	9.4	12	10	17	4.6	2.8	5.8	7.7
11	6.4	.66	.44	.70	9.0	11	7.7	13	1.6	2.0	4.4	9.4
12	7.4	.66	.15	.60	12	11	6.1	16	1.4	2.1	6.1	9.5
13	6.3	.60	.54	.80	17	13	5.3	56	1.4	2.3	6.1	6.9
14	5.8	.60	.40	1.5	23	12	5.2	125	1.4	2.0	6.0	8.0
15	6.4	.56	.50	1.8	30	12	5.4	57	1.8	1.6	8.6	6.0
16	7.7	.56	.60	2.2	35	11	5.0	51	1.8	1.6	9.3	6.2
17	4.3	.54	.80	2.6	28	11	4.7	44	1.0	1.9	8.4	5.8
18	2.2	.58	.70	2.9	21	11	4.3	40	1.1	1.8	7.2	6.1
19	1.7	.62	.60	2.5	22	10	5.0	57	.79	1.6	6.7	8.1
20	1.3	.59	.70	2.4	33	9.7	4.7	49	.94	5.5	8.1	8.7
21	1.2	.59	.70	2.3	41	9.5	5.3	47	1.3	7.4	6.3	9.4
22	1.2	.53	.80	2.7	36	9.6	5.3	44	.60	6.9	3.8	8.5
23	1.2	.53	.80	4.0	29	9.3	5.5	38	.94	6.4	3.8	7.5
24	1.1	.44	.60	6.0	26	9.4	5.3	36	1.1	7.8	5.8	8.2
25	1.1	.45	.50	6.6	22	9.0	9.4	27	.86	8.2	3.8	8.3
26	1.1	.49	.60	6.0	19	8.4	17	26	.72	5.6	5.7	8.2
27	1.1	.60	.70	4.8	17	8.0	15	25	.86	4.5	5.8	8.4
28	.88	.56	.70	4.6	18	8.3	12	77	.94	2.8	5.4	8.5
29	.88	.54	.80	4.1	---	7.8	13	40	.72	7.0	4.6	9.5
30	.88	.49	.70	3.9	---	7.2	18	23	1.1	7.5	5.0	8.8
31	.94	---	.70	3.5	---	6.0	---	17	---	368	4.5	---
TOTAL	122.08	19.47	19.37	75.28	494.3	359.2	276.1	1103	124.97	472.40	291.0	226.3
MEAN	3.94	.65	.62	2.43	17.7	11.6	9.20	35.6	4.17	15.2	9.39	7.54
MAX	8.0	.98	.99	6.6	41	23	18	125	17	368	74	9.6
MIN	.88	.44	.15	.60	3.2	6.0	4.3	13	.60	.86	3.8	3.0
AC-FT	242	39	38	149	980	712	548	2190	248	937	577	449
CAL YR 1984	TOTAL	4206.53		MEAN	11.5	MAX	179	MIN	.15	AC-FT	8340	
WTR YR 1985	TOTAL	3583.47		MEAN	9.82	MAX	368	MIN	.15	AC-FT	7110	

KANSAS RIVER BASIN

06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

LOCATION.--Lat 40°04'10", long 102°03'05", in sec.10, T.1 N., R.42 W., Dundy County, Nebraska, Hydrologic Unit 10250002, on right bank 100 ft east of Colorado-Nebraska State line and 9.5 mi upstream from confluence with Arikaree River.

DRAINAGE AREA.--1,360 mi², approximately, of which about 100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1932, published as North Fork of Arikaree River at Colorado-Nebraska State line. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1947(M). WSP 1390: 1934. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Steel piling control since January 1965. Datum of gage is 3,336.09 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1934, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 24, 25, Jan. 9-14, 20-24, Feb. 1-9. Records good except for periods of estimated record, which are fair. Natural flow affected by diversion in Pioneer Canal for irrigation of about 2,700 acres in Colorado and Nebraska.

AVERAGE DISCHARGE.--55 years, 47.2 ft³/s, 34,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s Apr. 28, 1947, gage height, 5.92 ft, from rating curve extended above 800 ft³/s on basis of slope-area measurement of peak flow; no flow Aug. 25, 26, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 7	0930	(a)	*2.22	Feb. 16	1800	*85	1.16

No other peak greater than base discharge.

a Backwater from ice

Minimum daily discharge, 8.6 ft³/s, July 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	56	61	60	43	61	59	59	25	9.9	40	12
2	21	56	60	61	45	61	58	23	25	9.8	42	11
3	21	56	60	58	47	62	56	25	25	10	39	11
4	23	56	60	60	45	61	55	25	27	9.5	35	12
5	29	59	58	61	42	61	57	24	32	9.0	30	44
6	32	60	60	62	45	61	58	26	22	8.7	22	62
7	32	62	57	61	54	61	57	24	25	8.8	22	35
8	30	60	57	62	64	61	56	20	17	8.6	20	31
9	32	59	58	60	56	61	56	20	15	9.6	20	35
10	32	60	58	56	61	61	56	18	15	11	19	36
11	31	60	58	54	61	60	57	18	16	12	18	40
12	34	61	58	50	60	60	56	16	15	11	19	40
13	37	63	58	56	61	62	56	29	13	9.6	20	38
14	39	60	60	66	61	62	54	64	12	11	22	37
15	47	60	58	58	66	61	54	44	12	10	26	37
16	59	61	60	58	81	60	53	29	11	9.0	25	35
17	65	61	59	59	76	61	54	26	11	9.4	24	37
18	59	61	58	62	67	59	52	24	11	9.0	25	35
19	56	61	60	63	65	59	52	26	12	11	26	33
20	56	61	59	50	65	58	52	25	11	15	26	33
21	57	62	58	40	66	59	49	25	12	15	24	33
22	58	62	58	50	64	58	48	24	11	13	22	38
23	59	62	58	54	63	57	48	23	9.1	13	18	39
24	58	61	56	80	63	57	43	23	8.8	11	19	37
25	57	61	52	60	63	58	51	26	11	9.5	16	41
26	58	62	58	61	62	56	60	26	9.9	9.2	13	39
27	57	62	58	61	61	54	56	27	10	12	12	37
28	57	61	61	62	61	55	51	40	11	14	12	37
29	57	62	64	62	---	57	58	35	10	21	12	42
30	57	61	62	64	---	58	67	28	9.5	21	12	48
31	56	---	61	54	---	59	---	26	---	31	12	---
TOTAL	1388	1809	1823	1825	1668	1841	1639	868	454.3	371.6	692	1045
MEAN	44.8	60.3	58.8	58.9	59.6	59.4	54.6	28.0	15.1	12.0	22.3	34.8
MAX	65	63	64	80	81	62	67	64	32	31	42	62
MIN	21	56	52	40	42	54	43	16	8.8	8.6	12	11
AC-FT	2750	3590	3620	3620	3310	3650	3250	1720	901	737	1370	2070
CAL YR 1984	TOTAL	17113.1		MEAN	46.8	MAX	128	MIN	6.9	AC-FT	33940	
WTR YR 1985	TOTAL	15423.9		MEAN	42.3	MAX	81	MIN	8.6	AC-FT	30590	

KANSAS RIVER BASIN

207

06823500 BUFFALO CREEK NEAR HAIGLER, NE

LOCATION.--Lat 40°02'22", long 101°51'57", in SE1/4NW1/4 sec.20, T.1 N., R.40 W., Dundy County, Hydrologic Unit 10250002, on left bank 10 ft upstream from county highway bridge, 0.4 mi upstream from mouth, and 4 mi northeast of Haigler.

DRAINAGE AREA.--260 mi², approximately, of which about 13 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 2119: 1948-50(M), 1957(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,188.90 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1980, at site 0.5 mi upstream at datum 15.67 ft higher.

REMARKS.--Estimated daily discharges: Dec. 2-7, Dec. 14 to Jan. 5, Jan. 10 to Feb. 13, and Mar. 4-5. Records fair except for periods of estimated record, which are poor. Natural flow affected by diversion about 1 mi upstream for irrigation of 880 acres.

AVERAGE DISCHARGE.--45 years, 7.45 ft³/s, 5,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 140 ft³/s June 27, 1948, gage height, 4.37 ft, site and datum then in use; minimum gage height, 5.93 ft Jan. 3, 1976, site and datum then in use, backwater from ice; no flow at times in 1955, 1968, 1973-80, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 22	1515	(a)	*3.33	Feb. 17	1300	*18	2.71

No peak greater than base discharge.

a Backwater from ice

Minimum daily discharge, 0.27 ft³/s, July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	7.4	6.9	6.2	5.2	9.0	8.0	8.3	6.2	1.3	1.7	3.8
2	6.7	7.5	6.8	5.8	5.0	8.8	7.7	7.7	6.2	1.2	1.4	3.7
3	6.6	7.6	6.2	6.0	6.0	8.5	7.5	7.5	5.4	.96	1.1	3.8
4	7.2	7.5	6.4	6.8	5.8	8.2	7.7	7.4	4.1	.76	.93	4.0
5	7.9	7.5	6.8	7.0	5.6	8.4	7.8	7.5	4.1	.64	.87	4.8
6	8.0	7.5	6.6	7.8	6.0	8.2	7.8	8.7	4.1	.47	.63	4.4
7	7.5	7.6	7.4	7.9	8.0	7.8	7.6	8.6	4.5	.40	.68	3.7
8	7.0	7.4	8.2	7.3	9.0	7.7	7.5	7.6	4.5	.35	.85	3.1
9	6.8	7.4	7.5	8.0	10	7.6	7.5	7.2	4.5	.35	.80	3.2
10	6.7	7.4	7.1	7.6	9.4	7.6	7.6	6.9	4.7	.38	.83	3.7
11	6.8	7.6	7.2	6.8	9.0	7.6	7.5	7.2	4.7	.34	.77	4.2
12	6.7	7.5	7.2	6.0	9.4	7.4	7.1	7.1	4.4	.28	.82	4.4
13	6.7	8.1	7.0	6.6	10	7.7	6.9	10	3.4	.27	.75	4.5
14	7.0	8.2	5.6	7.2	11	7.6	7.0	15	2.5	.32	1.3	4.4
15	7.7	7.7	6.2	7.0	13	7.6	7.6	8.4	2.4	.63	1.2	4.5
16	8.2	7.5	7.0	7.2	16	7.3	7.3	6.5	2.2	.72	1.3	3.7
17	8.4	7.7	6.4	7.4	17	7.2	7.2	6.0	2.1	.46	1.1	3.6
18	7.9	8.2	5.8	8.0	12	7.5	7.0	6.1	2.1	.46	1.1	3.1
19	7.5	7.8	6.0	7.0	11	7.4	7.1	6.8	1.6	.84	1.3	3.3
20	7.5	7.6	6.4	5.2	12	7.1	7.1	6.6	1.5	3.1	2.4	4.2
21	7.4	7.7	5.8	5.4	11	7.1	7.1	6.3	1.6	3.4	2.7	5.8
22	7.4	7.5	6.2	8.0	11	7.3	7.3	6.2	1.1	2.6	2.6	6.5
23	7.5	8.1	6.2	7.6	11	7.2	7.5	6.2	1.0	1.7	2.8	6.6
24	7.5	7.9	5.8	8.4	10	7.2	7.6	5.9	.97	1.6	3.6	6.6
25	7.6	7.9	5.6	11	9.9	7.2	8.7	5.9	.95	1.7	3.2	6.1
26	7.5	7.9	6.0	10	9.6	7.0	9.7	5.9	1.2	1.7	3.2	6.5
27	7.3	9.4	6.6	9.0	9.3	7.1	8.9	6.0	1.2	.88	3.6	7.6
28	7.5	11	7.2	8.0	9.2	7.1	8.0	6.4	1.1	1.0	3.4	8.4
29	7.5	6.9	7.4	7.0	---	7.3	8.6	6.5	1.1	1.3	3.6	8.9
30	7.4	6.9	6.4	5.2	---	7.8	9.1	6.0	1.3	1.6	3.6	9.8
31	7.4	---	6.6	4.5	---	8.2	---	6.0	---	1.6	3.8	---
TOTAL	227.5	233.9	204.5	222.9	271.4	236.7	231.0	224.4	86.72	33.31	57.93	150.9
MEAN	7.34	7.80	6.60	7.19	9.69	7.64	7.70	7.24	2.89	1.07	1.87	5.03
MAX	8.4	11	8.2	11	17	9.0	9.7	15	6.2	3.4	3.8	9.8
MIN	6.6	6.9	5.6	4.5	5.0	7.0	6.9	5.9	.95	.27	.63	3.1
AC-FT	451	464	406	442	538	469	458	445	172	66	115	299
CAL YR 1984	TOTAL	2378.98		MEAN	6.50	MAX	22	MIN	.00	AC-FT	4720	
WTR YR 1985	TOTAL	2181.16		MEAN	5.98	MAX	17	MIN	.27	AC-FT	4330	

KANSAS RIVER BASIN

06824000 ROCK CREEK AT PARKS, NE

LOCATION.--Lat 40°02'30", long 101°43'40", in SW1/4NE1/4 sec.21, T.1 N., R.39 W., Dundy County, Hydrologic Unit 10250002, on right bank at west edge of Parks, 100 ft downstream from county road bridge and 0.5 mi upstream from mouth.

DRAINAGE AREA.--20 mi², approximately, of which about 17 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1630: 1951(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,093.35 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 3-7, 13-15, 18-25, Jan. 1, 2, Jan. 31 to Feb. 15, Feb. 22-27, and Mar. 4-5. Records good except for periods of estimated record, which are poor. One diversion about 2 mi above station for irrigation of 215 acres; flow regulated at times by reservoir at State fish hatchery 7 mi upstream.

AVERAGE DISCHARGE.--45 years, 13.8 ft³/s, 10,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 493 ft³/s July 5, 1965, gage height, 6.00 ft, from rating curve extended above 40 ft³/s on basis of slope-conveyance study; minimum daily, 2.6 ft³/s Nov. 19, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1415	ice jam	*3.50	Sept. 4	2100	*39	2.24
May 13	2030	25	2.49				

Minimum daily discharge, 5.6 ft³/s Mar. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	15	9.0	9.0	5.9	9.7	15	11	9.2	11	9.0
2	10	11	15	8.0	9.4	5.8	9.9	15	11	9.5	10	8.2
3	11	11	14	8.9	10	6.0	9.9	15	11	9.5	10	8.6
4	13	11	14	9.3	9.8	5.8	10	14	11	9.3	10	17
5	14	11	15	9.3	9.6	5.6	11	14	11	9.2	10	19
6	14	11	16	10	10	6.0	10	17	11	9.1	10	13
7	13	11	15	12	11	5.8	10	14	11	9.2	10	12
8	13	11	14	12	11	5.7	11	14	10	9.0	10	10
9	12	11	15	13	12	6.2	11	14	10	9.2	10	9.7
10	12	12	14	18	11	7.2	10	13	9.9	9.6	10	9.8
11	12	13	11	13	10	8.0	10	13	9.7	11	9.9	10
12	12	13	12	14	11	8.0	10	13	9.8	10	9.9	10
13	12	13	11	14	12	8.2	9.7	16	9.9	9.6	9.7	15
14	12	13	10	13	12	8.6	10	21	9.9	9.5	13	14
15	13	13	12	12	13	8.8	11	15	9.7	10	13	12
16	13	13	11	11	14	8.8	11	14	9.6	10	12	11
17	12	13	12	9.9	14	8.8	10	13	9.5	10	11	11
18	13	13	11	9.5	14	9.0	10	13	9.2	10	11	10
19	12	14	10	9.0	15	8.6	11	13	9.2	10	11	10
20	11	14	10	9.0	14	8.4	12	13	9.4	14	11	11
21	9.8	14	9.0	9.2	14	8.0	11	12	9.7	13	10	11
22	10	13	9.4	9.5	13	8.2	12	12	9.3	12	9.9	12
23	10	12	9.4	9.0	12	8.2	12	12	9.0	11	9.9	12
24	11	12	9.0	9.0	11	8.4	13	12	9.2	11	9.9	12
25	10	12	8.0	9.0	9.6	8.0	14	12	9.5	10	9.5	11
26	10	12	8.4	8.8	8.4	8.0	15	12	9.9	10	9.2	11
27	10	13	8.6	8.6	7.0	8.8	15	12	9.4	10	9.2	11
28	11	12	10	8.6	5.8	8.8	14	12	9.2	10	9.2	11
29	11	12	10	8.6	---	9.0	14	12	9.3	10	8.6	13
30	11	13	10	9.7	---	9.7	15	11	9.2	11	9.0	13
31	11	---	10	9.4	---	9.7	---	11	---	11	9.2	---
TOTAL	359.8	368	358.8	323.3	312.6	240.0	342.2	419	296.5	315.9	316.1	347.3
MEAN	11.6	12.3	11.6	10.4	11.2	7.74	11.4	13.5	9.88	10.2	10.2	11.6
MAX	14	14	16	18	15	9.7	15	21	11	14	13	19
MIN	9.8	11	8.0	8.0	5.8	5.6	9.7	11	9.0	9.0	8.6	8.2
AC-FT	714	730	712	641	620	476	679	831	588	627	627	689
CAL YR 1984	TOTAL	4369.0		MEAN	11.9	MAX	28	MIN	7.0	AC-FT	8670	
WTR YR 1985	TOTAL	3999.5		MEAN	11.0	MAX	21	MIN	5.6	AC-FT	7930	

06824500 REPUBLICAN RIVER AT BENKELMAN, NE

LOCATION.--Lat 40°01'55", long 101°32'30", in SE1/4SW1/4 sec.19, T.1 N., R.37 W., Dundy County, Hydrologic Unit 10250002, on left bank at downstream side of bridge on U.S. Highway 34, 0.6 mi south of Burlington Northern Inc. track, 1 mi southwest of Benkelman, 2 mi upstream from South Fork Republican River, and 11 mi downstream from Rock Creek.

DRAINAGE AREA.--4,830 mi², approximately, of which about 1,230 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1895 (published as North Fork Republican River at Benkelman), October 1902 to November 1906, October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1895. WSP 1919: 1952, 1956. WSP 2119: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,975.34 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1946, nonrecording gages at several sites within 1.5 mi of present site at various datums; Dec. 17, 1946, to May 26, 1972, water-stage recorder at present site and datum and May 27, 1972, to Aug 11, 1978, at site 150 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 13 to Feb. 22. Records good except for period of estimated record, which is poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--44 years, 86.8 ft³/s, 62,890 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,040 ft³/s Sept. 7, 1951, gage height, 7.58 ft; maximum gage height, 7.80 ft Aug. 9, 1950; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 13.1 ft May 31, 1935, from elevations furnished by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 18	1230	(a)	*5.00	Aug. 1	1200	*412	4.42

No peak greater than base discharge.

a Backwater from ice.

Minimum daily discharge, 0.22 ft³/s, July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	78	65	84	40	81	98	113	52	2.4	189	9.0
2	25	77	68	80	47	82	97	100	42	2.5	80	8.8
3	25	80	61	82	56	85	92	75	39	2.5	58	8.8
4	38	75	70	88	54	61	88	72	52	1.9	44	9.6
5	55	77	74	94	45	68	87	71	54	1.7	42	31
6	49	78	69	104	52	87	92	104	57	1.6	37	20
7	46	80	78	98	70	89	91	79	50	1.2	31	41
8	48	81	85	90	80	84	90	71	42	.92	27	37
9	48	80	73	78	88	83	90	59	33	1.2	25	34
10	49	72	77	74	86	89	92	57	27	1.4	22	36
11	48	73	72	76	80	92	88	52	26	2.4	18	41
12	48	72	68	60	84	90	86	43	24	1.1	13	49
13	51	73	64	64	86	91	81	83	25	.81	14	74
14	56	79	60	82	88	94	81	192	24	.64	27	59
15	66	73	66	80	90	91	80	179	23	1.7	25	52
16	79	71	74	80	100	86	78	128	18	.75	26	46
17	85	69	80	82	110	83	72	104	15	.22	25	42
18	86	67	58	86	110	89	71	91	14	.30	26	40
19	79	70	58	84	140	89	72	99	8.8	5.4	30	39
20	75	69	60	70	220	87	69	100	7.4	17	30	43
21	72	68	54	50	300	87	69	82	6.2	9.0	31	48
22	74	69	64	58	130	92	66	76	5.8	6.0	28	54
23	75	68	66	56	114	90	64	82	4.1	7.8	23	59
24	78	63	60	68	98	87	62	78	3.3	14	15	62
25	82	67	56	90	101	86	79	72	4.5	7.9	17	59
26	81	71	70	88	98	85	101	69	6.4	6.4	15	62
27	81	67	80	94	90	82	102	69	5.5	5.3	12	63
28	78	66	80	90	84	76	97	70	3.6	5.5	11	66
29	77	68	100	96	---	81	99	107	2.5	9.3	10	72
30	76	64	92	86	---	87	105	74	1.8	11	11	71
31	79	---	94	50	---	91	---	56	---	24	10	---
TOTAL	1934	2165	2196	2462	2741	2645	2539	2707	676.9	153.84	972	1336.2
MEAN	62.4	72.2	70.8	79.4	97.9	85.3	84.6	87.3	22.6	4.96	31.4	44.5
MAX	86	81	100	104	300	94	105	192	57	24	189	74
MIN	25	63	54	50	40	61	62	43	1.8	.22	10	8.8
AC-FT	3840	4290	4360	4880	5440	5250	5040	5370	1340	305	1930	2650
CAL YR 1984	TOTAL	29062.12		MEAN	79.4	MAX	320	MIN	.00	AC-FT	57640	
WTR YR 1985	TOTAL	22527.94		MEAN	61.7	MAX	300	MIN	.22	AC-FT	44680	

KANSAS RIVER BASIN

06824500 REPUBLICAN RIVER AT BENKELMAN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-73, October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 17...	1100	99	--	7.9	14.0	10.1	--	430	880	200	52	18
NOV 27...	1030	87	615	8.6	.0	13.8	12	K57	120	230	60	19
DEC 07...	1100	84	595	8.4	.0	12.6	--	73	82	230	62	19
JAN 21...	1100	85	650	8.7	.0	12.4	--	25	84	260	68	21
FEB 14...	1200	90	570	8.0	.0	11.6	17	K83	1000	210	57	17
MAR 15...	1000	94	550	7.6	11.0	9.6	--	34	63	230	59	19
APR 11...	1200	95	540	8.3	16.0	8.6	--	18	110	230	60	19
MAY 02...	1300	90	525	8.4	22.0	7.8	52	4800	480	220	57	19
JUN 11...	1200	35	670	8.8	20.0	--	--	100	580	280	72	25
JUL 10...	1000	1.5	590	7.8	23.0	--	--	3400	2000	220	54	20
AUG 09...	1200	38	605	8.1	20.0	8.1	26	870	360	260	67	22
SEP 11...	1515	40	480	8.3	20.5	7.9	--	620	620	200	52	16

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 17...	27	.9	84	9.0	55	.90	<.010	--	.80	1.7	.080	5.4
NOV 27...	28	.8	81	9.3	32	1.3	.060	.64	.70	2.0	.050	2.6
DEC 07...	26	.8	70	7.1	27	1.5	.100	.70	.80	2.3	.050	2.5
JAN 21...	31	.9	79	8.6	4	1.5	.160	.44	.60	2.1	.060	3.0
FEB 14...	24	.7	62	7.4	16	1.4	.260	.74	1.0	2.4	.090	3.1
MAR 15...	28	.8	79	8.8	50	1.0	.050	.55	.60	1.6	.080	3.6
APR 11...	28	.8	74	7.7	50	.70	<.010	--	.60	1.3	.170	3.7
MAY 02...	31	.9	71	9.0	72	.70	.190	.51	.70	1.4	.080	5.0
JUN 11...	39	1	140	10	89	.60	.060	.64	.70	1.3	.140	5.1
JUL 10...	41	1	120	13	10	<.10	.060	.74	.80	--	.020	4.0
AUG 09...	34	1	110	8.2	126	.60	.050	.65	.70	1.3	.220	8.7
SEP 11...	23	.7	70	6.7	105	<.10	.020	.88	.90	--	.100	7.6

KANSAS RIVER BASIN

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06827500 SOUTH FORK REPUBLICAN RIVER NEAR BENKELMAN, NE

LOCATION.--Lat 40°00'34", long 101°32'32", in NE1/4SW1/4 sec.31, T.1 N., R.37 W., Dundy County, Hydrologic Unit 10250003, on right bank 100 ft upstream from bridge on State Highway 61, 1 mi downstream from Kansas-Nebraska State line, 2.5 mi southwest of Benkelman, and 4 mi upstream from mouth.

DRAINAGE AREA.--2,740 mi², approximately, of which about 2,190 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to September 1895, October 1902 to November 1906, October 1930 to September 1932, August 1937 to current year. Published as South Fork of Republican River at Benkelman prior to 1906 and as Republican River at Benkelman 1931-32. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1904-6, 1931. WSP 1390: 1940, 1945, 1947. WSP 1919: 1951-52, 1954-56. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,990.91 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 10, 1947, nonrecording gages at several sites within 3.5 mi of present site at various datums. Dec. 10, 1947, to Sept. 28, 1966, water-stage recorder 130 ft downstream at datum 2.00 ft higher, and Sept. 29, 1966, to Mar. 7, 1968, at present site at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Nov. 29 to Dec. 3, Dec. 5-6 and Dec. 27 to Feb. 22. Records fair except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station, and since July 6, 1950, by storage in Bonny Reservoir.

AVERAGE DISCHARGE.--55 years, 49.2 ft³/s, 35,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 19,600 ft³/s Aug. 16, 1958, gage height, 8.70 ft, site and datum then in use, but may have been higher during flood of June 24, 1945; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1923, 10.1 ft May 31, 1935, from floodmarks at site 0.2 mi downstream, at datum 2.00 ft higher, discharge, 150,000 ft³/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 799 ft³/s Aug. 1, gage height, 4.96 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	15	23	13	54	35	25	26	.00	340	.00
2	.00	.00	15	21	14	53	35	23	21	.00	58	.00
3	.00	.57	14	23	16	54	29	20	19	.00	30	.00
4	.00	2.9	15	26	16	42	29	19	23	.00	19	.00
5	.00	3.8	18	28	15	66	30	21	31	.00	12	.00
6	.00	5.1	17	30	18	54	29	28	27	.00	7.6	.00
7	.00	6.2	26	27	20	49	29	23	23	.00	6.1	.00
8	.00	7.5	37	25	21	47	28	18	18	.00	4.5	.00
9	.00	9.7	38	24	24	45	28	16	15	.00	2.1	.00
10	.00	10	28	22	23	42	27	16	14	.00	1.0	.00
11	.00	10	17	20	22	41	26	15	13	.00	.47	.00
12	.00	10	15	17	24	40	26	12	11	.00	.07	.00
13	.00	10	15	23	25	40	23	22	9.7	.00	.00	.00
14	.00	12	18	30	30	40	23	95	8.3	.00	.23	.01
15	.00	11	28	29	40	40	23	78	6.5	.00	.44	.00
16	.00	14	41	29	50	38	24	57	4.4	.00	.08	.00
17	.00	13	44	35	48	38	21	46	3.2	.00	.00	.00
18	.00	16	39	40	60	38	19	41	2.5	.00	.00	.00
19	.00	19	39	35	70	38	18	40	2.2	.00	.00	.00
20	.00	19	43	21	80	37	18	40	1.8	.00	.00	.00
21	.00	21	50	20	100	37	18	38	1.1	.00	.00	.00
22	.00	16	51	25	80	33	18	36	.31	.00	.00	.00
23	.00	18	57	24	73	32	18	33	.00	.00	.00	.00
24	.00	16	58	30	68	33	15	33	.00	.00	.00	.00
25	.00	16	53	35	64	33	15	29	.04	.00	.00	.00
26	.00	16	49	34	58	33	24	25	.00	.00	.00	.00
27	.00	15	40	35	54	33	28	23	.00	.00	.00	.00
28	.00	9.7	43	33	52	30	23	27	.00	.00	.00	.00
29	.00	12	45	31	---	28	23	66	.00	.00	.00	.00
30	.00	13	29	25	---	28	24	50	.00	.00	.00	.00
31	.00	---	30	15	---	34	---	34	---	18	.00	---
TOTAL	.00	332.47	1027	835	1178	1250	726	1049	281.05	18.00	481.59	.01
MEAN	.00	11.1	33.1	26.9	42.1	40.3	24.2	33.8	9.37	.58	15.5	.00
MAX	.00	21	58	40	100	66	35	95	31	18	340	.01
MIN	.00	.00	14	15	13	28	15	12	.00	.00	.00	.00
AC-FT	.00	659	2040	1660	2340	2480	1440	2080	557	36	955	.02
CAL YR 1984	TOTAL	12415.01		MEAN	33.9	MAX	240	MIN	.00	AC-FT	24630	
WTR YR 1985	TOTAL	7178.12		MEAN	19.7	MAX	340	MIN	.00	AC-FT	14240	

KANSAS RIVER BASIN

06828500 REPUBLICAN RIVER AT STRATTON, NE

LOCATION.--Lat 40°08'28", long 101°13'42", in SW1/4NW1/4 sec.13, T.2 N., R.35 W., Hitchcock County, Hydrologic Unit 10250004, on right bank at downstream side of county bridge, 0.5 mi south of Stratton, 0.2 mi downstream from Muddy Creek, 10 mi upstream from Trenton Dam, and 19 mi downstream from South Fork Republican River.

DRAINAGE AREA.--8,450 mi², approximately, of which about 3,800 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area. WDR NE-73: 1968-71(M), 1972.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,775.49 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 1, 1967, at site 0.3 mi downstream at present datum.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 9 and Dec. 16 to Feb. 24. Records fair except for periods of estimated records, which are poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir (station 06826000).

AVERAGE DISCHARGE.--35 years, 127 ft³/s, 92,010 acre-ft/yr; median of yearly mean discharges, 115 ft³/s, 83,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,800 ft³/s July 31, 1962, gage height, 9.34 ft, site then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred May 31, 1935, discharge, about 200,000 ft³/s, based on slope-area measurement at Max.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1920 ft³/s Sept. 13, gage height, 8.14 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	73	84	120	66	194	145	176	83	.57	89	.00
2	.00	73	80	110	70	183	153	155	69	.00	261	.00
3	.00	72	78	100	78	177	153	133	57	.00	88	.00
4	.00	67	83	120	76	148	150	119	75	.00	55	.00
5	.00	66	100	135	70	135	157	119	84	.00	38	.00
6	.00	67	110	145	74	149	142	134	83	.00	26	.00
7	.00	68	130	135	80	157	137	137	67	.00	20	.00
8	.33	67	135	130	90	157	128	114	53	.00	15	.00
9	6.6	70	120	110	98	151	129	98	43	.00	8.7	.00
10	17	70	111	100	96	148	130	87	39	.00	2.2	.00
11	22	67	105	94	94	138	121	84	34	.00	.33	.27
12	23	70	98	76	100	134	117	80	29	.00	.00	20
13	25	70	74	84	116	134	117	93	27	.00	.00	605
14	31	75	64	96	135	125	117	300	25	.00	.18	113
15	50	75	72	90	160	124	117	350	18	.00	7.5	46
16	89	72	80	92	180	128	116	258	12	.00	8.9	30
17	71	72	90	94	230	136	115	188	6.7	.00	3.8	24
18	78	75	84	120	270	140	110	152	3.1	.00	3.4	21
19	77	70	88	116	350	141	106	138	2.9	.00	8.3	14
20	70	72	110	76	400	132	103	148	.92	.00	13	10
21	68	70	106	70	430	123	102	148	.33	.00	11	21
22	65	72	110	94	400	133	103	128	.25	.00	6.4	34
23	64	77	120	90	320	140	98	122	.21	.00	3.2	41
24	73	80	116	100	270	134	93	123	.09	.00	.75	39
25	87	83	110	130	247	123	111	109	.30	.41	.00	37
26	78	83	130	125	223	116	165	100	.30	.10	.00	33
27	75	80	140	120	218	114	182	100	.11	.00	.00	36
28	74	86	145	120	212	120	164	127	.00	.00	.00	37
29	79	86	160	125	---	121	168	106	.00	.00	.00	55
30	77	84	120	110	---	123	180	178	.00	.00	.00	54
31	77	---	125	72	---	129	---	114	---	.00	.00	---
TOTAL	1376.93	2212	3278	3299	5153	4307	3929	4418	813.21	1.08	669.66	1270.27
MEAN	44.4	73.7	106	106	184	139	131	143	27.1	.03	21.6	42.3
MAX	89	86	160	145	430	194	182	350	84	.57	261	605
MIN	.00	66	64	70	66	114	93	80	.00	.00	.00	.00
AC-FT	2730	4390	6500	6540	10220	8540	7790	8760	1610	2.1	1330	2520
CAL YR 1984	TOTAL	42982.45		MEAN	117	MAX	730	MIN	.00	AC-FT	85260	
WTR YR 1985	TOTAL	30727.15		MEAN	84.2	MAX	605	MIN	.00	AC-FT	60950	

06829000 SWANSON LAKE NEAR TRENTON, NE

LOCATION.--Lat 40°10'10", long 101°03'35", in SE1/4NE1/4 sec.5, T.2 N., R.33 W., Hitchcock County, Hydrologic Unit 10250004, in gate-control house at right end of spillway on downstream side of Trenton Dam on Republican River, 2.5 mi west of Trenton.

DRAINAGE AREA.--8,620 mi², approximately, of which about 3,940 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May 1953 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1953, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began May 4, 1953. Capacity, 116,100 acre-ft between elevations 2,710.0 ft, sill of outlet gates, and 2,752.0 ft, top of storage pool. Top of flood-control pool is at elevation 2,773.0 ft, capacity, 254,000 acre-ft. Top of superstorage flood-control pool at elevation 2,785.0 ft, capacity, 361,600 acre-ft. Dead storage, 4,100 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 148,900 acre-ft Aug. 2, 3, 1962, elevation, 2,757.42 ft; minimum since operation of reservoir began, 19,950 acre-ft Oct. 24, 1954, elevation, 2,722.61 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 124,800 acre-ft June 6-8, elevation, 2,752.92 ft; minimum contents, 72,670 acre-ft Sept. 13, elevation, 2,741.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,740	67,730	2,755	135,600
2,745	87,930	2,760	163,900
2,750	110,500		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79520	81790	85380	90170	95520	104800	112000	118000	124400	116600	95520	76280
2	79520	81870	85460	90300	95560	105100	112200	118300	124400	116100	95120	75760
3	79520	82120	85510	90470	95740	105700	112400	118400	124400	115600	94580	75160
4	79770	82120	85670	90560	95920	105700	112600	118800	124600	115100	93970	74690
5	80100	82120	85720	90690	96180	105900	112900	119100	124600	114500	93310	74330
6	80100	82200	85890	90950	96360	106200	113000	119200	124800	113900	92600	74250
7	80100	82330	85930	91210	96580	106500	113200	119200	124800	113400	91820	73940
8	80100	82370	86100	91470	96710	106700	113300	119300	124800	112700	91430	73740
9	80100	82660	86270	91730	96890	107000	113500	119500	124700	111800	91120	73460
10	80100	82700	86520	91820	97070	107300	113700	119600	124600	110900	90210	73150
11	79890	82740	86740	91950	97210	107500	113900	119800	124400	109900	89480	72950
12	79890	82830	86910	92120	97480	107700	114200	119800	124100	108900	88790	72800
13	79890	82950	87210	92250	97610	108000	114300	120100	123800	108100	87970	72800
14	79970	83160	87290	92340	97880	108100	114400	120800	123500	107000	87080	73860
15	80050	83160	87380	92560	98010	108400	114600	121200	123300	106200	86610	74130
16	80340	83200	87460	92690	98010	108700	114800	121600	122900	105500	85840	74210
17	80380	83370	87630	92870	98460	108900	114900	121800	122700	105200	85300	74210
18	80630	83450	87840	93040	98910	109100	115000	122100	122000	104300	84620	74210
19	80590	83580	87930	93220	99540	109300	115400	122300	121500	103600	84120	74050
20	80590	83700	88100	93480	100100	109600	115400	122400	121100	103100	83490	74020
21	80710	83830	88360	93610	100900	109700	115400	122600	120400	102500	82950	74020
22	80800	84040	88490	93700	101600	110000	115400	122700	119700	101700	82450	74020
23	80840	84120	88660	93880	102300	110400	115500	122700	119000	101000	81910	74050
24	81000	84290	88790	93920	102800	110500	115600	122900	118400	100400	81290	74050
25	81210	84580	88880	94050	103400	110700	115800	122900	117700	99770	80710	74050
26	81370	84830	88960	94270	103800	111200	116400	123000	117500	99090	80100	74050
27	81460	84960	89130	94450	104200	111200	116600	123500	117300	98460	79560	74050
28	81540	85000	89260	94670	104600	111300	116900	123800	117200	97920	78830	74050
29	81660	85130	89480	94890	---	111400	117500	124000	116900	97480	78220	74210
30	81700	85300	89740	95250	---	111600	117800	124300	116800	96850	77490	74290
31	81740	---	89990	95430	---	111900	---	124300	---	96230	76850	---
MAX	81740	85300	89990	95430	104600	111900	117800	124300	124800	116600	95520	76280
MIN	79520	81790	85380	90170	95520	104800	112000	118000	116800	96230	76850	72800
(†)	2743.53	2744.38	2745.48	2746.72	2748.74	2750.30	2751.53	2752.83	2751.32	2746.90	2742.33	2741.69
(††)	+2180	+3560	+4690	+5440	+9170	+7300	+5900	+6500	-7500	-20570	-19380	-2560
CAL YR 1984	MEAN	98880	MAX	131800	MIN	75920	(††)	+14150				
WTR YR 1985	MEAN	97970	MAX	124800	MIN	72800	(††)	-5270				

(†) Elevation, in feet, at end of month.

(††) Change in contents, in acre-feet.

KANSAS RIVER BASIN

06829500 REPUBLICAN RIVER AT TRENTON, NE

LOCATION.--Lat 40°10'00", long 101°02'40", in SE1/4 sec.4, T.2 N., R.33 W., Hitchcock County, Hydrologic Unit 10250004, on left bank 300 ft upstream from Elm Creek, 0.9 mi downstream from centerline of spillway of Trenton Dam, and 1.5 mi southwest of Trenton.

DRAINAGE AREA.--8,620 mi², approximately, of which about 3,940 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,671.06 ft above National Geodetic Vertical Datum of 1929. See WSP 2119 for history of changes prior to Oct. 1, 1959.

REMARKS.--Estimated daily discharges: Oct. 1-10, Nov. 16-19, Dec. 1-3, 6, 7, 30, Jan. 1-2, 20-24, 28-31, Feb. 1-8, Mar. 3, 4, Apr. 1, 2, Sept. 4-10, 12-16, 18-23, 25. Records fair. Natural flow affected by irrigation development above station, since July 6, 1950, by storage in Bonny Reservoir (station 06826000), since 1953 by storage in Swanson Lake (station 06829000), and since June 1957 by Meeker-Driftwood Canal which diverts directly from Swanson Lake for irrigation of about 16,400 acres.

AVERAGE DISCHARGE.--32 years (1954-85), 56.1 ft³/s, 40,640 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s June 16, 1948, gage height, 5.64 ft, former site and datum; no flow at times in 1947-50, 1952-54.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known since about 1826 occurred May 31, 1935, discharge, about 200,000 ft³/s. Discharge of 21,100 ft³/s was measured July 3, 1946, gage height, 6.0 ft, former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 217 ft³/s June 17, gage height, 4.50 ft; minimum daily, 0.60 ft³/s Oct. 8-10, Apr. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	.94	1.0	.80	.80	1.5	.90	.92	1.2	106	112	51
2	.90	.97	.90	.90	.90	1.5	.80	.81	1.1	136	113	51
3	.90	1.1	.70	1.1	1.0	1.4	.72	.82	1.1	136	112	50
4	.90	1.0	.73	1.3	1.0	2.5	1.1	1.4	1.7	137	113	50
5	1.0	.87	.85	1.3	.90	1.3	1.1	1.7	1.1	137	112	50
6	.80	.87	.80	1.2	1.0	1.3	1.0	1.0	1.1	137	113	2.5
7	.70	.91	.90	1.2	1.0	1.1	1.0	1.0	1.2	136	115	1.7
8	.60	.94	1.1	1.3	1.0	1.0	.95	1.1	1.3	135	115	1.5
9	.60	1.0	.90	1.4	1.1	1.1	.88	1.0	1.2	134	113	1.4
10	.60	.96	.87	1.4	1.3	1.4	.97	1.0	1.3	133	112	1.3
11	.62	.92	.96	1.3	1.3	1.4	1.3	1.0	1.1	132	113	1.3
12	.77	.88	.97	1.4	1.3	.74	1.1	.90	1.4	131	112	1.3
13	.84	.91	1.1	1.5	1.5	1.1	1.1	1.3	1.5	130	112	1.4
14	.85	1.0	1.1	1.3	1.5	1.2	1.1	1.2	1.9	128	78	2.5
15	1.1	.93	.97	1.1	2.5	1.4	1.1	.95	1.8	125	54	3.5
16	.83	.90	.86	.97	2.2	1.3	1.2	.87	1.6	124	54	2.5
17	.87	.90	.81	1.1	1.7	1.3	.88	1.0	.90	124	52	1.8
18	.94	.90	.75	1.3	1.6	1.2	1.4	1.2	.172	121	52	1.6
19	.93	.90	.68	1.3	1.6	1.1	1.3	1.0	126	119	52	1.5
20	.75	.92	.67	.90	1.7	1.2	.96	1.1	122	118	52	1.5
21	.79	.92	.83	.80	1.8	1.1	.73	1.1	119	117	51	1.4
22	.79	.93	.82	.90	1.6	1.4	.73	1.1	117	116	51	1.4
23	.79	.96	.84	.90	1.6	1.2	.85	1.0	117	115	51	1.3
24	.87	1.0	.81	.90	1.7	1.2	.92	1.1	116	112	51	1.3
25	1.0	1.1	.80	1.0	1.7	1.2	.74	.94	115	112	51	1.3
26	.97	1.2	.94	1.2	1.6	1.7	1.7	1.1	46	111	51	1.2
27	.96	1.1	.99	1.2	1.5	1.3	.91	1.2	2.7	111	51	1.5
28	.89	1.0	1.1	1.1	1.6	1.2	.60	1.3	2.0	112	51	1.4
29	.90	1.1	1.0	1.1	---	1.1	1.4	1.2	1.8	113	51	1.5
30	.94	1.0	.90	1.0	---	1.2	1.1	1.1	1.5	112	50	1.5
31	.94	---	.90	.90	---	.94	---	1.0	---	113	51	---
TOTAL	26.24	29.03	27.55	35.07	40.00	39.58	30.54	33.41	1169.6	3823	2421	293.1
MEAN	.85	.97	.89	1.13	1.43	1.28	1.02	1.08	39.0	123	78.1	9.77
MAX	1.1	1.2	1.1	1.5	2.5	2.5	1.7	1.7	172	137	115	51
MIN	.60	.87	.67	.80	.80	.74	.60	.81	1.1	106	50	1.2
AC-FT	52	58	55	70	79	79	61	66	2320	7580	4800	581
CAL YR 1984	TOTAL	15451.80		MEAN	42.2	MAX	332	MIN	.60	AC-FT	30650	
WTR YR 1985	TOTAL	7968.12		MEAN	21.8	MAX	172	MIN	.60	AC-FT	15800	

06829500 REPUBLICAN RIVER AT TRENTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

				STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)				
DATE		TIME										
OCT 17...		1130		1.0	885	7.4	9.0	8.6				
MAR 26...		1500		2.0	780	8.7	20.0	14.0				
JUN 11...		1030		1.0	930	8.8	16.0	--				
JUL 10...		1600		100	660	8.3	26.0	--				
AUG 08...		1020		115	605	7.9	24.0	8.0				
SEP 11...		1740		1.4	780	8.3	19.0	10.0				
DATE		TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAR 26...		1500	5	220	44	48	24	64	2	17	175	160
AUG 08...		1020	25	200	14	41	24	52	2	15	187	120
DATE	TIME	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS STO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR 26...		18	1.1	30	470	.64	2.5	.35	<.010	180	5	1
AUG 08...		17	1.1	17	400	.54	124	<.10	.030	140	7	6

KANSAS RIVER BASIN

06831500 FRENCHMAN CREEK NEAR IMPERIAL, NE

LOCATION.--Lat 40°25'45", long 101°37'25", in SW1/4NW1/4 sec.3, T.5 N., R.38 W., Chase County, Hydrologic Unit 10250005, on right bank 0.2 mi downstream from bridge on county highway, 5.8 mi upstream from Enders Dam, and 6.1 miles south of Imperial.

DRAINAGE AREA.--880 mi², approximately, of which about 720 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year. Published as Frenchman River near Imperial October 1965 to September 1972.

REVISED RECORDS.--WSP 976: 1942(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,130 ft, from topographic map. Prior to Mar. 7, 1941, nonrecording gage at bridge 0.2 mi upstream at different datum. Mar. 7, 1941, to Sept. 30, 1958, water-stage recorder at site 0.2 mi downstream at datum 4.35 ft lower.

REMARKS.--Estimated daily discharges: Nov. 30, Dec. 15, Jan. 13-15, 20-24, and Jan. 31 to Feb. 12. Records good except for periods of estimated record, which are fair. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--45 years, 61.2 ft³/s, 44,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,340 ft³/s Mar. 22, 1960, gage height, 8.43 ft; minimum daily, 4.8 ft³/s Mar. 12, 1977, backwater from ice.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1940, reached a stage of 12.4 ft, from floodmarks, site and datum in use Mar. 7, 1941, to Sept. 30, 1958 (discharge not determined but believed greater than that of Mar. 22, 1960).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	1430	(a)	*1.74	Mar. 5	1030	*51	1.32
No peaks greater than base discharge.							

a Backwater from ice.

Minimum daily discharge, 18 ft³/s Aug. 28 to Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	30	30	33	40	40	31	37	28	28	25	18
2	23	28	30	35	39	40	30	35	28	26	24	18
3	23	29	30	37	39	40	30	34	29	25	24	19
4	25	28	30	36	40	33	30	34	33	24	23	19
5	29	28	30	37	40	43	31	36	31	24	22	21
6	30	28	30	38	39	40	30	35	31	23	22	20
7	26	29	30	38	39	40	30	34	30	23	21	19
8	25	30	30	38	39	39	29	33	29	23	20	19
9	25	30	31	38	40	39	29	33	28	22	20	19
10	25	30	31	37	41	37	30	33	28	22	19	19
11	25	30	31	36	42	36	30	33	28	22	20	20
12	25	30	32	35	43	35	31	32	28	22	20	21
13	26	30	32	38	43	36	30	39	28	22	19	21
14	27	31	29	38	44	35	30	43	28	21	20	20
15	30	30	34	38	47	35	31	37	28	21	20	21
16	31	28	33	40	49	33	30	34	27	21	20	20
17	30	29	33	40	47	33	32	33	27	21	20	20
18	28	29	33	40	47	33	31	33	25	21	20	20
19	28	29	32	40	45	33	31	33	25	22	20	20
20	28	29	33	39	44	32	31	32	26	27	21	19
21	28	29	33	39	43	32	32	32	26	25	20	20
22	28	30	33	39	42	33	32	32	26	25	20	21
23	28	30	34	36	42	32	32	30	26	23	19	23
24	28	29	32	40	41	31	31	30	25	24	19	22
25	28	30	34	40	41	31	35	30	25	23	19	22
26	28	30	35	40	41	30	39	30	25	22	19	22
27	28	28	35	40	41	30	37	30	25	21	19	22
28	28	30	36	40	40	30	35	31	25	21	18	22
29	28	30	36	40	---	30	37	30	25	23	18	23
30	28	30	36	36	---	31	39	30	24	23	18	23
31	28	---	36	40	---	32	---	28	---	25	18	---
TOTAL	840	881	1004	1181	1178	1074	956	1026	817	715	627	613
MEAN	27.1	29.4	32.4	38.1	42.1	34.6	31.9	33.1	27.2	23.1	20.2	20.4
MAX	31	31	36	40	49	43	39	43	33	28	25	23
MIN	23	28	29	33	39	30	29	28	24	21	18	18
AC-FT	1670	1750	1990	2340	2340	2130	1900	2040	1620	1420	1240	1220
CAL YR 1984	TOTAL	11479	MEAN	31.4	MAX	59	MIN	19	AC-FT	22770		
WTR YR 1985	TOTAL	10912	MEAN	29.9	MAX	49	MIN	18	AC-FT	21640		

06832000 ENDERS RESERVOIR NEAR ENDERS, NE

LOCATION.--Lat 40°25'05", long 101°30'55", in NE1/4 sec.9, T.5 N., R.37 W., Chase County, Hydrologic Unit 10250005, near right bank in control house at outlet tube of Enders Dam on Frenchman Creek, 2.2 mi southeast of Enders.

DRAINAGE AREA.--950 mi², approximately, of which about 790 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 3, 1960, mercury-column pressure gage at same datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 23, 1950. Capacity, 36,010 acre-ft between elevations 3,080.0 ft, sill of outlet gates, and 3,112.3 ft, top of storage pool. Top of flood-control pool at elevation 3,127.0 ft, capacity, 74,520 acre-ft. Top of superstorage flood-control pool at elevation 3,129.5 ft, capacity, 80,730 acre-ft. Dead storage, 8,470 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,330 acre-ft Mar. 25, 1960, elevation, 3,118.20 ft; minimum since operation of reservoir began, 8,870 acre-ft Aug. 28, 1978, elevation, 3,080.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,610 acre-ft June 16, elevation, 3,103.90 ft; minimum, 12,870 acre-ft Sept. 1, elevation, 3,086.45 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

3,085	11,770	3,100	26,540
3,090	15,830	3,110	40,660

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15730	18280	20260	22550	24740	26820	28410	29940	31260	28960	21210	12940
2	15800	18360	20330	22590	24810	26880	28480	29960	31260	28880	21090	13030
3	15890	18420	20410	22660	24900	26980	28540	29990	31260	28770	20970	13090
4	16030	18460	20490	22750	24980	26980	28580	30070	31340	28610	20830	13190
5	16250	18520	20540	22810	25050	27030	28630	30150	31370	28390	20620	13270
6	16340	18580	20600	22870	25110	27130	28660	30180	31450	28120	20380	13330
7	16420	18630	20690	22940	25190	27200	28700	30220	31510	27800	20110	13400
8	16500	18720	20760	23040	25290	27270	28730	30270	31530	27410	19900	13420
9	16570	18760	20840	23130	25360	27350	28790	30310	31510	26910	19650	13470
10	16630	18820	20920	23220	25430	27410	28840	30390	31510	26400	19410	13510
11	16700	18910	20950	23280	25510	27430	28880	30390	31480	25940	19070	13590
12	16790	19000	21030	23350	25580	27470	28910	30390	31480	25470	18730	13710
13	16850	19080	21150	23450	25650	27540	28940	30600	31530	25070	18400	13770
14	16940	19150	21210	23520	25700	27570	29000	30630	31550	24700	18070	13830
15	17040	19190	21320	23610	25790	27620	29040	30670	31570	24350	17790	13910
16	17180	19250	21360	23670	25870	27690	29080	30710	31610	24000	17580	13980
17	17240	19320	21430	23730	25960	27740	29130	30750	31590	23660	17330	14080
18	17320	19380	21540	23800	26030	27790	29190	30800	31550	23320	17100	14120
19	17380	19460	21600	23850	26090	27830	29200	30840	31530	23050	16860	14190
20	17460	19530	21690	23920	26180	27880	29230	30860	31520	22930	16600	14180
21	17520	19580	21740	23990	26270	27920	29260	30900	31330	22750	16300	14240
22	17580	19640	21810	24090	26340	27990	29280	30950	31110	22580	15990	14350
23	17660	19720	21860	24170	26400	28030	29320	30990	30790	22430	15660	14380
24	17740	19790	21950	24230	26470	28080	29340	31020	30400	22310	15290	14450
25	17810	19890	22020	24310	26530	28120	29490	31080	29910	22230	14900	14510
26	17900	19950	22110	24370	26620	28180	29590	31120	29780	22160	14490	14560
27	17960	20000	22180	24440	26680	28210	29660	31150	29590	22020	14030	14610
28	18020	20080	22230	24520	26740	28220	29710	31210	29420	21810	13640	14660
29	18100	20140	22310	24580	---	28240	29830	31250	29210	21690	13320	14780
30	18150	20210	22380	24650	---	28310	29910	31250	29050	21540	13100	14860
31	18220	---	22460	24710	---	28350	---	31260	---	21360	12890	---
MAX	18220	20210	22460	24710	26740	28350	29910	31260	31610	28960	21210	14860
MIN	15730	18280	20260	22550	24740	26820	28410	29940	29050	21360	12890	12940
(†)	3092.53	3094.49	3096.55	3098.49	3100.16	3101.43	3102.63	3103.64	3101.98	3095.56	3086.47	3088.88
(††)	+2480	+1990	+2250	+2250	+2030	+1610	+1560	+1350	-2210	-7690	-8470	+1970
CAL YR 1984	MEAN	25520	MAX	35520	MIN	14390	(††)	-850				
WTR YR 1985	MEAN	23440	MAX	31610	MIN	12890	(††)	-880				

(†) Elevation, in feet, at end of month.

(††) Change in contents, in acre-feet.

06832500 FRENCHMAN CREEK NEAR ENDERS, NE

LOCATION.--Lat 40°25'05", long 101°30'35", in NW1/4NW1/4 sec.10, T.5 N., R.37 W., Chase County, Hydrologic Unit 10250005, on left bank 0.2 mi downstream from Enders Dam and 2.5 mi southeast of Enders.

DRAINAGE AREA.--950 mi², approximately, of which about 790 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1946 to current year. Published as Frenchman River near Enders October 1965 to September 1972.

REVISED RECORDS.--WSP 2119: 1956, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,026.22 ft above National Geodetic Vertical Datum of 1929. Prior to June 14, 1948, at site 800 ft upstream at datum 6.03 ft higher. June 14, 1948, to Sept. 14, 1972, at present site at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good except those below 5.0 ft³/s, which are poor. Flow regulated by Enders Reservoir (station 06832000).

AVERAGE DISCHARGE.--39 years, 59.6 ft³/s, 43,180 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 763 ft³/s Aug. 20, 1953, gage height, 11.31 ft, present datum; maximum gage height, 11.65 ft, present datum, July 18, 1958, backwater from downstream tributary; no flow for many days in 1972-85.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 293 ft³/s June 25, gage height, 8.28 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.10	.00	.00	.36	.48	.51	.54	87	102	11
2	.00	.00	.09	.00	.00	.51	.48	.65	.54	67	95	.58
3	.00	.00	.03	.00	.00	.44	.39	.32	.54	71	96	.48
4	.00	.00	.02	.00	.00	.45	.50	.20	.79	95	101	.44
5	.00	.00	.00	.00	.00	.41	.62	.37	.68	113	125	.43
6	.00	.00	.00	.00	.00	.38	.58	.43	.62	142	147	.43
7	.01	.00	.00	.00	.00	.25	.37	.41	.57	187	147	.43
8	.01	.00	.00	.00	.00	.33	.35	.38	.52	220	137	.43
9	.02	.00	.00	.00	.00	.32	.31	.32	.48	254	111	.43
10	.02	.00	.00	.00	.00	.34	.28	.32	.58	262	137	.43
11	.02	.00	.00	.00	.00	.47	.38	.49	.63	264	179	.45
12	.02	.00	.00	.00	.00	.59	.36	.75	.79	243	192	.49
13	.02	.01	.00	.00	.00	.49	.43	1.2	.84	236	207	.48
14	.04	.02	.00	.00	.00	.45	.49	2.2	.89	202	204	.48
15	.12	.02	.00	.00	.00	.37	.39	2.1	.83	179	171	.48
16	.13	.04	.00	.00	.00	.44	.32	.51	.75	182	142	.48
17	.15	.13	.00	.00	.07	.48	.28	.37	.80	188	139	.55
18	.17	.11	.00	.00	.10	.43	.28	.40	.81	186	128	.54
19	.17	.12	.00	.00	.10	.47	.23	.46	.86	171	146	.54
20	.17	.12	.00	.00	.07	.43	.26	.53	36	164	180	.49
21	.15	.13	.00	.00	.14	.41	.28	.46	63	118	186	.51
22	.16	.13	.00	.00	.19	.36	.36	.43	122	119	186	.49
23	.15	.05	.00	.00	.18	.32	.45	.43	174	120	185	.46
24	.14	.11	.00	.00	.24	.41	.43	.43	207	90	195	.42
25	.10	.14	.00	.00	.20	.38	.58	.41	246	54	213	.37
26	.00	.14	.00	.00	.25	.27	.62	.39	48	54	228	.34
27	.00	.16	.00	.00	.41	.36	.46	.44	88	78	241	.37
28	.00	.16	.00	.00	.35	.38	.42	.59	112	128	223	.43
29	.00	.12	.00	.00	---	.51	.60	.51	102	147	184	.46
30	.00	.05	.00	.00	---	.65	.67	.46	103	132	140	.36
31	.00	---	.00	.00	---	.55	---	.55	---	129	131	---
TOTAL	1.77	1.76	.24	.00	2.30	13.01	12.65	18.02	1314.06	4682	4998	24.27
MEAN	.06	.06	.01	.00	.08	.42	.42	.58	43.8	151	161	.81
MAX	.17	.16	.10	.00	.41	.65	.67	2.2	246	264	241	11
MIN	.00	.00	.00	.00	.00	.25	.23	.20	.48	54	95	.34
AC-FT	3.5	3.5	.5	.00	4.6	26	25	36	2610	9290	9910	48
CAL YR 1984	TOTAL	12426.61	MEAN	34.0	MAX	253	MIN	.00	AC-FT	24650		
WTR YR 1985	TOTAL	11068.08	MEAN	30.3	MAX	264	MIN	.00	AC-FT	21950		

06834000 FRENCHMAN CREEK AT PALISADE, NE

LOCATION.--Lat 40°21'12", long 101°07'35", in SW1/4SE1/4 sec.36, T.5 N., R.34 W., Hayes County, Hydrologic Unit 10250005, on right bank at upstream side of bridge on U.S. Highway 6, 0.7 mi west of Palisade, and 1.5 mi upstream from Stinking Water Creek.

DRAINAGE AREA.--1,110 mi², approximately, of which about 950 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to October 1896, June 1950 to current year. Published as Frenchman River at Palisade, October 1894 to October 1896 and October 1965 to September 1972.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,743.49 ft above National Geodetic Vertical Datum of 1929. October 1894 to October 1896, nonrecording gage at railroad bridge 0.4 mi downstream at different datum; June 1950 to Feb. 7, 1977, recording gage at site 2,000 ft upstream at datum 4.0 ft higher.

REMARKS.--Estimated daily discharges: Dec. 2-8 and Dec. 13 to Feb. 19. Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station and, since Oct. 23, 1950, by storage in Enders Reservoir (station 06832000).

AVERAGE DISCHARGE.--37 years, 81.8 ft³/s, 59,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft³/s June 17, 1956, gage height, 8.79 ft, site and datum then in use; minimum daily, 11 ft³/s Sept. 11, 12, 14, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 221 ft³/s Aug. 28, gage height, 4.90 ft; minimum daily, 13 ft³/s June 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	27	27	28	24	31	31	29	24	106	139	145
2	23	26	27	27	25	31	29	29	24	100	126	96
3	24	27	26	26	25	31	29	30	23	81	119	58
4	25	28	24	28	25	32	28	30	25	69	113	48
5	28	26	26	28	22	35	29	32	27	79	111	42
6	27	25	25	28	22	35	27	31	26	95	118	36
7	25	26	25	28	23	33	26	30	23	110	138	31
8	24	26	26	25	23	33	25	29	21	143	141	28
9	24	26	29	26	25	31	26	29	20	165	138	27
10	24	27	28	26	25	30	26	29	20	197	119	26
11	24	27	27	26	26	30	26	29	18	208	123	26
12	24	26	27	26	28	29	26	29	18	215	159	27
13	24	27	26	25	29	29	26	31	19	206	167	39
14	25	27	25	25	31	30	25	35	18	204	186	31
15	27	26	27	27	35	29	26	32	17	182	189	25
16	29	26	29	27	45	29	26	30	17	166	171	25
17	28	26	31	26	52	30	25	30	16	162	150	24
18	26	26	28	26	50	31	25	28	14	169	143	22
19	25	26	28	26	48	30	25	27	14	170	137	21
20	25	26	30	22	46	30	25	26	13	178	140	19
21	24	26	30	23	44	31	25	25	13	171	168	20
22	25	26	30	25	41	31	24	26	33	137	172	22
23	26	27	29	25	40	31	23	26	63	130	177	25
24	25	27	29	25	38	30	23	25	124	135	176	26
25	26	27	27	27	36	30	29	25	153	125	179	25
26	25	27	28	27	35	30	32	25	195	92	195	23
27	25	28	30	27	33	31	30	25	110	85	203	24
28	25	29	29	26	32	31	29	25	84	83	218	23
29	25	29	29	26	---	30	30	26	115	116	210	24
30	25	27	29	20	---	30	30	26	101	152	189	24
31	25	---	27	24	---	31	---	25	---	145	156	---
TOTAL	780	800	858	801	928	955	806	874	1388	4376	4870	1032
MEAN	25.2	26.7	27.7	25.8	33.1	30.8	26.9	28.2	46.3	141	157	34.4
MAX	29	29	31	28	52	35	32	35	195	215	218	145
MIN	23	25	24	20	22	29	23	25	13	69	111	19
AC-FT	1550	1590	1700	1590	1840	1890	1600	1730	2750	8680	9660	2050
CAL YR 1984	TOTAL	21812		MEAN	59.6	MAX	402	MIN	16	AC-FT	43260	
WTR YR 1985	TOTAL	18468		MEAN	50.6	MAX	218	MIN	13	AC-FT	36630	

KANSAS RIVER BASIN

06835000 STINKING WATER CREEK NEAR PALISADE, NE

LOCATION.--Lat 40°22'10", long 101°06'50", in SW1/4NW1/4 sec.30, T.5 N., R.33 W., Hayes County, Hydrologic Unit 10250006, on right bank 25 ft downstream from county bridge, 1.2 mi upstream from mouth, and 1.8 mi northwest of Palisade.

DRAINAGE AREA.--1,500 mi², approximately, of which about 380 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1730: 1952(M). WSP 1919: 1951(P), 1955. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,740.99 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1 to Apr. 15. Records good except for period of estimated record, which is poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--36 years, 39.7 ft³/s, 28.760 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,030 ft³/s June 17, 1956, gage height, 11.30 ft, from rating curve extended above 1,200 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 6.0 ft³/s Aug. 4, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 14	0400	*53	*3.39	No peaks greater than base discharge.			
Minimum daily discharge, 9.8 ft ³ /s July 18, Sept. 1.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	27	27	27	24	39	35	41	26	17	19	9.8
2	18	26	26	28	23	40	34	40	25	17	18	9.9
3	19	27	23	31	23	41	34	38	24	19	18	10
4	20	27	27	31	24	42	35	37	25	18	18	9.9
5	21	24	26	30	25	42	36	36	26	16	17	10
6	23	25	24	30	24	39	37	35	27	16	15	10
7	24	25	25	30	24	38	36	35	26	14	14	11
8	24	25	26	29	24	38	33	34	25	14	14	11
9	23	25	28	25	24	39	30	33	24	14	14	11
10	22	26	28	24	25	40	27	33	24	13	13	11
11	23	27	27	26	24	40	28	32	23	13	13	11
12	22	26	27	26	24	41	28	32	22	12	12	13
13	22	27	26	27	26	41	28	35	22	11	12	26
14	22	27	25	29	26	42	27	39	22	11	13	39
15	24	26	26	30	27	42	28	47	22	11	13	26
16	25	26	27	30	28	43	28	44	22	11	13	19
17	27	26	27	30	29	43	28	40	20	11	13	18
18	26	26	25	29	30	41	28	37	20	9.8	12	17
19	25	26	25	28	34	41	28	35	20	11	12	16
20	25	26	26	26	37	42	28	33	20	15	13	16
21	24	26	27	25	39	41	28	31	19	15	13	17
22	25	26	26	28	41	41	28	30	18	16	13	17
23	26	26	26	28	43	42	27	29	18	15	13	18
24	25	26	27	26	45	42	27	28	17	15	12	19
25	25	26	27	28	43	44	29	28	16	16	12	19
26	26	26	27	28	42	41	34	27	17	15	12	19
27	25	27	28	28	41	40	38	27	17	14	11	19
28	25	27	28	27	40	39	40	27	17	13	10	19
29	25	25	29	27	---	39	39	27	16	13	10	20
30	25	26	29	24	---	39	40	26	16	15	9.9	20
31	25	---	28	25	---	37	---	26	---	18	9.9	---
TOTAL	729	781	823	860	859	1259	946	1042	636	438.8	411.8	491.6
MEAN	23.5	26.0	26.5	27.7	30.7	40.6	31.5	33.6	21.2	14.2	13.3	16.4
MAX	27	27	29	31	45	44	40	47	27	19	19	39
MIN	18	24	23	24	23	37	27	26	16	9.8	9.9	9.8
AC-FT	1450	1550	1630	1710	1700	2500	1880	2070	1260	870	817	975
CAL YR 1984	TOTAL	13168		MEAN	36.0	MAX	925	MIN	13	AC-FT	26120	
WTR YR 1985	TOTAL	9277.2		MEAN	25.4	MAX	47	MIN	9.8	AC-FT	18400	

06835500 FRENCHMAN CREEK AT CULBERTSON, NE

LOCATION.--Lat 40°14'05", long 100°52'40", in SW1/4SE1/4 sec.12, T.3 N., R.32 W., Hitchcock County, Hydrologic Unit 10250005, on right bank 8 ft (revised) upstream from bridge on U.S. Highways 6 and 34, 2 mi west of Culbertson, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--2,770 mi², approximately, of which about 1,470 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1913 to September 1915 (gage heights and discharge measurements only), October 1930 to current year. Published as Frenchman River at Culbertson October 1965 to September 1972. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1931, 1933, 1934(M), 1938(M). WSP 2119: Drainage area. WDR NE-84-1: 1979, 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 2,583.44 ft above National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Nov. 2, 1950.

REMARKS.--Estimated daily discharges: Nov. 4, Dec. 5, 6, and Dec. 15 to Feb. 15. Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station and, since Oct. 23, 1950, by storage in Enders Reservoir (station 06832000). Principal diversion is by Culbertson Canal, 20,800 acres.

AVERAGE DISCHARGE.--55 years, 101 ft³/s, 73,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, estimated, May 31, 1935, gage height, 14.8 ft, from floodmarks, present site and datum; no flow Aug. 7, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 162 ft³/s Feb. 17, gage height, 3.53 ft; maximum gage height, 4.55 ft Jan. 30, backwater from ice; minimum daily discharge, 1.1 ft³/s Aug. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	56	66	50	60	91	76	29	14	14	9.4	1.4
2	31	57	65	40	65	90	76	28	14	13	5.4	3.9
3	39	57	61	40	60	91	77	28	14	11	3.3	11
4	42	57	57	45	60	89	77	28	16	8.9	3.0	13
5	49	56	60	60	55	84	78	29	15	8.1	2.9	34
6	56	67	60	65	55	86	78	28	15	7.7	2.9	19
7	54	69	58	70	55	85	78	28	15	7.6	2.6	20
8	52	69	67	70	55	87	76	26	14	7.4	2.6	19
9	46	69	70	60	60	87	76	24	14	9.6	2.3	18
10	50	70	68	50	60	87	76	26	14	9.7	2.2	19
11	52	70	68	45	65	86	76	24	13	9.7	1.9	20
12	45	70	68	50	80	85	76	24	13	7.0	1.9	18
13	49	70	68	55	100	84	75	26	13	5.1	2.0	34
14	50	70	56	60	110	85	74	28	14	4.8	2.4	52
15	53	70	50	65	120	84	73	25	13	4.4	2.9	53
16	52	70	60	65	123	83	52	21	13	4.6	2.4	43
17	62	65	60	60	148	82	45	20	12	3.3	2.0	29
18	63	61	55	55	130	83	38	27	12	2.9	2.2	31
19	62	60	40	35	119	81	36	27	11	3.4	2.1	30
20	63	55	45	50	121	81	33	26	12	3.4	2.1	29
21	60	69	50	55	122	81	32	26	11	2.7	1.9	34
22	59	62	50	55	110	82	31	26	9.8	2.4	2.1	37
23	52	62	55	60	106	81	30	26	10	2.8	1.8	40
24	60	63	55	60	101	80	29	25	9.6	5.6	1.5	31
25	59	64	45	65	98	80	31	24	24	2.4	1.3	37
26	59	66	45	65	95	79	33	21	41	2.2	1.1	38
27	65	66	55	65	93	78	32	18	73	7.9	1.1	37
28	59	63	60	60	91	77	34	19	30	2.6	1.1	42
29	58	65	60	60	---	75	36	16	22	2.6	1.8	45
30	53	66	50	55	---	74	31	18	23	4.1	2.4	46
31	56	---	50	55	---	75	---	17	---	12	1.8	---
TOTAL	1644	1934	1777	1745	2517	2573	1665	758	524.4	192.9	76.4	884.3
MEAN	53.0	64.5	57.3	56.3	89.9	83.0	55.5	24.5	17.5	6.22	2.46	29.5
MAX	65	70	70	70	148	91	78	29	73	14	9.4	53
MIN	31	55	40	35	55	74	29	16	9.6	2.2	1.1	1.4
AC-FT	3260	3840	3520	3460	4990	5100	3300	1500	1040	383	152	1750
CAL YR 1984	TOTAL	22448.57		MEAN	61.3	MAX	716	MIN	.98	AC-FT	44530	
WTR YR 1985	TOTAL	16291.0		MEAN	44.6	MAX	148	MIN	1.1	AC-FT	32310	

KANSAS RIVER BASIN

06835500 FRENCHMAN CREEK AT CULBERTSON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)					
OCT 17...	1030	60	550	8.1	8.5	10.6					
MAR 26...	1600	85	585	8.3	15.5	9.2					
JUN 11...	0900	12	825	9.3	13.0	--					
JUL 10...	1630	6.0	640	8.1	32.0	--					
AUG 08...	1255	3.0	675	8.1	26.5	10.8					
SEP 12...	0730	17	506	8.3	17.0	8.0					
DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAR 26...	1600	50	180	0	48	15	20	.7	15	188	45
AUG 08...	1255	13	260	7	64	24	39	1	19	252	72
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR 26...	7.9	.80	44	310	.42	71	2.5	.030	100	3	2
AUG 08...	9.7	1.1	51	430	.59	3.5	4.7	.010	180	8	14

06836000 BLACKWOOD CREEK NEAR CULBERTSON, NE

LOCATION.--Lat 40°14'10", long 100°48'39", in SE1/4SW1/4 sec.10, T.3 N., R.31 W., Hitchcock County, Hydrologic Unit 10250004, on right bank 500 ft upstream from bridge on U.S. Highways 6 and 34, 0.2 mi north of Burlington Northern Inc. bridge, 1 mi east of Culbertson, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--320 mi², approximately, of which about 270 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May 1946 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,555.25 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1967, at site 0.2 mile downstream at present datum and Oct. 1, 1967, to Aug. 28, 1968, at site 0.8 mi downstream at datum 8.96 ft lower.

REMARKS.--Records fair. Entire year affected by backwater from beaver dams. Natural flow affected by irrigation development above station, return flow from irrigated areas, and waste from Culbertson Canal.

AVERAGE DISCHARGE.--39 years, 5.96 ft³/s, 4,320 acre-ft/yr; median of yearly mean discharges, 5.3 ft³/s, 3,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s June 17, 1955, gage height, 14.64 ft, site then in use; no flow Jan. 4-6, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 31, 1935, reached a stage of 24.0 ft, at site 0.2 mi downstream, at present datum, from floodmarks, discharge, about 5,300 ft³/s, from information by Nebraska Department of Roads.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 26	0400	*143	*5.36	No peak greater than base discharge.			
Minimum daily discharge, 0.13 ft ³ /s Sept. 11.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.51	.80	.90	.52	.50	.58	6.0	2.0	4.0	.39	3.5
2	1.1	.54	.82	.80	.46	.50	.56	4.5	2.0	6.3	.69	9.9
3	1.1	.58	.82	1.0	.44	.50	.56	3.6	1.9	3.9	.63	11
4	1.5	.62	.82	1.1	.47	.53	.55	3.1	2.3	1.6	.55	7.2
5	2.1	.65	.82	1.1	.43	.50	.54	3.4	2.6	1.0	.54	13
6	1.7	.67	.79	1.1	.49	.50	.57	3.5	2.2	1.0	.27	1.7
7	1.4	.67	.77	1.1	.50	.50	.87	3.9	1.9	1.9	1.1	.77
8	1.2	.69	.78	1.1	.50	.50	1.1	3.5	1.9	2.3	1.6	.62
9	.84	.67	.82	1.1	.50	.50	1.1	3.7	1.9	2.3	.79	.14
10	.46	.67	.82	1.1	.50	.54	1.9	3.5	1.5	2.7	.63	.14
11	.59	.69	.82	1.1	.50	.51	2.7	3.9	.21	2.1	.65	.13
12	.54	.72	.82	.93	.50	.50	2.4	4.4	.15	1.5	.54	.14
13	.69	.67	.82	.93	.50	.48	3.7	5.8	.16	1.6	1.3	.21
14	.88	.67	.84	.94	.51	.46	4.4	5.8	.27	2.0	2.5	.22
15	1.3	.67	.94	.94	7.0	.46	4.6	3.5	.24	2.6	2.7	.26
16	.82	.62	.94	.94	15	.46	4.6	1.7	.33	1.3	2.0	.26
17	.59	.68	1.0	.94	37	.50	4.1	2.3	1.3	1.8	2.1	.25
18	.56	.76	1.0	.94	18	.46	4.0	3.4	1.1	2.0	3.7	.22
19	.56	.77	.90	.84	11	.46	4.3	3.5	.47	2.2	1.6	.22
20	.45	.77	.94	.76	8.8	.40	4.6	3.1	.54	2.9	1.4	.29
21	.43	.77	.94	.70	3.3	.36	4.6	3.0	.58	3.2	1.8	.43
22	.53	.77	.94	.66	.95	.33	5.4	2.5	.59	2.4	2.4	.51
23	.52	.77	.94	.66	.70	.36	9.8	2.2	.67	1.1	1.7	.55
24	.53	.78	.94	.69	.52	.39	5.2	2.4	1.9	16	1.4	.50
25	.70	.82	.90	.76	.50	.40	3.7	2.4	11	5.0	1.3	.48
26	.72	.82	.96	.77	.50	.40	2.7	2.4	77	3.5	1.8	.44
27	.67	.79	1.0	.77	.50	.77	4.3	4.2	12	1.9	3.7	.60
28	.60	.77	1.1	.72	.50	.76	3.6	3.1	3.8	5.1	5.1	.57
29	.54	.77	1.1	.72	---	.67	5.8	2.7	3.5	4.5	5.4	.57
30	.51	.77	1.1	.72	---	.67	7.5	2.5	5.6	.78	5.8	.50
31	.44	---	1.0	.70	---	.68	---	1.9	---	.75	4.2	---
TOTAL	25.97	21.12	28.00	27.53	111.09	15.55	100.33	105.4	141.61	91.23	60.28	55.32
MEAN	.84	.70	.90	.89	3.97	.50	3.34	3.40	4.72	2.94	1.94	1.84
MAX	2.1	.82	1.1	1.1	37	.77	9.8	6.0	77	16	5.8	13
MIN	.43	.51	.77	.66	.43	.33	.54	1.7	.15	.75	.27	.13
AC-FT	52	42	56	55	220	31	199	209	281	181	120	110
CAL YR 1984	TOTAL	1267.59		MEAN	3.46	MAX	202	MIN	.43	AC-FT	2510	
WTR YR 1985	TOTAL	783.43		MEAN	2.15	MAX	77	MIN	.13	AC-FT	1550	

KANSAS RIVER BASIN

06836500 DRIFTWOOD CREEK NEAR MCCOOK, NE

LOCATION.--Lat 40°09'41", long 100°39'35", in SE1/4SW1/4 sec.1, T.2 N., R.30 W., Red Willow County, Hydrologic Unit 10250004, on right bank downstream from county road bridge, 3.0 mi downstream from siphon and wasteway on Meeker-Driftwood Canal, 3.5 mi southwest of McCook, and 2.6 miles upstream from mouth.

DRAINAGE AREA.--360 mi², approximately, of which about 350 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--March 1946 to current year.

REVISED RECORDS.--WSP 1210: 1950.

GAGE.--Water-stage recorder. Datum of gage is 2,485.23 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1962, at site 1.7 mi upstream in old channel at datum 8.55 ft higher, Oct. 12, 1962, to Apr. 11, 1963, at site 1.4 mi upstream at datum 4.80 ft higher, and Apr. 12, 1963 to Apr. 22, 1982 at site 1.9 mi upstream at datum 8.55 ft higher.

REMARKS.--Estimated daily discharges: Dec. 13-15, 18-20, Jan. 1, 2, 9-17, 20-24, Jan. 30 to Feb. 17, July 6, 7, Sept. 15-17, 19-23. Records fair except for periods of estimated record, which are poor. Natural flow affected by waste from Meeker-Driftwood Canal and by irrigation development above station.

AVERAGE DISCHARGE.--39 years, 10.4 ft³/s, 7,530 acre-ft/yr; median of yearly mean discharges, 8.3 ft³/s, 6,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,740 ft³/s Aug. 7, 1950, gage height, 25.43 ft, at site then in use, from floodmark, from rating curve extended above 3,000 ft³/s; no flow at times in 1946-50, 1952-56.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 27	0700	*843	*11.29	No other peak greater than base discharge.			
Minimum daily discharge, 2.5 ft ³ /s, Oct. 1, 2.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	6.1	6.3	5.4	4.8	6.8	6.1	7.3	4.4	12	11	14
2	2.5	5.8	6.1	7.0	5.0	6.8	5.9	6.4	4.2	10	12	15
3	2.6	6.5	6.7	6.6	5.6	6.8	6.2	5.9	4.1	9.0	12	11
4	2.8	6.4	5.9	5.9	5.4	6.2	6.0	5.6	4.4	10	13	11
5	5.0	6.1	6.1	6.0	5.2	6.2	6.5	5.5	4.6	11	12	11
6	4.5	6.0	6.3	6.1	6.2	6.3	6.5	5.5	4.8	9.0	11	11
7	3.7	6.4	6.2	5.9	6.2	6.7	6.3	5.7	4.8	8.0	10	9.1
8	4.0	6.3	6.2	5.8	6.4	6.4	6.2	5.1	4.4	7.0	11	8.0
9	4.0	6.2	6.4	5.6	6.8	6.3	6.0	5.0	4.6	10	12	7.7
10	4.3	6.2	6.3	5.4	7.4	6.4	5.9	5.1	4.4	9.8	14	10
11	5.2	6.2	6.3	5.4	7.0	6.7	6.1	4.9	4.9	14	14	10
12	5.7	6.1	6.5	5.0	7.2	6.4	6.0	4.8	8.0	12	12	8.7
13	6.2	6.1	6.8	5.4	7.4	6.4	6.0	7.4	4.1	12	9.3	11
14	6.8	6.1	6.4	6.0	7.6	6.3	5.7	12	4.2	10	22	29
15	8.7	5.7	7.4	6.6	8.0	6.1	5.8	7.9	4.7	14	43	12
16	10	5.4	7.2	6.2	14	6.1	5.9	6.7	5.9	14	21	8.0
17	10	5.6	7.1	6.0	17	6.2	5.7	5.7	4.8	10	16	6.6
18	8.9	5.6	6.2	5.7	47	6.2	5.7	5.6	5.5	8.9	17	6.2
19	7.6	5.5	6.6	6.3	38	6.1	5.5	5.5	5.4	15	20	5.8
20	7.1	5.4	6.8	5.4	32	6.1	5.4	5.4	6.5	21	15	5.8
21	6.7	5.5	6.7	5.2	26	6.0	5.2	5.2	6.0	23	12	5.6
22	6.3	5.4	7.6	5.4	20	6.1	5.2	5.1	6.4	22	9.9	5.6
23	5.9	5.4	8.9	5.2	13	6.1	5.2	4.9	6.2	21	11	5.4
24	6.0	5.4	7.3	5.4	10	6.4	5.1	4.9	6.3	35	9.7	5.4
25	6.6	6.1	7.0	5.6	8.2	6.0	5.2	4.9	41	87	8.8	5.3
26	6.6	7.8	6.7	5.4	7.3	5.9	7.8	5.0	502	44	11	5.5
27	6.5	7.3	5.8	5.6	6.9	5.8	7.7	4.8	585	24	11	5.5
28	5.9	6.3	6.6	5.5	6.9	6.0	7.4	5.0	76	18	13	5.4
29	5.9	6.3	7.3	5.7	---	5.8	7.9	5.1	23	19	13	5.7
30	5.8	6.5	6.2	5.4	---	5.9	8.0	4.8	15	14	16	6.1
31	5.9	---	6.3	5.2	---	6.1	---	4.4	---	10	15	---
TOTAL	180.2	181.7	206.2	177.3	342.5	193.6	184.1	177.1	1365.6	543.7	437.7	266.4
MEAN	5.81	6.06	6.65	5.72	12.2	6.25	6.14	5.71	45.5	17.5	14.1	8.88
MAX	10	7.8	8.9	7.0	47	6.8	8.0	12	585	87	43	29
MIN	2.5	5.4	5.8	5.0	4.8	5.8	5.1	4.4	4.1	7.0	8.8	5.3
AC-FT	357	360	409	352	679	384	365	351	2710	1080	868	528
CAL YR 1984	TOTAL	3144.2		MEAN	8.59	MAX	186	MIN	2.2	AC-FT	6240	
WTR YR 1985	TOTAL	4256.1		MEAN	11.7	MAX	585	MIN	2.5	AC-FT	8440	

06837000 REPUBLICAN RIVER AT MCCOOK, NE

LOCATION.--Lat 40°11'15", long 100°37'05", in SW1/4NE1/4 sec.32, T.3 N., R.29 W., Red Willow County, Hydrologic Unit 10250004, on left bank 25 ft downstream from bridge on U.S. Highway 83 at south edge of McCook, 2.5 mi downstream from Driftwood Creek, and 10.5 mi upstream from Red Willow Creek.

DRAINAGE AREA.--12,310 mi², approximately, of which about 6,260 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to June 1932, October 1954 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,456.37 ft above National Geodetic Vertical Datum of 1929. October 1930 to June 1932, nonrecording gage on former highway bridge 325 ft upstream at different datum and October 1954 to Mar. 13, 1959, on highway bridge 25 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 13 to Feb. 20. Records good except for period of estimated record, which is poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir, Enders Reservoir (station 06832000), and Swanson Lake (station 06829000).

AVERAGE DISCHARGE.--32 years, 178 ft³/s, 129,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,890 ft³/s Mar. 21, 1960, gage height, 9.14 ft; no flow for several days in July and August 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred May 31, 1935, discharge, about 245,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s June 26, gage height, 6.43 ft from floodmark; minimum daily, 27 ft³/s June 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	95	99	76	48	140	114	88	41	52	155	65
2	56	92	102	78	54	143	115	80	41	104	159	64
3	60	91	97	80	68	140	116	75	41	137	155	80
4	69	91	100	84	64	132	118	72	52	128	146	68
5	84	93	98	88	60	128	126	71	55	128	148	119
6	77	93	97	92	72	121	118	67	47	137	139	83
7	75	95	96	86	72	118	115	60	40	134	140	48
8	73	97	102	86	72	121	111	60	36	132	140	42
9	72	94	107	62	80	123	114	56	42	125	135	39
10	72	96	103	47	86	123	114	55	37	130	134	42
11	77	98	102	47	90	120	111	55	37	143	134	40
12	78	99	105	42	94	118	109	56	39	132	134	41
13	79	98	94	70	100	118	109	75	32	131	127	42
14	84	92	88	94	110	116	109	105	30	121	135	68
15	97	92	90	90	116	114	110	80	28	134	142	82
16	100	95	92	86	125	114	101	66	28	137	107	59
17	101	99	94	90	140	119	86	58	27	129	91	48
18	100	100	84	94	180	123	78	61	57	129	88	40
19	105	98	86	96	230	121	73	61	163	143	95	38
20	105	91	94	80	360	120	70	56	146	161	93	39
21	105	99	90	82	320	122	66	53	142	166	80	45
22	102	101	88	84	223	128	63	54	142	160	71	54
23	94	99	90	80	195	126	63	55	139	153	68	54
24	99	99	96	100	173	121	64	57	139	240	65	52
25	103	101	80	110	164	119	67	53	230	227	65	51
26	100	106	84	104	155	115	98	56	932	195	67	54
27	97	106	90	108	146	111	86	107	639	163	67	55
28	95	107	98	106	141	110	81	61	203	155	69	60
29	95	102	104	100	---	111	95	51	82	173	72	77
30	95	99	92	80	---	115	100	48	57	157	75	75
31	96	---	84	60	---	108	---	44	---	155	74	---
TOTAL	2701	2918	2926	2582	3738	3758	2900	1996	3724	4511	3370	1724
MEAN	87.1	97.3	94.4	83.3	134	121	96.7	64.4	124	146	109	57.5
MAX	105	107	107	110	360	143	126	107	932	240	159	119
MIN	56	91	80	42	48	108	63	44	27	52	65	38
AC-FT	5360	5790	5800	5120	7410	7450	5750	3960	7390	8950	6680	3420
CAL YR 1984	TOTAL	53496		MEAN	146	MAX	645	MIN	45	AC-FT	106100	
WTR YR 1985	TOTAL	36848		MEAN	101	MAX	932	MIN	27	AC-FT	73090	

KANSAS RIVER BASIN

06837000 REPUBLICAN RIVER AT MC COOK, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1967 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1966 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 13, 1966.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 38.5°C June 24, 1971; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 34.5°C June 8, 1985; minimum, 0.0°C on many days during winter period.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	7.0	8.0	5.0	5.5	.0	.5	.0	.0	.0	9.5	3.5
2	19.5	9.0	9.0	3.5	2.0	.0	.5	.0	.0	.0	6.0	4.0
3	18.0	9.5	9.0	4.5	.5	.0	.0	.0	.0	.0	9.0	4.5
4	15.0	13.5	8.0	4.5	.0	.0	.0	.0	.0	.0	5.5	2.0
5	14.5	14.0	6.0	2.0	3.0	.0	.0	.0	.0	.0	5.5	1.0
6	17.0	11.5	4.0	1.5	.5	.0	.5	.0	.5	.0	9.0	1.5
7	17.0	11.5	6.0	1.5	2.0	.0	.0	.0	.5	.0	10.0	4.0
8	16.0	13.0	5.5	3.5	5.0	.0	.0	.0	.0	.0	12.0	3.0
9	15.5	11.5	6.5	4.0	8.0	1.5	.0	.0	.0	.0	13.0	5.0
10	15.5	13.0	4.5	1.5	6.0	.5	.5	.0	.0	.0	13.5	5.5
11	18.5	13.0	4.5	1.0	5.0	3.0	.5	.0	.0	.0	12.0	8.0
12	19.5	14.5	4.5	1.0	4.5	1.5	.0	.0	.0	.0	8.0	5.0
13	18.5	16.0	5.5	1.0	1.5	.0	.0	.0	.0	.0	11.5	3.5
14	17.0	12.0	6.5	3.0	.5	.0	.0	.0	.0	.0	13.0	3.5
15	14.5	9.5	5.5	2.0	.5	.0	.0	.0	.0	.0	13.0	5.0
16	12.0	6.5	4.5	1.5	.5	.0	.0	.0	.0	.0	13.5	5.5
17	9.5	5.0	6.5	1.5	.5	.0	.0	.0	.0	.0	14.5	5.5
18	8.0	5.5	6.5	.5	1.0	.0	.0	.0	.5	.0	15.0	5.5
19	9.5	3.5	6.5	.0	.0	.0	.0	.0	.0	.0	15.0	7.0
20	8.5	6.0	5.0	2.0	.0	.0	.0	.0	.5	.0	14.5	6.0
21	8.0	5.5	6.0	.0	1.0	.0	.0	.0	4.0	.0	14.0	7.0
22	8.5	6.0	5.5	1.5	1.0	.0	.0	.0	4.0	1.0	11.0	7.0
23	8.5	5.0	6.5	.0	1.0	.0	.5	.0	3.5	2.0	11.0	4.5
24	6.5	4.5	6.5	1.5	1.0	.0	.5	.0	5.0	.5	14.0	5.0
25	10.0	6.0	6.0	5.5	.5	.0	.0	.0	5.5	1.5	6.0	16.0
26	12.0	6.0	5.5	2.0	.5	.0	.5	.0	5.5	2.0	9.5	18.5
27	13.0	9.0	4.0	.0	.0	.0	.5	.0	4.5	1.5	6.5	14.5
28	10.5	7.0	3.5	.0	.5	.0	.5	.0	8.0	2.0	6.5	10.0
29	11.0	6.0	6.0	.0	.5	.0	.5	.0	---	---	4.5	8.5
30	9.0	6.5	5.0	.0	.0	.0	.0	.0	---	---	1.5	5.0
31	9.5	6.5	---	---	.0	.0	.0	.0	---	---	.0	10.5
MONTH	19.5	3.5	9.0	.0	8.0	.0	.5	.0	8.0	.0	15.0	1.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[illegible]

KANSAS RIVER BASIN

06837300 RED WILLOW CREEK ABOVE HUGH BUTLER LAKE, NE

LOCATION.--Lat 40°24'05", long 100°46'45", in NE1/4SE1/4 sec.13, T.5 N., R.31 W., Hayes County, Hydrologic Unit 10250007, on right bank 1,000 ft above county road bridge, 7.2 mi upstream from Red Willow Dam, and 12 mi northeast of Culbertson.

DRAINAGE AREA.--600 mi², approximately, of which about 200 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Artificial control since March 1961. Datum of gage is 2,594.80 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 23, 1961, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 2-4, 7, 8, Dec. 15 to Jan. 13, Jan. 20-24, and Jan. 31 to Feb. 3. Records good except for periods of estimated record, which are poor. Natural flow affected by pump irrigation development above station.

AVERAGE DISCHARGE.--25 years, 27.7 ft³/s, 20,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft³/s June 16, 1972, gage height, 13.27 ft, from rating curve extended above 1,000 ft³/s on basis of slope-conveyance study; minimum daily, 4.0 ft³/s July 4, 5, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 23	1215	*90	*1.85	No peaks greater than base discharge.			

Minimum daily discharge, 7.1 ft³/s Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	19	23	15	14	29	24	36	22	14	15	7.2
2	11	19	23	17	16	28	24	36	21	15	15	8.2
3	13	19	21	21	18	28	24	34	19	16	14	8.3
4	15	18	24	22	17	29	24	31	20	16	15	9.6
5	16	18	22	21	16	29	24	28	21	15	15	9.0
6	20	18	18	20	19	28	25	27	21	12	14	9.4
7	21	18	20	19	18	26	26	26	22	11	12	8.9
8	20	18	22	19	20	27	26	26	20	9.8	12	8.5
9	18	18	19	18	20	27	24	26	19	10	12	9.0
10	18	19	19	17	21	27	24	25	17	14	12	9.6
11	17	21	21	18	24	26	23	24	15	14	11	10
12	17	22	22	20	22	26	22	25	15	18	9.6	11
13	16	23	21	23	19	26	22	30	15	14	11	12
14	15	23	17	25	20	26	22	44	15	12	11	16
15	15	22	18	29	26	26	21	53	15	12	9.4	20
16	18	21	22	22	51	25	21	68	15	11	14	20
17	19	21	28	28	49	25	20	52	14	17	11	20
18	22	21	18	25	40	24	20	38	14	12	11	16
19	25	20	20	25	36	24	20	34	14	17	10	13
20	20	20	22	18	36	24	20	29	14	20	10	12
21	21	20	23	16	37	24	20	26	13	18	8.6	13
22	20	20	22	18	43	26	20	24	12	16	8.8	14
23	20	21	23	20	63	26	20	23	12	14	9.5	18
24	19	22	20	22	48	26	20	22	11	16	9.4	19
25	19	22	18	23	41	26	22	22	13	17	8.4	19
26	20	23	20	26	35	26	27	21	16	16	9.3	19
27	21	25	23	24	33	24	32	21	13	15	8.5	18
28	21	26	26	23	31	24	35	21	14	14	8.2	18
29	21	24	23	27	---	24	37	21	14	14	8.2	18
30	20	23	22	19	---	23	39	21	14	15	7.6	18
31	19	---	19	15	---	23	---	22	---	15	7.1	---
TOTAL	565.7	624	659	655	833	802	728	936	480	449.8	337.6	411.7
MEAN	18.2	20.8	21.3	21.1	29.8	25.9	24.3	30.2	16.0	14.5	10.9	13.7
MAX	25	26	28	29	63	29	39	68	22	20	15	20
MIN	8.7	18	17	15	14	23	20	21	11	9.8	7.1	7.2
AC-FT	1120	1240	1310	1300	1650	1590	1440	1860	952	892	670	817
CAL YR 1984	TOTAL	9963.9		MEAN	27.2	MAX	357	MIN	7.3	AC-FT	19760	
WTR YR 1985	TOTAL	7481.8		MEAN	20.5	MAX	68	MIN	7.1	AC-FT	14840	

06837390 HUGH BUTLER LAKE NEAR MCCOOK, NE

LOCATION.--Lat 40°21'35", long 100°39'55", in SW1/4NW1/4 sec.31, T.5 N., R.29 W., Frontier County, Hydrologic Unit 10250007, in gate-control house at outlet tube of Red Willow Dam on Red Willow Creek, 12 mi north of McCook.

DRAINAGE AREA.--730 mi², approximately, of which about 310 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1961 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 10, 1962, nonrecording gage at present datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Sept. 5, 1961. Capacity, 31,470 acre-ft between elevations 2,522.0 ft, sill of outlet works, and 2,581.8 ft, top of irrigation pool. Top of flood-control pool and crest of mean spillway at elevation 2,604.9 ft, capacity, 86,360 acre-ft. Top of superstorage flood control pool at elevation 2,627.8 ft, capacity, 162,600 acre-ft. Dead storage, 6,310 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 41,680 acre-ft July 15, 16, 1967, elevation, 2,584.14 ft; minimum since operation of reservoir began, 16,930 acre-ft Sept. 8, 1978, elevation, 2,565.31 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 36,010 acre-ft May 30, elevation, 2,580.70 ft; minimum, 25,630 acre-ft Sept. 9, elevation, 2,573.27 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,570	21,800	2,580	34,910
2,575	27,800	2,585	43,170

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27550	28610	29410	30190	31160	33170	34070	35000	35860	34140	30570	26200
2	27560	28620	29410	30220	31190	33250	34110	35050	35850	34050	30440	26070
3	27610	28700	29410	30280	31230	33410	34200	35110	35860	33970	30360	25970
4	27650	28700	29450	30320	31280	33290	34230	35160	35910	33910	30240	25920
5	27750	28680	29470	30360	31310	33310	34200	35190	35880	33840	30110	25850
6	27800	28700	29470	30400	31330	33380	34220	35190	35900	33760	30020	25790
7	27840	28750	29510	30410	31340	33430	34200	35190	35910	33680	29940	25720
8	27840	28780	29570	30470	31410	33440	34200	35210	35930	33520	29840	25650
9	27850	28840	29600	30510	31440	33500	34250	35220	35830	33280	29690	25640
10	27890	28790	29620	30520	31450	33560	34300	35220	35720	33040	29560	25640
11	27950	28820	29730	30520	31480	33580	34360	35330	35580	32850	29430	25640
12	27970	28860	29750	30580	31510	33580	34390	35300	35460	32730	29300	25700
13	28010	28900	29830	30640	31550	33620	34390	35440	35520	32550	29120	25700
14	28090	28950	29840	30650	31560	33640	34390	35470	35350	32390	29050	25710
15	28080	28940	29900	30700	31650	33680	34430	35580	35270	32200	28950	25750
16	28160	28950	29920	30750	31840	33700	34450	35660	35190	32000	28880	25800
17	28160	28960	29940	30800	32030	33740	34460	35740	35100	31830	28820	25820
18	28220	28970	29940	30840	32180	33810	34460	35770	34990	31620	28740	25820
19	28240	29000	29960	30840	32300	33820	34480	35820	34910	31510	28660	25870
20	28290	29030	30000	30830	32450	33840	34460	35830	34850	31470	28550	25810
21	28300	29070	30040	30850	32520	33840	34480	35830	34740	31420	28460	25820
22	28310	29110	30060	30880	32650	33910	34450	35830	34620	31350	28350	25870
23	28340	29120	30100	30960	32760	33910	34420	35850	34530	31270	28220	25850
24	28390	29150	30090	30980	32860	33940	34390	35850	34370	31270	28040	25850
25	28460	29260	30110	31000	32970	33970	34430	35850	34570	31210	27760	25870
26	28500	29310	30150	31040	33010	34060	34570	35880	34400	31140	27510	25870
27	28550	29280	30220	31060	33050	34100	34600	35880	34320	31070	27210	25900
28	28550	29310	30280	31110	33130	34040	34690	35880	34290	31010	26910	25900
29	28580	29350	30280	31170	---	33970	34880	35930	34230	30930	26680	25960
30	28580	29380	30250	31170	---	34000	34960	35900	34160	30800	26510	25980
31	28660	---	30190	31140	---	34020	---	35900	---	30680	26360	---
MAX	28660	29380	30280	31170	33130	34100	34960	35930	35930	34140	30570	26200
MIN	27550	28610	29410	30190	31160	33170	34070	35000	34160	30680	26360	25640
(†)	2575.65	2576.19	2576.79	2577.46	2578.83	2579.42	2580.03	2580.63	2579.51	2577.14	2573.86	2573.56
(††)	+1060	+720	+810	+950	+1990	+890	+940	+940	-1740	-3480	-4320	-380
CAL YR 1984	MEAN	31370	MAX	37470	MIN	27550	(††)	+2150				
WTR YR 1985	MEAN	31270	MAX	35930	MIN	25640	(††)	-1620				

(†) Elevation, in feet, at end of month.

(††) Change in contents, in acre-feet.

KANSAS RIVER BASIN

06837500 RED WILLOW CREEK NEAR MCCOOK, NE

LOCATION.--Lat 40°20'50", long 100°38'35", in SW1/4NW1/4 sec.6, T.4 N., R.29 W., Red Willow County, Hydrologic Unit 10250007, on left bank 45 ft downstream from bridge on U.S. Highway 83, 3 mi downstream from Red Willow Dam and 10 mi north of McCook.

DRAINAGE AREA.--740 mi², approximately, of which about 320 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to September 1947. Annual maximums, water years 1958-60. October 1960 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder, concrete control since Dec. 23, 1965. Datum of gage is 2,485.97 ft above National Geodetic Vertical Datum of 1929. October 1940 to September 1947, water-stage recorder at site 45 ft upstream at datum 9.55 ft higher. Nov. 22, 1957, to Sept. 30, 1960, crest-stage gage, Oct. 1, 1960, to Apr. 5, 1961, nonrecording gage, and Apr. 6, 1961, to Sept. 26, 1974, water-stage recorder at site 45 ft upstream, present datum.

REMARKS.--Estimated daily discharges: July 9-23. Records good except for period of estimated record, which is fair. Natural flow affected by irrigation development above station and, since Sept. 5, 1961, by storage in Hugh Butler Lake (station 06837390).

AVERAGE DISCHARGE.--24 years (1962-85), 20.5 ft³/s, 14,850 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s June 22, 1947, gage height, 31.95 ft, present datum, from rating curve extended above 2,500 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.60 ft³/s Sept. 22, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1935, reached a stage of 33.45 ft, from floodmarks, discharge, 45,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 155 ft³/s Aug. 28, gage height, 10.03 ft; minimum daily, 3.3 ft³/s June 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.9	3.9	4.2	3.9	3.9	4.3	4.5	3.3	32	66	90
2	3.6	3.9	3.9	4.3	3.9	3.9	4.3	6.3	3.4	34	68	80
3	3.5	4.0	3.9	4.3	3.9	3.9	4.3	4.7	3.4	34	68	66
4	3.9	4.1	3.9	4.3	3.9	3.9	4.3	4.5	3.5	35	68	58
5	4.2	3.9	3.9	4.3	3.9	3.9	4.3	4.1	3.7	36	61	57
6	4.0	3.9	3.9	4.3	4.0	4.0	4.3	4.2	4.0	38	59	43
7	3.7	3.9	3.9	4.3	4.1	4.1	4.3	4.1	4.2	40	57	34
8	3.7	3.9	3.9	4.3	4.1	4.1	4.3	4.3	4.1	90	52	34
9	3.7	3.9	3.9	4.3	4.1	4.1	4.2	4.3	23	104	49	19
10	3.9	3.9	3.9	4.3	4.1	4.1	4.1	4.6	68	120	48	4.2
11	3.9	3.9	3.9	4.2	3.9	4.1	4.1	4.8	60	120	49	3.8
12	4.0	3.9	3.9	4.2	3.9	4.1	4.1	4.1	48	98	65	3.8
13	4.1	3.9	3.9	4.3	3.9	4.1	4.1	4.8	50	86	87	3.8
14	4.0	3.9	3.9	4.3	3.9	4.1	4.1	5.2	43	82	68	3.8
15	4.5	3.9	3.9	4.1	4.4	4.1	4.1	4.6	34	88	46	3.9
16	4.5	3.9	3.9	4.1	4.5	4.1	4.0	4.4	45	92	35	3.9
17	4.3	3.9	3.9	4.1	4.2	4.1	3.9	4.3	34	94	28	3.8
18	4.3	3.9	3.9	4.1	4.0	4.1	3.8	4.0	34	98	29	3.7
19	4.2	3.9	3.9	4.0	4.3	4.1	3.7	4.3	34	86	44	3.6
20	4.1	3.9	3.9	4.1	4.1	4.1	3.7	4.3	44	56	57	3.4
21	4.1	3.9	3.9	4.1	3.9	4.1	3.7	3.8	53	52	57	3.7
22	4.1	3.9	3.9	4.1	3.9	4.3	3.7	4.2	52	48	58	3.6
23	4.1	3.9	3.9	4.1	4.1	4.3	3.7	4.0	55	40	65	3.5
24	4.1	3.9	3.9	4.1	4.1	4.3	3.7	3.9	67	27	82	3.5
25	4.1	3.9	3.9	4.1	4.1	4.3	3.9	3.9	108	25	132	3.5
26	4.1	4.1	3.9	4.1	4.0	4.3	4.5	3.8	76	24	141	3.7
27	4.1	4.1	3.9	4.1	3.9	4.2	4.3	3.8	34	23	152	3.7
28	4.1	4.0	3.9	3.9	3.9	4.1	4.5	3.7	42	27	154	3.6
29	4.1	3.9	3.9	3.9	---	4.1	5.0	4.1	40	48	147	4.0
30	3.9	3.9	3.9	3.8	---	4.2	4.7	4.3	33	53	114	3.8
31	3.9	---	3.9	4.0	---	4.3	---	3.8	---	59	88	---
TOTAL	124.5	117.8	120.9	128.7	112.9	127.4	124.0	133.7	1106.6	1889	2294	559.3
MEAN	4.02	3.93	3.90	4.15	4.03	4.11	4.13	4.31	36.9	60.9	74.0	18.6
MAX	4.5	4.1	3.9	4.3	4.5	4.3	5.0	6.3	108	120	154	90
MIN	3.5	3.9	3.9	3.8	3.9	3.9	3.7	3.7	3.3	23	28	3.4
AC-FT	247	234	240	255	224	253	246	265	2190	3750	4550	1110
CAL YR 1984	TOTAL	6495.4	MEAN	17.7	MAX	89	MIN	3.2	AC-FT	12880		
WTR YR 1985	TOTAL	6838.8	MEAN	18.7	MAX	154	MIN	3.3	AC-FT	13560		

06838000 RED WILLOW CREEK NEAR RED WILLOW, NE

LOCATION.--Lat 40°14'10", long 100°30'00", in NE1/4NE1/4 sec.17, T.3 N., R.28 W., Red Willow County, Hydrologic Unit 10250007, on left bank near downstream side of bridge on U.S. Highways 6 and 34, 0.8 mi north of Red Willow and 2.5 mi upstream from mouth.

DRAINAGE AREA.--830 mi², approximately, of which about 410 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1510: 1945(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,398.64 ft above National Geodetic Vertical Datum of 1929. Prior to May 26, 1945, nonrecording gage at bridge 1.2 mi upstream at datum 11.16 ft higher, May 26, 1945, to Aug. 2, 1974, water-stage recorder at present site and datum, and Aug. 3, 1974, to June 27, 1980, on right bank at downstream side of bridge, present datum.

REMARKS.--Estimated daily discharges: Dec. 2-8, Dec. 13 to Feb. 19, and Mar. 5. Records fair except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station, since Sept. 5, 1961, by storage in Hugh Butler Lake (station 06837390), and since June 1963 by Red Willow Canal which diverts 4.5 mi above station for irrigation of about 4,150 acres.

AVERAGE DISCHARGE.--23 years (1963-85), 14.7 ft³/s, 10,650 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s June 22, 1947, gage height, 18.36 ft, from rating curve extended above 6,800 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.33 ft³/s Sept. 8, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 249 ft³/s June 26, gage height, 7.77 ft; minimum daily, 0.49 ft³/s June 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	7.0	6.9	14	6.4	7.8	9.3	9.9	7.8	21	11	40
2	6.4	7.0	7.2	15	6.2	8.0	8.9	8.8	6.8	22	12	40
3	6.3	7.3	7.0	17	7.0	8.5	8.5	11	7.4	23	9.1	24
4	6.7	7.1	8.6	20	7.6	8.6	10	9.0	8.6	23	7.4	15
5	7.9	7.3	11	22	7.0	8.8	12	8.4	8.4	15	8.7	22
6	7.0	7.4	10	23	7.8	8.9	10	7.4	8.6	5.4	5.1	19
7	6.2	7.7	9.4	21	8.0	9.0	9.7	7.6	5.2	5.0	9.4	6.0
8	6.4	7.8	10	20	8.0	9.0	9.4	7.5	.49	13	9.0	5.1
9	6.3	7.8	8.0	17	8.6	9.0	9.5	7.6	4.4	18	7.9	15
10	6.2	7.5	7.4	13	9.0	9.1	10	7.6	26	25	7.8	9.9
11	6.4	7.4	7.4	12	8.2	9.2	10	7.8	42	20	9.1	7.7
12	6.5	7.3	7.6	9.0	7.6	9.0	10	8.1	30	7.5	7.4	5.6
13	6.7	7.3	8.0	10	8.4	9.0	10	8.2	33	1.3	14	8.3
14	6.6	7.5	7.6	12	9.2	9.0	10	13	34	.62	21	6.8
15	8.5	7.2	8.4	11	10	9.0	10	9.6	21	.87	14	6.8
16	8.6	7.3	11	10	12	9.0	10	7.9	23	1.4	12	6.6
17	7.7	7.5	14	12	15	9.1	10	7.3	27	8.1	6.8	6.3
18	6.9	7.6	12	15	18	9.3	11	6.9	17	11	5.8	6.0
19	6.8	7.4	13	16	22	9.3	10	6.7	10	23	7.0	5.7
20	6.8	7.6	15	8.4	20	9.3	10	7.0	7.6	9.8	7.7	5.5
21	6.8	7.6	14	8.0	17	9.0	10	6.9	12	7.0	4.9	6.3
22	7.0	7.6	13	12	12	9.7	10	7.1	5.9	7.6	3.7	6.7
23	6.9	7.6	13	11	10	9.5	10	7.2	4.9	8.1	4.5	6.6
24	6.9	7.6	14	13	8.5	8.7	8.7	7.8	6.8	17	8.3	6.1
25	7.7	7.6	11	17	8.1	8.4	9.2	7.6	31	11	40	6.0
26	7.1	7.9	12	16	8.0	8.4	14	7.4	120	12	65	5.8
27	7.0	7.4	14	17	7.8	8.9	12	8.0	24	11	66	5.9
28	6.8	8.9	16	15	7.8	9.6	9.2	7.8	21	11	67	5.7
29	7.2	7.0	18	14	---	9.1	12	8.2	20	15	72	6.8
30	6.9	6.8	16	9.0	---	9.5	12	10	21	15	72	6.8
31	6.8	---	15	5.2	---	9.6	---	7.8	---	12	44	---
TOTAL	214.3	224.0	345.5	434.6	285.2	278.3	305.4	253.1	594.89	380.69	639.6	324.0
MEAN	6.91	7.47	11.1	14.0	10.2	8.98	10.2	8.16	19.8	12.3	20.6	10.8
MAX	8.6	8.9	18	23	22	9.7	14	13	120	25	72	40
MIN	6.2	6.8	6.9	5.2	6.2	7.8	8.5	6.7	.49	.62	3.7	5.1
AC-FT	425	444	685	862	566	552	606	502	1180	755	1270	643
CAL YR 1984	TOTAL	3355.80		MEAN	9.17	MAX	32	MIN	.90	AC-FT	6660	
WTR YR 1985	TOTAL	4279.58		MEAN	11.7	MAX	120	MIN	.49	AC-FT	8490	

KANSAS RIVER BASIN

06840000 FOX CREEK AT CURTIS, NE

LOCATION.--Lat 40°38'00", long 100°29'20", in SE1/4NW1/4 sec.27, T.8 N., R.28 W., Frontier County, Hydrologic Unit 10250008, on left bank 15 ft upstream from bridge on State Highway 23, 0.5 mi upstream from mouth, and 1 mi east of Curtis.

DRAINAGE AREA.--74 mi², approximately.

PERIOD OF RECORD.--March 1951 to September 1958. Annual maximums, water years 1960-70. October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,519.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 4-6, 14-16, 25-31, Jan. 1-2, 9-16, 20-22, 25, 31, and Feb. 1-3. Records good except for periods of estimated daily discharges which are fair.

AVERAGE DISCHARGE.--15 years (1952-58, 1978-85), 6.85 ft³/s, 4,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft³/s May 31, 1951, gage height, 15.35 ft; minimum daily, 0.71 ft³/s July 26, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 27.3 ft June 21, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29 ft³/s Feb. 16, gage height, 4.61 ft; minimum daily, 2.0 ft³/s Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	5.0	5.8	4.6	5.0	6.3	6.8	7.7	6.4	5.1	3.5	3.1
2	4.3	5.2	5.6	4.8	5.0	6.3	6.6	7.1	6.2	5.5	2.2	3.5
3	4.4	5.7	5.2	5.6	5.6	6.7	6.5	6.9	6.1	5.3	2.6	2.1
4	5.0	5.5	5.2	5.7	6.0	7.0	6.6	6.8	6.7	4.4	3.4	2.0
5	6.9	5.1	5.2	5.8	6.1	6.3	6.9	7.2	7.2	3.3	4.3	2.1
6	7.2	5.6	5.4	5.8	6.1	6.4	6.6	6.9	6.7	2.9	4.2	3.4
7	6.3	5.8	5.8	5.8	6.0	6.6	6.3	6.7	6.5	2.8	3.9	3.4
8	5.7	5.4	5.7	5.7	6.0	6.4	6.3	6.6	6.2	2.5	4.5	3.2
9	5.9	5.1	5.8	5.0	6.3	6.4	6.4	6.5	5.9	3.3	4.2	3.3
10	6.6	5.2	5.6	4.6	6.3	6.5	6.6	6.6	6.0	2.2	3.7	10
11	7.1	5.1	5.5	4.4	5.9	6.5	6.6	7.4	5.8	2.7	3.4	4.2
12	7.2	5.2	5.6	4.6	6.2	6.4	6.5	8.0	5.9	2.5	3.6	4.0
13	6.8	4.5	5.0	5.2	6.4	6.3	6.4	8.2	5.8	3.1	3.3	4.2
14	6.8	4.8	4.6	5.6	6.5	6.2	6.3	10	6.1	3.2	3.6	4.1
15	7.9	5.4	4.8	5.4	9.3	6.3	6.3	8.0	5.7	4.7	3.7	3.9
16	8.1	5.1	5.0	5.6	19	6.2	6.3	6.9	6.1	3.9	3.8	3.9
17	8.1	5.4	5.1	5.9	16	6.3	6.2	6.8	5.7	3.6	3.9	3.6
18	6.8	5.9	5.5	6.1	16	6.3	6.2	6.8	5.6	3.5	3.0	3.5
19	6.4	5.4	5.8	5.3	12	6.3	6.5	6.8	5.4	3.6	2.3	3.4
20	6.1	5.4	5.6	4.4	12	6.3	6.7	6.6	5.6	3.8	2.1	3.3
21	5.4	5.4	5.9	5.0	18	6.4	6.8	6.4	5.4	3.9	3.6	3.6
22	5.5	5.1	5.7	5.4	10	6.7	6.7	6.2	5.3	3.1	3.7	4.1
23	5.5	5.6	5.8	5.7	14	6.6	6.4	6.2	5.5	3.1	3.6	4.4
24	5.6	5.8	4.7	6.0	8.1	6.3	6.5	6.2	5.3	4.7	2.3	3.9
25	5.8	6.1	4.4	4.8	6.9	6.4	7.7	6.2	5.4	4.7	2.6	3.9
26	5.3	6.3	4.6	6.0	6.5	6.5	9.0	6.1	6.9	3.6	3.3	3.9
27	5.5	5.9	5.0	6.0	6.3	6.6	8.1	6.5	6.1	3.6	3.1	3.9
28	5.5	5.8	5.6	6.0	6.3	6.7	7.1	6.5	5.5	3.8	3.1	3.9
29	5.5	5.8	5.9	6.3	---	6.4	7.4	6.5	5.3	4.0	3.3	4.3
30	5.7	5.7	5.4	5.4	---	6.6	7.9	8.2	5.0	2.8	3.5	4.6
31	5.7	---	4.8	4.6	---	6.8	---	6.6	---	2.6	3.5	---
TOTAL	188.9	163.3	165.6	167.1	243.8	200.0	203.2	216.1	177.3	111.8	104.8	114.7
MEAN	6.09	5.44	5.34	5.39	8.71	6.45	6.77	6.97	5.91	3.61	3.38	3.82
MAX	8.1	6.3	5.9	6.3	19	7.0	9.0	10	7.2	5.5	4.5	10
MIN	4.3	4.5	4.4	4.4	5.0	6.2	6.2	6.1	5.0	2.2	2.1	2.0
AC-FT	375	324	328	331	484	397	403	429	352	222	208	228
CAL YR 1984	TOTAL	2522.8		MEAN	6.89	MAX	217	MIN	2.4	AC-FT	5000	
WTR YR 1985	TOTAL	2056.6		MEAN	5.63	MAX	19	MIN	2.0	AC-FT	4080	

06841000 MEDICINE CREEK ABOVE HARRY STRUNK LAKE, NE

LOCATION.--Lat 40°30'10", long 100°19'20", in SW1/4 sec.7, T.6 N., R.26 W., Frontier County, Hydrologic Unit 10250008, on right bank 0.3 mi downstream from top of Harry Strunk Lake flood-control pool, 2.5 mi upstream from top of irrigation pool, 3.8 mi southeast of Stockville, and 13.5 mi upstream from Medicine Creek Dam.

DRAINAGE AREA.--770 mi², approximately, of which about 530 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--January 1950 to current year. Prior to October 1950, published as "above Medicine Creek Reservoir."

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Concrete control since November 1950. Datum of gage is 2,380.94 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Estimated daily discharges: Dec. 18 to Feb. 22, Mar. 8 to Apr. 15, Apr. 20 to May 6, May 12 to June 2, and June 27 to July 2. Records poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--35 years, 65.1 ft³/s, 47,160 acre-ft/yr; median of yearly mean discharges, 58 ft³/s, 42,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s June 21, 1967, gage height, 20.05 ft; minimum daily, 9.1 ft³/s Aug. 9, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1874, 24.4 ft June 22, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 17	2045	(a)	b*7.23	No peaks greater than base discharge.			
(c)	----	d*200	unknown				

a Backwater from ice.

b Recorded.

c Sometime during period May 12-25.

d Estimate.

Minimum daily discharge, 22 ft³/s Aug. 28-31, Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	47	51	40	38	58	56	110	52	52	31	23
2	34	46	49	45	41	57	54	110	45	47	30	24
3	36	46	48	50	45	57	52	100	42	44	30	23
4	41	46	46	56	48	58	52	70	43	42	28	23
5	44	46	46	54	45	57	52	60	44	40	28	25
6	47	45	46	52	47	54	58	56	47	38	26	24
7	50	44	46	50	44	51	64	52	49	35	26	23
8	49	45	46	50	45	50	60	52	49	35	34	23
9	46	47	46	47	46	52	58	52	47	34	33	22
10	47	47	47	45	45	52	56	51	46	35	33	37
11	45	48	49	40	46	50	56	50	45	33	32	42
12	46	49	49	40	47	50	54	54	44	32	30	34
13	45	49	49	45	50	50	54	60	43	33	28	35
14	44	50	44	50	60	50	54	68	42	33	28	37
15	48	49	49	54	80	50	54	100	42	34	28	41
16	51	48	54	60	100	50	53	150	42	28	28	42
17	54	47	51	54	120	48	53	120	42	28	27	41
18	57	47	40	60	150	48	52	90	41	28	27	37
19	52	47	45	56	130	48	52	70	40	31	27	33
20	50	47	50	40	110	48	54	60	40	34	27	32
21	49	47	52	42	90	50	58	56	40	37	27	33
22	48	47	54	45	80	52	56	54	38	37	26	34
23	47	48	56	50	81	52	52	54	39	33	26	39
24	47	48	58	56	77	52	50	52	39	36	26	40
25	47	49	41	60	66	52	60	50	40	39	25	40
26	47	51	45	64	63	52	80	50	42	39	25	40
27	49	53	50	58	61	50	90	50	50	36	25	39
28	48	52	54	54	59	49	100	52	60	33	22	38
29	47	53	58	50	---	49	110	54	50	30	22	40
30	47	52	54	47	---	52	120	56	50	31	22	41
31	46	---	50	35	---	58	---	60	---	33	22	---
TOTAL	1441	1440	1523	1549	1914	1606	1874	2123	1333	1100	849	1005
MEAN	46.5	48.0	49.1	50.0	68.4	51.8	62.5	68.5	44.4	35.5	27.4	33.5
MAX	57	53	58	64	150	58	120	150	60	52	34	42
MIN	33	44	40	35	38	48	50	50	38	28	22	22
AC-FT	2860	2860	3020	3070	3800	3190	3720	4210	2640	2180	1680	1990
CAL YR 1984	TOTAL	20342		MEAN	55.6	MAX	611	MIN	22	AC-FT	40350	
WTR YR 1985	TOTAL	17757		MEAN	48.6	MAX	150	MIN	22	AC-FT	35220	

KANSAS RIVER BASIN

06842000 HARRY STRUNK LAKE NEAR CAMBRIDGE, NE

LOCATION.--Lat 40°22'40", long 100°13'00", in NE1/4 sec.25, T.5 N., R.26 W., Frontier County, Hydrologic Unit 10250008, near right bank in control house at outlet tube of Medicine Creek Dam on Medicine Creek, 7 mi northwest of Cambridge.

DRAINAGE AREA.--880 mi², approximately, of which about 640 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--August 1949 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 18, 1960, nonrecording gage at present datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Aug. 8, 1949. Capacity, 32,230 acre-ft between elevation 2,335.0 ft, sill of outlet gates, and 2,366.1 ft, top of storage pool and crest of slot in spillway. Top of flood-control pool and crest of main spillway at elevation 2,386.2 ft, capacity, 89,310 acre-ft. Top of superstorage flood-control pool at elevation 2,400.0 ft, capacity, 147,400 acre-ft. Maximum water-surface elevation, 2,408.9 ft, 196,000 acre-ft. Dead storage, 4,910 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,750 acre-ft Mar. 23, 1960, elevation, 2,374.10 ft; minimum since operation of reservoir began, 7,840 acre-ft Sept. 7, 1978, elevation, 2,340.39 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 39,770 acre-ft May 19, elevation, 2,367.48 ft; minimum, 20,870 acre-ft Oct. 1, elevation, 2,355.27 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,350	15,250	2,365	35,140
2,355	20,550	2,370	44,890
2,360	27,100		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20980	24120	27010	29700	32720	37330	38970	39640	39320	38590	32840	23400
2	21100	24120	27100	29770	32800	37480	39040	39680	39260	38570	32800	23090
3	21230	24270	27100	29870	32890	37650	39160	39660	39120	38550	32820	22780
4	21320	24300	27220	30000	32990	37680	39100	39720	39080	38450	32820	22490
5	21450	24340	27280	30100	33100	37740	39060	39700	39060	38300	32720	22300
6	21590	24420	27370	30250	33170	37850	39060	39610	39180	38100	32600	22180
7	21700	24420	27410	30350	33250	37930	39080	39570	39320	37780	32400	22050
8	21780	24670	27570	30510	33350	37980	39060	39590	39350	37310	32170	21900
9	21880	24790	27690	30640	33470	38080	39080	39590	39260	36750	31730	21740
10	21960	24720	27750	30720	33540	38150	39200	39610	39220	36160	31430	21690
11	22120	24720	27870	30780	33640	38230	39280	39490	39040	35520	31120	21690
12	22190	24890	27930	30880	33750	38250	39260	39450	38950	34980	30740	21810
13	22280	25000	27990	30980	33850	38320	39240	39530	39040	34480	30140	21860
14	22400	25440	28060	31060	33940	38360	39240	39640	39060	33940	29690	21910
15	22400	25460	28170	31200	34060	38440	39320	39720	39080	33630	29350	22030
16	22580	25530	28240	31330	34320	38470	39330	39700	39120	33400	29120	22190
17	22670	25630	28310	31430	34670	38570	39350	39700	38970	33150	28810	22300
18	22850	25680	28400	31550	35040	38660	39320	39700	38830	32840	28490	22390
19	22850	25680	28490	31680	35470	38680	39280	39760	38790	32750	28280	22450
20	22930	25680	28600	31730	35800	38680	39320	39660	38930	32650	28080	22370
21	23030	25850	28610	31750	36070	38660	39330	39630	38790	32670	27940	22420
22	23130	26040	28720	31810	36340	38770	39240	39610	38720	32690	27660	22550
23	23220	26150	28830	31910	36520	38770	39140	36550	38750	32770	27280	22580
24	23320	26230	28900	31980	36680	38810	39140	39550	38550	32840	26830	22620
25	23460	26460	28970	32080	36840	38870	39080	39590	38750	32870	26420	22700
26	23590	26550	29100	32220	36930	39020	39300	39570	38490	32920	25960	22780
27	23730	26620	29230	32280	37070	39020	39350	39390	38510	32970	25410	22840
28	23730	26670	29350	32390	37230	38930	39510	39450	38570	33020	24960	22860
29	23840	26800	29460	32540	---	38850	39530	39510	38620	32940	24500	22980
30	23890	26890	29550	32620	---	38930	39610	39370	38570	32920	24120	23050
31	24120	---	29660	32650	---	38930	---	39330	---	32890	23800	---
MAX	24120	26890	29660	32650	37230	39020	39610	39760	39350	38590	32840	23400
MIN	20980	24120	27010	29700	32720	37330	38970	36550	38490	32650	23800	21690
(†)	2357.85	2359.85	2361.70	2363.55	2366.15	2367.05	2367.40	2367.26	2366.86	2363.69	2357.61	2357.04
(††)	+3250	+2770	+2770	+2990	+4580	+1700	+680	-280	-760	-5680	-9090	-750
CAL YR 1984	MEAN	32250	MAX	41650	MIN	20040	(††)	+290				
WTR YR 1985	MEAN	32020	MAX	39760	MIN	20980	(††)	+2180				

(†) Elevation, in feet, at end of month.

(††) Change in contents, in acre-feet.

06842500 MEDICINE CREEK BELOW HARRY STRUNK LAKE, NE

LOCATION.--Lat 40°22'20", long 100°13'20", at center of sec.25, T.5 N., R.26 W., Frontier County, Hydrologic Unit 10250008, on right bank 0.5 mi downstream from Medicine Creek Dam and 6.5 mi northwest of Cambridge.

DRAINAGE AREA.--880 mi², approximately, of which about 640 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1950, published as "below Medicine Creek Dam." Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Concrete control since August 1950. Datum of gage is 2,295.26 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Apr. 24, 1950, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--No discharges were estimated. Records good except those below 1.0 ft³/s, which are fair. Flow regulated by Harry Strunk Lake (station 06842000).

AVERAGE DISCHARGE.--36 years, 60.9 ft³/s, 44,120 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s Mar. 23, 1960, gage height, 5.97 ft; minimum daily, 0.10 ft³/s Nov. 13, 1952, Sept. 19, 1963, Sept. 27-29, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 323 ft³/s July 10, 11, 12, gage height, 2.91 ft; minimum daily, 0.70 ft³/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	1.1	1.1	.92	1.1	1.8	37	58	50	29	29	183
2	.70	1.1	1.1	.92	1.1	3.1	38	58	45	29	41	165
3	1.1	1.1	1.1	.93	1.2	5.5	38	58	46	28	49	164
4	1.2	1.1	1.1	.93	1.2	7.2	40	58	48	43	52	164
5	1.1	1.1	1.2	.94	1.2	5.5	42	60	46	102	68	126
6	1.1	1.1	1.1	.95	1.2	7.0	42	56	45	119	75	83
7	1.2	1.2	1.2	.95	1.2	8.9	42	56	45	155	109	69
8	1.4	1.2	1.2	.96	1.2	10	41	56	47	261	119	68
9	1.4	1.1	1.2	.96	1.2	12	41	56	48	308	141	68
10	1.5	1.0	1.2	.97	1.2	12	41	55	47	318	149	54
11	1.4	1.0	1.2	.94	1.2	17	42	56	45	323	157	33
12	1.4	1.0	1.1	.94	1.2	18	43	55	44	284	207	24
13	1.5	1.0	1.1	.96	1.3	19	44	60	42	252	262	9.0
14	1.5	1.0	1.2	.96	1.3	19	43	65	43	248	236	.96
15	1.5	1.0	1.2	.97	1.3	22	43	63	42	174	185	.92
16	1.6	1.0	1.1	.96	1.3	24	43	63	42	132	155	.92
17	1.3	1.1	1.0	.97	1.3	24	43	63	42	135	146	.92
18	1.2	1.1	.98	.97	1.3	25	43	61	40	151	146	.91
19	1.2	1.1	.98	.96	1.3	26	44	61	37	104	136	.91
20	1.2	1.1	.97	.95	1.4	27	44	60	36	63	119	.90
21	1.2	1.1	.99	1.0	1.3	28	45	58	37	61	120	.91
22	1.2	1.1	.98	.99	1.2	30	45	57	38	25	157	.90
23	1.1	1.1	.98	1.0	.96	31	45	56	65	1.2	191	.87
24	1.2	1.1	.97	1.0	.90	31	43	55	102	1.3	202	.88
25	1.2	1.1	.97	1.1	.91	32	44	54	172	1.2	208	.88
26	1.1	1.2	.98	1.1	.89	34	51	53	91	1.2	256	.92
27	1.1	1.1	.97	1.1	.89	33	50	54	30	1.1	280	.92
28	1.2	1.1	1.0	1.1	.96	34	50	53	29	1.1	262	.93
29	1.2	1.1	.98	1.1	---	35	52	53	29	15	247	1.0
30	1.2	1.1	.95	1.1	---	36	55	54	29	29	207	.97
31	1.2	---	.92	1.1	---	36	---	51	---	29	185	---
TOTAL	38.14	32.6	33.02	30.70	32.71	654.0	1314	1776	1502	3424.1	4896	1225.62
MEAN	1.23	1.09	1.07	.99	1.17	21.1	43.8	57.3	50.1	110	158	40.9
MAX	1.6	1.2	1.2	1.1	1.4	36	55	65	172	323	280	183
MIN	.70	1.0	.92	.92	.89	1.8	37	51	29	1.1	29	.87
AC-FT	76	65	65	61	65	1300	2610	3520	2980	6790	9710	2430
CAL YR 1984	TOTAL	19650.15		MEAN	53.7	MAX	297	MIN	.70	AC-FT	38980	
WTR YR 1985	TOTAL	14958.89		MEAN	41.0	MAX	323	MIN	.70	AC-FT	29670	

KANSAS RIVER BASIN

06843500 REPUBLICAN RIVER AT CAMBRIDGE, NE

LOCATION.--Lat 40°17'05", long 100°08'35", in NW1/4SE1/4 sec.28, T.4 N., R.25 W., Furnas County, Hydrologic Unit 10250004, on left bank 400 ft south of U.S. Highways 6 and 34, 0.5 mi downstream from Medicine Creek, 1 mi east of Cambridge, and 1.3 mi upstream from Cambridge diversion dam.

DRAINAGE AREA.--14,520 mi², approximately, of which about 7,810 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1945 to current year.

REVISED RECORDS.--WSP 2119: Drainage area. WDR NE-84: 1983(M).

GAGE.--Water-stage recorder. Datum of gage is 2,239.07 ft above National Geodetic Vertical Datum of 1929. Prior to July 13, 1948, nonrecording gage at site 150 ft upstream at same datum and July 13, 1948, to Sept. 25, 1950, at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 13 to Feb. 24. Records good except for period of estimated record, which is poor. Natural flow affected by irrigation development above station and since 1949 by regulation from upstream reservoirs.

AVERAGE DISCHARGE.--36 years (water years 1950-85, since storage in Harry Strunk Lake), 274 ft³/s, 198,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft³/s June 22, 1947, gage height, 16.7 ft, from floodmarks, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.07 ft³/s Sept. 27, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 17.6 ft May 31 to June 1, 1935, from information by local resident, discharge, about 280,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,610 ft³/s June 26, gage height, 6.71 ft; minimum daily, 38 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	91	122	96	70	170	188	222	118	183	152	219
2	41	94	123	98	80	166	184	199	115	172	153	208
3	42	95	123	100	90	165	175	188	110	180	176	192
4	50	95	117	102	86	160	173	182	119	197	173	206
5	65	98	128	104	80	163	190	176	128	241	170	206
6	71	100	125	106	84	163	190	167	129	248	231	178
7	70	99	122	104	84	162	182	162	124	231	231	148
8	69	97	129	102	84	163	179	161	113	335	222	110
9	66	97	125	78	88	161	178	156	112	387	223	98
10	65	95	122	50	90	163	181	153	112	380	239	106
11	62	99	120	50	92	162	178	150	99	383	242	80
12	63	106	115	48	94	158	176	156	104	375	272	76
13	70	106	110	80	98	155	175	181	94	320	326	109
14	70	104	98	110	106	158	173	259	106	299	361	129
15	90	99	106	106	116	164	170	243	104	258	342	95
16	104	100	108	100	140	168	171	201	89	188	309	97
17	109	103	110	104	170	162	169	180	82	196	268	86
18	105	101	106	110	230	164	162	171	80	212	244	73
19	101	102	104	120	300	167	162	165	64	228	229	59
20	102	106	112	96	430	166	159	158	112	215	211	52
21	101	109	110	98	390	160	153	150	113	213	187	57
22	103	112	106	106	320	164	146	141	108	205	195	63
23	106	108	108	100	280	173	143	137	124	158	214	70
24	106	106	114	130	230	171	140	136	149	173	214	71
25	113	109	100	155	212	168	148	132	237	229	201	72
26	113	124	102	145	197	169	205	127	951	210	247	71
27	103	125	110	150	185	168	218	143	917	186	279	72
28	95	126	116	145	177	169	193	196	565	163	270	72
29	92	121	125	140	---	168	202	145	289	155	266	85
30	92	119	116	116	---	179	233	136	204	174	254	95
31	88	---	104	86	---	187	---	123	---	171	230	---
TOTAL	2565	3146	3536	3235	4603	5136	5296	5196	5771	7265	7331	3255
MEAN	82.7	105	114	104	164	166	177	168	192	234	236	109
MAX	113	126	129	155	430	187	233	259	951	387	361	219
MIN	38	91	98	48	70	155	140	123	64	155	152	52
AC-FT	5090	6240	7010	6420	9130	10190	10500	10310	11450	14410	14540	6460
CAL YR 1984	TOTAL	76914		MEAN	210	MAX	725	MIN	16	AC-FT	152600	
WTR YR 1985	TOTAL	56335		MEAN	154	MAX	951	MIN	38	AC-FT	111700	

06844000 MUDDY CREEK AT ARAPAHOE, NE

LOCATION.--Lat 40°18'20", long 99°54'40", in NW1/4NW1/4 sec.22, T.4 N., R.23 W., Furnas County, Hydrologic Unit 10250009, on left bank 10 ft upstream from bridge on U.S. Highways 6 and 34, 0.2 mi west of Arapahoe, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--246 mi².

PERIOD OF RECORD.--December 1950 to September 1972, and October 1977 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,143.92 ft, above National Geodetic Vertical Datum of 1929. December 1950 to Jan. 11, 1951, nonrecording gage, and Jan. 12, 1951, to Sept. 30, 1972, recording gage at site on left bank 20 ft downstream from bridge at present datum.

REMARKS.--Estimated daily discharges: Dec. 3, 4, 6, 14, 17, 18, 22-25, Dec. 30 to Jan. 1, Jan. 9-24, Jan. 30 to Feb. 25, Feb. 27 to Mar. 11. Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station and return flow from irrigated areas.

AVERAGE DISCHARGE.--29 years (1951-72, 1978-85), 14.3 ft³/s, 10,360 acre-ft/yr; median of yearly mean discharges, 10 ft³/s, 7,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,280 ft³/s June 16, 1957, gage height, 24.62 ft; no flow Aug. 26 to Sept. 2, 1953, July 23, 29, Aug. 4, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 31 ft occurred June 22, 1947, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*): floodmark; no peak above base of 750 ft³/s; minimum daily, 2.9 ft³/s Dec. 1.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 26	1915	*640	*11.06	No other peak greater than base discharge.			
Minimum daily discharge, 5.0 ft ³ /s Nov. 24, Dec. 12, and Sept. 4.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	7.9	7.3	5.8	6.0	8.6	8.2	11	6.7	7.7	7.3	5.4
2	5.1	7.9	6.9	6.1	6.4	8.8	8.2	9.5	6.1	7.0	7.6	5.7
3	5.4	7.8	6.6	6.1	6.6	8.4	8.2	9.0	5.8	6.5	8.2	5.6
4	5.3	7.6	7.6	6.4	7.0	7.6	8.2	9.0	5.5	6.4	8.2	5.0
5	7.5	7.7	7.4	6.0	6.4	7.0	8.4	8.9	16	6.2	7.8	8.8
6	11	7.6	7.0	5.9	6.6	7.2	8.5	8.9	16	6.9	7.8	10
7	8.7	7.7	7.7	6.0	6.8	7.6	8.5	9.0	5.8	7.5	7.6	13
8	7.0	7.1	7.8	5.8	6.8	7.4	8.5	9.2	5.8	7.2	7.3	8.8
9	6.5	7.0	7.7	5.6	7.2	7.6	8.5	9.1	7.4	7.1	6.9	7.0
10	6.9	7.1	7.5	5.4	7.4	8.0	8.5	8.6	18	7.7	6.2	7.6
11	7.7	7.3	8.5	5.4	6.6	8.2	8.5	8.9	8.3	7.6	5.8	8.8
12	8.3	7.1	7.9	5.0	6.8	7.6	8.5	8.9	6.2	6.5	5.7	32
13	8.0	6.9	7.1	5.6	7.4	7.4	8.5	11	5.8	6.1	6.5	16
14	7.8	6.7	8.0	6.2	7.2	7.3	8.5	20	5.8	28	6.3	9.3
15	8.8	6.5	9.1	5.8	7.2	7.3	8.7	17	5.8	61	6.0	11
16	9.5	6.4	8.8	5.6	8.0	7.3	8.9	13	5.8	40	5.5	8.9
17	9.6	6.4	8.0	6.4	20	7.4	8.8	11	5.8	14	5.5	11
18	9.3	6.4	7.0	7.0	30	7.6	8.5	9.7	5.5	9.1	5.4	7.6
19	8.9	7.0	7.7	7.2	40	7.6	8.5	9.2	5.4	150	5.4	6.6
20	8.3	7.3	7.5	5.8	30	7.6	8.5	9.1	5.3	27	6.2	6.5
21	7.9	6.5	7.5	5.6	20	7.6	8.5	7.9	5.3	11	7.2	6.9
22	7.9	6.9	7.2	6.2	15	8.0	8.5	8.2	5.4	10	6.7	7.4
23	7.9	7.2	7.4	6.0	13	8.3	8.5	8.2	5.5	9.0	6.0	7.3
24	7.9	5.0	7.6	6.6	11	7.9	8.4	7.9	5.5	12	5.9	7.0
25	8.1	7.6	7.0	7.5	10	7.6	8.2	7.3	9.1	14	5.5	6.9
26	8.4	7.9	6.8	7.0	9.7	7.9	10	7.5	293	13	5.6	7.0
27	8.0	7.8	6.7	6.9	9.0	7.9	11	7.2	193	9.0	6.4	6.6
28	7.9	7.2	6.8	7.3	9.0	7.9	10	6.9	23	8.4	6.3	6.5
29	7.9	7.7	7.3	7.8	---	7.9	9.3	6.9	12	7.6	6.6	7.3
30	7.8	7.6	7.0	8.2	---	7.9	10	6.9	9.0	7.4	6.4	8.0
31	7.7	---	6.4	7.2	---	8.2	---	6.8	---	7.3	6.1	---
TOTAL	242.2	214.8	230.8	195.4	327.1	240.6	262.0	291.7	713.6	528.2	201.9	265.5
MEAN	7.81	7.16	7.45	6.30	11.7	7.76	8.73	9.41	23.8	17.0	6.51	8.85
MAX	11	7.9	9.1	8.2	40	8.8	11	20	293	150	8.2	32
MIN	5.1	5.0	6.4	5.0	6.0	7.0	8.2	6.8	5.3	6.1	5.4	5.0
AC-FT	480	426	458	388	649	477	520	579	1420	1050	400	527
CAL YR 1984	TOTAL	3608.3		MEAN	9.86	MAX	173	MIN	4.0	AC-FT	7160	
WTR YR 1985	TOTAL	3713.8		MEAN	10.2	MAX	293	MIN	5.0	AC-FT	7370	

KANSAS RIVER BASIN

06844210 TURKEY CREEK AT EDISON, NE

LOCATION.--Lat 40°16'15", long 99°44'00", in the center of sec.31, T.4 N., R.21 W., Furnas County, Hydrologic Unit 10250009, on left bank 10 ft downstream from bridge on State Highway 136, 2 mi east of Edison and 5 mi upstream from mouth.

DRAINAGE AREA.--74.9 mi².

PERIOD OF RECORD.--October 1977 to current year.

REVISED RECORDS.--WDR NE-81-1: 1978-80(M).

GAGE.--Water-stage recorder. Elevation of gage is 2,090 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 29 to Dec. 11, Dec. 15-17, Dec. 21 to Feb. 22, Feb. 27, Mar. 1, 3-6. Records good except for periods of estimated record, which are poor. Natural flow affected by pump irrigation development above station and by return flow from irrigated areas.

AVERAGE DISCHARGE.--8 years, 5.96 ft³/s, 4,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft³/s July 18, 1981, gage height, 11.95 ft, from floodmark; minimum daily, 0.74 ft³/s Sept. 9, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 337 ft³/s July 19, gage height, 8.76 ft, from floodmark; minimum daily, 2.5 ft³/s Jan. 12, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	4.2	4.4	3.0	3.1	10	7.2	8.3	9.8	9.3	7.7	7.3
2	2.8	4.4	4.2	2.7	3.5	9.8	6.8	7.3	8.7	8.8	7.6	6.3
3	2.9	4.3	4.0	2.9	4.0	9.6	6.1	7.0	8.4	9.8	9.0	5.6
4	3.1	4.6	4.1	4.0	4.5	8.6	6.3	6.4	8.7	10	18	5.8
5	4.9	4.9	4.6	6.0	3.8	8.4	6.5	6.4	9.3	11	8.0	6.3
6	7.3	4.6	4.5	7.0	4.5	8.8	6.2	6.6	9.2	11	6.0	10
7	4.3	4.8	5.0	6.4	4.6	9.0	6.0	7.0	8.8	9.9	5.9	6.5
8	3.6	5.0	7.0	6.4	4.6	9.5	5.9	7.4	8.2	9.7	6.1	6.1
9	3.5	5.2	6.6	5.0	5.2	8.8	5.8	7.7	8.0	6.9	6.1	6.2
10	3.6	4.9	6.0	3.5	5.0	9.5	6.2	7.6	13	8.5	6.1	8.9
11	4.0	4.9	5.2	2.8	4.3	8.6	6.3	8.0	8.1	7.5	6.1	7.4
12	4.1	4.9	4.4	2.5	4.7	7.5	6.1	8.1	8.0	8.0	6.1	7.7
13	4.2	4.9	4.0	3.5	4.8	6.9	6.2	11	8.7	6.9	6.1	59
14	4.1	5.1	3.5	6.0	5.0	7.1	6.0	30	8.7	7.6	6.6	15
15	5.0	5.0	3.6	5.4	5.2	6.7	6.4	25	8.7	8.1	7.5	6.8
16	6.7	4.8	3.8	5.2	6.0	6.6	6.1	9.9	8.1	7.0	7.9	5.6
17	6.4	4.9	4.0	6.2	6.4	6.4	5.8	8.7	7.7	7.5	8.0	5.3
18	5.9	5.0	3.6	6.6	7.2	6.7	5.9	8.5	7.9	6.7	7.2	5.2
19	4.5	5.2	3.2	7.0	8.0	7.0	5.8	8.2	7.2	124	6.6	4.7
20	4.4	5.1	3.7	2.7	15	6.5	5.9	8.2	7.5	12	6.1	4.4
21	4.4	5.2	4.0	2.5	30	6.2	5.9	8.3	7.9	7.0	5.9	4.9
22	4.4	5.3	4.6	2.7	20	6.4	5.8	8.1	7.3	6.3	6.1	5.5
23	4.3	5.3	4.2	3.0	17	7.1	7.1	8.0	6.6	6.1	5.7	5.7
24	4.2	5.3	3.7	5.4	15	6.6	7.1	8.0	6.3	23	5.6	5.4
25	4.6	5.4	3.2	8.6	11	6.2	6.5	8.1	10	14	5.6	5.1
26	5.0	5.7	3.4	8.0	11	6.2	8.3	8.0	134	7.6	5.7	4.3
27	5.0	6.0	3.9	8.4	11	5.9	9.3	8.1	60	7.2	5.2	4.4
28	4.7	4.2	4.5	7.6	9.6	5.9	6.8	8.5	12	7.4	5.6	4.4
29	4.6	4.4	5.6	7.0	---	6.1	7.3	8.3	10	8.1	6.1	4.5
30	4.2	4.6	5.0	7.2	---	6.3	8.7	8.5	9.8	12	24	5.9
31	4.4	---	4.5	4.0	---	6.9	---	33	---	7.9	8.3	---
TOTAL	137.7	148.1	136.0	159.2	234.0	231.8	196.3	312.2	436.6	396.8	232.5	240.2
MEAN	4.44	4.94	4.39	5.14	8.36	7.48	6.54	10.1	14.6	12.8	7.50	8.01
MAX	7.3	6.0	7.0	8.6	30	10	9.3	33	134	124	24	59
MIN	2.6	4.2	3.2	2.5	3.1	5.9	5.8	6.4	6.3	6.1	5.2	4.3
AC-FT	273	294	270	316	464	460	389	619	866	787	461	476
CAL YR 1984	TOTAL	2384.6	MEAN	6.52	MAX	21	MIN	2.0	AC-FT	4730		
WTR YR 1985	TOTAL	2861.4	MEAN	7.84	MAX	134	MIN	2.5	AC-FT	5680		

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE

LOCATION.--Lat 40°07'53", long 99°30'08", in NE1/4NE1/4 sec.19, T.2 N., R.19 W., Harlan County, Hydrologic Unit 10250009, on right bank 18 ft downstream from bridge on State Highway 89, 200 ft downstream from Burlington Northern Inc. bridge, 2 mi west of Orleans, 2.8 mi upstream from Sappa Creek, and 23 mi upstream from Harlan County Dam.

DRAINAGE AREA.--15,640 mi², approximately, of which about 8,910 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,972.57 ft above National Geodetic Vertical Datum of 1929. Prior to June 2, 1948, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 4, 5, 8-13, Dec. 15 to Feb. 28, June 11-17, and Aug. 3, 4. Records fair except for periods of estimated discharge, which are poor. Natural flow affected by irrigation development above station and regulation by upstream reservoirs.

AVERAGE DISCHARGE.--38 years, 294 ft³/s, 213,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft³/s June 22, 1948, gage height, 11.25 ft, from rating curve extended above 29,000 ft³/s; maximum gage height, 12.60 ft Mar. 22, 1960, backwater from ice; no flow at times in 1952-57, 1963, 1978-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1, 1935. Flood of June 23, 1947, reached a stage of 14.00 ft, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,520 ft³/s June 27, gage height, 6.18 ft; minimum daily, 27 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	122	153	120	104	304	229	303	185	247	135	77
2	31	122	149	120	110	281	229	306	150	191	123	80
3	34	126	139	125	120	286	226	290	138	164	145	75
4	41	124	135	125	114	274	219	279	134	133	140	76
5	52	122	130	130	110	259	217	272	121	105	136	81
6	61	119	122	130	110	250	223	243	132	95	118	91
7	70	120	130	125	110	250	227	235	125	84	106	99
8	70	121	140	120	112	247	219	228	117	77	113	100
9	70	123	140	110	114	244	216	222	115	60	101	91
10	72	125	135	70	120	244	216	221	117	60	84	76
11	76	125	130	70	125	241	214	223	92	68	73	81
12	77	126	125	68	130	241	211	215	94	58	70	84
13	78	131	120	110	140	244	206	246	84	67	64	152
14	79	133	101	125	150	227	199	600	90	73	63	295
15	92	133	120	120	170	224	198	581	84	116	79	181
16	105	132	135	116	220	224	197	438	74	180	97	153
17	122	133	140	125	280	217	194	327	70	128	82	132
18	127	132	135	130	380	218	197	298	64	90	82	124
19	123	134	130	140	560	217	193	283	57	246	76	108
20	120	137	150	116	700	216	186	242	53	604	68	93
21	117	135	140	120	600	216	179	219	48	249	65	92
22	115	137	135	130	480	220	175	203	49	188	63	88
23	112	135	135	125	400	229	192	194	44	165	57	90
24	111	140	140	160	370	233	176	184	38	205	56	87
25	118	141	125	190	360	226	172	179	35	252	58	90
26	120	144	130	175	350	223	185	175	103	172	64	88
27	125	148	135	180	340	222	217	171	845	175	62	86
28	122	154	145	175	320	220	272	164	993	159	67	81
29	121	153	155	175	---	217	282	188	572	140	84	93
30	119	154	145	140	---	222	304	202	358	153	81	104
31	121	---	130	116	---	230	---	218	---	146	82	---
TOTAL	2828	3981	4174	3981	7199	7366	6370	8149	5181	4850	2694	3148
MEAN	91.2	133	135	128	257	238	212	263	173	156	86.9	105
MAX	127	154	155	190	700	304	304	600	993	604	145	295
MIN	27	119	101	68	104	216	172	164	35	58	56	75
AC-FT	5610	7900	8280	7900	14280	14610	12630	16160	10280	9620	5340	6240
CAL YR 1984	TOTAL	81954.4		MEAN	224	MAX	863	MIN	8.1	AC-FT	162600	
WTR YR 1985	TOTAL	59921		MEAN	164	MAX	993	MIN	27	AC-FT	118900	

KANSAS RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT												
09...	1045	64	710	8.3	14.0	10.0	40	430	420	250	0	63
22...	1300	115	800	8.4	7.0	12.2	--	--	--	--	--	--
NOV												
15...	1400	134	870	8.7	6.5	12.9	20	K160	96	280	--	73
26...	1200	143	865	8.5	4.5	12.8	--	--	--	--	--	--
DEC												
04...	0945	120	790	8.7	.0	15.3	--	140	210	320	25	87
17...	1415	142	745	8.3	.0	13.8	--	--	--	--	--	--
JAN												
15...	1210	119	845	7.4	.0	11.4	--	K30	K26	340	22	92
FEB												
11...	1045	126	785	8.0	.0	7.1	19	230	170	320	--	87
MAR												
18...	1515	216	830	8.4	12.5	10.9	--	K77	80	300	15	80
APR												
01...	1130	233	675	8.2	8.0	10.4	--	120	120	330	3	84
MAY												
23...	1130	196	775	8.4	25.0	8.8	89	510	250	290	--	75
JUN												
18...	1240	65	800	8.2	22.5	8.4	--	270	4300	290	26	76
JUL												
19...	1220	156	495	8.2	27.5	--	--	13000	57000	--	--	--
AUG												
05...	1450	135	610	7.9	31.0	--	46	2700	1100	240	--	65
SEP												
12...	1020	86	552	8.2	17.5	8.6	--	480	1600	220	5	54

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
OCT												
09...	23	45	1	21	253	81	23	.70	26	430	.59	75
22...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
15...	24	47	1	--	--	85	22	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	26	51	1	15	300	96	25	.80	45	530	.71	170
17...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
15...	27	51	1	16	319	100	27	.80	50	560	.75	178
FEB												
11...	24	46	1	--	--	94	26	--	--	--	--	--
MAR												
18...	24	46	1	17	284	94	22	.80	42	500	.67	289
APR												
01...	28	42	1	17	322	79	21	.70	16	480	.65	303
MAY												
23...	25	50	1	--	--	91	24	--	--	--	--	--
JUN												
18...	25	48	1	19	267	93	23	.70	36	480	.65	84
JUL												
19...	17	23	--	19	164	48	12	.40	44	--	--	--
AUG												
05...	20	38	1	--	--	75	18	--	--	--	--	--
SEP												
12...	21	35	1	19	217	61	16	.70	28	360	.50	85

KANSAS RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN, TOTAL (MG/L) AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L) AS P) (00666)	ARSENIC TOTAL (UG/L) AS AS) (01002)	BORON, DIS- SOLVED (UG/L) AS B) (01020)
OCT											
09...	49	1.0	.92	.030	.97	1.0	2.0	.240	.120	--	140
22...	--	--	--	--	--	--	--	--	--	--	--
NOV											
15...	63	2.1	--	.070	1.0	1.1	3.2	.210	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	27	2.7	2.7	.080	1.1	1.2	3.9	.190	.160	--	140
17...	--	--	--	--	--	--	--	--	--	--	--
JAN											
15...	13	3.2	3.3	.110	.59	.70	3.9	.200	.190	--	150
FEB											
11...	11	3.2	--	.140	.36	.50	3.7	.180	--	8	--
MAR											
18...	129	2.2	2.2	.050	1.3	1.3	3.5	.290	.150	--	130
APR											
01...	87	1.9	1.9	.040	1.7	1.7	3.6	.230	.090	--	120
MAY											
23...	115	1.2	--	.050	1.3	1.3	2.5	.280	--	10	--
JUN											
18...	41	.20	.23	.040	.66	.70	.90	.230	.140	--	140
JUL											
19...	656	2.5	2.6	.060	1.5	1.6	4.1	.790	.500	--	210
AUG											
05...	242	.60	1.1	.100	.70	.80	1.4	.310	--	--	--
SEP											
12...	158	.80	.70	.040	1.6	1.6	2.4	.290	.100	--	120

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L) AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L) AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU) (01042)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L) AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L) AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L) AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L) AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L) AS C) (00680)
OCT											
09...	--	--	--	11	--	5	--	--	--	--	4.6
22...	--	--	--	--	--	--	--	--	--	--	--
NOV											
15...	<1	6	5	--	5	--	.1	--	<1	<10	3.8
26...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	--	10	--	11	--	--	--	--	3.9
17...	--	--	--	--	--	--	--	--	--	--	--
JAN											
15...	--	--	--	8	--	5	--	--	--	--	2.7
FEB											
11...	<1	3	3	--	2	--	<.1	--	<1	<10	4.3
MAR											
18...	--	--	--	<3	--	8	--	--	--	--	5.2
APR											
01...	--	--	--	5	--	4	--	--	--	--	5.2
MAY											
23...	<1	9	9	--	6	--	<.1	3	<1	30	6.5
JUN											
18...	--	--	--	<3	--	9	--	--	--	--	4.3
JUL											
19...	--	--	--	3300	--	520	--	--	--	--	22
AUG											
05...	--	--	--	--	--	--	<.1	--	--	--	17
SEP											
12...	--	--	--	<3	--	<1	--	--	--	--	8.9

KANSAS RIVER BASIN

06846500 BEAVER CREEK AT CEDAR BLUFFS, KS

LOCATION.--Lat 39°59'06", long 100°33'35", in NW1/4 NE1/4 sec.10, T.1 S., R.29 W., Decatur County, Hydrologic Unit 10250014, on right bank at downstream side of bridge on U.S. Highway 83, 0.2 mi north of Cedar Bluffs, 1.0 mi south of Kansas-Nebraska State line, and at mile 107.4.

DRAINAGE AREA.--1,618 mi², of which 294 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1510: 1947, 1950-51.

GAGE.--Water-stage recorder. Datum of gage is 2,520.33 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1971, at site 0.1 mi upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mi downstream at datum 5.00 ft lower.

REMARKS.--Estimated daily discharges: Feb. 15, Feb. 25 to Mar. 3, and May 8-9. Records good except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--40 years, 17.0 ft³/s, 12,320 acre-ft per yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,940 ft³/s June 11, 1960, gage height, 18.71 ft at site 0.1 mi upstream at same datum; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1944 reached a stage of 18.16 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Aug. 29	1100	*175	*7.14	No peak greater than base discharge.			

No flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.41
2	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	14	.08
3	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	6.3	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.4	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.1	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.2	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	.00
8	.00	.00	.00	.00	.00	.00	.00	.63	.00	.00	2.8	.00
9	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	2.3	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.4	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.1	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.7	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.63	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.09
16	.00	.00	.00	.00	2.9	.00	.00	.00	.00	.00	.00	.76
17	.00	.00	.00	.00	15	.00	.00	.00	.00	.00	.00	.24
18	.00	.00	.00	.00	.94	.00	.00	.00	.00	.00	.00	.03
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.27	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.46	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.47	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.27	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.15	.00	.00	.00	.00	1.4	.00	.00
28	.00	.00	.00	.00	.08	.00	.00	.00	.00	.49	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.11	91	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.04	9.7	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	1.2	---
TOTAL	.00	.00	.00	.00	23.25	.08	.00	.68	.00	2.04	144.94	1.61
MEAN	.000	.000	.000	.000	.83	.003	.000	.022	.000	.066	4.68	.054
MAX	.00	.00	.00	.00	15	.04	.00	.63	.00	1.4	91	.76
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	46	.2	.00	1.3	.00	4.0	287	3.2

CAL YR 1984 TOTAL 394.74 MEAN 1.08 MAX 24 MIN .00 AC-FT 783
WTR YR 1985 TOTAL 172.60 MEAN .47 MAX 91 MIN .00 AC-FT 342

06847000 BEAVER CREEK NEAR BEAVER CITY, NE

LOCATION.--Lat 40°07'12", long 99°53'35", in SW1/4SW1/4 sec.23, T.2 N., R.23 W., Furnas County, Hydrologic Unit 10250014, on left bank 400 ft downstream from bridge on U.S. Highway 283, 3.5 mi west of Beaver City, and at mi 24.7.

DRAINAGE AREA.--1,950 mi², approximately, of which about 1,650 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1340: 1937-38(M), 1939, 1940-41(M), 1943(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,162.96 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1947, nonrecording gages and Aug. 13, 1947, to Nov. 14, 1957, water-stage recorder, at site 400 ft upstream at datum 2.0 ft higher. Nov. 15, 1957, to Sept. 22, 1958, at site 3.6 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Jan. 12-17 and Feb. 1-13. Records fair except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--49 years, 23.0 ft³/s, 16,660 acre-ft/yr; median of yearly mean discharges, 12 ft³/s, 8,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,510 ft³/s June 14, 1983, gage height, 15.68 ft; no flow at times in 1937-40, 1946, 1953-57, 1959, 1969-74, 1976, 1978-81.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 13	2030	*18	*3.55	No peaks greater than base discharge.			

Minimum daily discharge, 0.10 ft³/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.80	.81	.93	1.1	1.5	1.2	4.4	1.3	.63	.51	.17
2	.13	.81	.82	.91	1.0	1.5	1.3	3.7	1.2	.57	.46	.17
3	.32	.80	.83	.95	.90	1.6	3.4	4.0	1.2	.62	.47	.16
4	.56	.81	.85	.96	.90	1.4	1.8	4.2	1.2	1.4	.44	.20
5	.65	.84	.84	1.0	.90	1.5	1.4	5.2	1.3	.98	.39	.21
6	.25	.73	.83	1.1	.90	1.4	1.1	5.0	1.3	.64	.68	.19
7	.31	.58	.85	1.1	.90	1.3	1.1	5.3	1.3	.61	.85	.13
8	.61	.62	.85	1.1	.90	1.3	1.2	4.8	1.2	.62	.61	.10
9	.67	.64	.87	1.1	.90	1.3	1.2	4.9	1.1	.61	.61	.11
10	.79	.66	1.1	1.1	1.0	1.3	1.8	4.7	1.2	.59	.54	.15
11	.82	.63	1.1	1.1	1.0	1.2	1.4	4.7	1.1	.56	.36	.12
12	.73	.63	1.1	1.0	1.0	1.3	1.4	4.5	1.6	.46	.32	.13
13	.83	.67	.97	1.0	1.0	1.3	1.4	5.8	1.2	.44	3.5	.23
14	.81	.66	.98	1.0	1.1	1.2	1.4	13	1.1	.47	8.4	.19
15	1.2	.63	.92	1.0	1.1	1.3	1.5	6.8	1.0	.76	.92	.18
16	1.1	.62	.92	1.0	1.3	1.3	1.4	3.3	1.1	.71	.30	.16
17	.78	.64	.91	1.1	1.6	1.3	1.5	2.8	1.1	.74	.19	.18
18	.76	.66	.89	1.2	2.0	1.4	1.4	3.8	.91	.71	.18	.19
19	.76	.68	.92	1.2	2.1	1.7	1.5	2.6	.84	.75	.17	.14
20	.73	.68	.91	1.1	3.7	1.5	1.6	2.3	.69	.72	.17	.15
21	.71	.69	.94	1.1	4.1	1.3	2.4	1.9	.66	.73	.20	.18
22	.71	.73	.93	1.2	2.5	1.2	2.4	1.9	.77	.71	.23	.20
23	.69	.74	.92	1.2	2.1	.98	2.5	1.9	.66	.66	.22	.23
24	.73	.73	.90	1.3	1.6	.76	2.2	1.7	.62	1.2	.20	.23
25	.81	.76	.88	1.3	1.6	1.0	3.0	1.6	.61	.65	.20	.22
26	.87	.76	.90	1.2	1.5	1.0	4.1	1.7	.91	.46	.20	.23
27	.84	.77	.92	1.2	1.4	.89	3.3	1.3	.66	.46	.18	.23
28	.77	.77	1.2	1.2	1.5	1.2	2.9	1.5	.72	.45	.13	.22
29	.85	.80	1.2	1.2	---	1.1	3.4	1.6	.69	.44	.15	.38
30	.79	.79	1.1	1.2	---	1.1	4.7	1.8	.60	.46	.15	.38
31	.80	---	1.0	1.2	---	1.2	---	1.2	---	.49	.16	---
TOTAL	21.49	21.33	29.16	34.25	41.60	39.33	60.9	113.9	29.84	20.30	22.09	5.76
MEAN	.69	.71	.94	1.10	1.49	1.27	2.03	3.67	.99	.65	.71	.19
MAX	1.2	.84	1.2	1.3	4.1	1.7	4.7	13	1.6	1.4	8.4	.38
MIN	.11	.58	.81	.91	.90	.76	1.1	1.2	.60	.44	.13	.10
AC-FT	43	42	58	68	83	78	121	226	59	40	44	11
CAL YR 1984	TOTAL	835.93		MEAN	2.28	MAX	12	MIN	.11	AC-FT	1660	
WTR YR 1985	TOTAL	439.95		MEAN	1.21	MAX	13	MIN	.10	AC-FT	873	

KANSAS RIVER BASIN

06847500 SAPPA CREEK NEAR STAMFORD, NE

LOCATION.--Lat 40°07'53", long 99°33'15", in NW1/4NW1/4 sec.23, T.2 N., R.20 W., Harlan County, Hydrologic Unit 10250011, on left bank 40 ft south of Burlington Northern Inc. track, 500 ft downstream from bridge on county highway, 2 mi east of Stamford, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--3,740 mi², approximately, of which about 3,280 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1919: 1960. WSP 2119: Drainage area. WDR NE-71-1: Calendar year totals. WRD NE-82-1: 1979 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,981.31 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--40 years, 54.9 ft³/s, 39,780 acre-ft/yr; median of yearly mean discharges, 29 ft³/s, 21,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,400 ft³/s June 24, 1966, gage height, 22.13 ft, from floodmark, from contracted opening and flow-over-road measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 14	0830	*308	*7.40	No peaks greater than base discharge.			
No flow for many days.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	53	11	24	19	3.9	1.5	.29
2	.00	.00	.00	.00	.00	37	11	28	15	3.5	1.6	.25
3	.00	.00	.00	.00	.00	26	10	30	13	2.3	1.7	.22
4	.00	.00	.00	.00	.00	22	11	27	13	1.9	1.7	.19
5	.00	.00	.00	.00	.00	23	12	26	13	1.8	1.6	.19
6	.00	.00	.00	.00	.00	24	13	19	14	1.7	1.5	.18
7	.00	.00	.00	.00	.00	19	11	16	14	1.9	1.3	.17
8	.00	.00	.00	.00	.00	15	10	15	15	1.5	2.2	.16
9	.00	.00	.00	.00	.00	13	10	14	16	1.2	3.3	.15
10	.00	.00	.00	.00	.00	13	10	13	14	1.7	1.9	.13
11	.00	.00	.00	.00	.00	14	11	13	13	1.5	1.5	.12
12	.00	.00	.00	.00	.00	13	10	13	12	1.1	1.2	.13
13	.00	.00	.00	.00	.00	11	9.8	19	11	1.3	.90	.30
14	.00	.00	.00	.00	.00	11	10	244	11	1.2	.88	.19
15	.00	.00	.00	.00	.00	10	9.9	258	9.9	9.7	1.4	.22
16	.00	.00	.00	.00	.00	10	10	196	9.2	18	2.4	.57
17	.00	.00	.00	.00	.00	11	9.4	151	8.4	3.1	1.7	.76
18	.17	.00	.00	.00	4.4	9.8	9.1	77	7.7	1.1	.96	.37
19	.04	.00	.00	.00	13	9.8	9.3	47	7.3	1.2	.69	.14
20	.00	.00	.00	.00	30	8.4	9.3	43	6.9	1.0	.60	.04
21	.00	.00	.00	.00	123	8.2	8.8	35	6.3	12	.55	.04
22	.00	.00	.00	.00	102	10	8.6	29	5.6	13	.44	.04
23	.00	.00	.00	.00	62	11	9.2	25	4.5	9.0	.42	.01
24	.00	.00	.00	.00	76	9.8	10	23	4.2	21	.39	.00
25	.00	.00	.00	.00	56	9.9	21	22	4.1	7.1	.43	.00
26	.00	.00	.00	.00	43	10	18	21	7.1	2.7	.55	.00
27	.00	.00	.00	.00	62	9.5	14	20	11	1.8	2.4	.00
28	.00	.00	.00	.00	59	7.4	13	18	7.8	1.6	1.0	.00
29	.00	.00	.00	.00	---	12	14	17	5.5	1.4	.76	.00
30	.00	.00	.00	.00	---	10	20	24	4.6	1.4	.55	.00
31	.00	---	.00	.00	---	11	---	28	---	1.5	.38	---
TOTAL	.21	.00	.00	.00	630.40	461.8	343.4	1535	303.1	133.1	38.40	4.86
MEAN	.01	.00	.00	.00	22.5	14.9	11.4	49.5	10.1	4.29	1.24	.16
MAX	.17	.00	.00	.00	123	53	21	258	19	21	3.3	.76
MIN	.00	.00	.00	.00	.00	7.4	8.6	13	4.1	1.0	.38	.00
AC-FT	.4	.00	.00	.00	1250	916	681	3040	601	264	76	9.6
CAL YR 1984	TOTAL	3826.55		MEAN	10.5	MAX	111	MIN	.00	AC-FT	7590	
WTR YR 1985	TOTAL	3450.27		MEAN	9.45	MAX	258	MIN	.00	AC-FT	6840	

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS

LOCATION.--Lat 39°59'09", long 99°28'39", in NW1/4 NW1/4 sec.9, T.1 S., R.19 W., Phillips County, Hydrologic Unit 10250015, on left bank at downstream side of bridge on U.S. Highway 383, 1.0 mi south of Kansas-Nebraska State line, 2.5 mi west of Woodruff, and at mile 26.5.

DRAINAGE AREA.--1,007 mi².

PERIOD OF RECORD.--October 1928 to September 1932, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,016.20 ft above National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Oct. 7, 1955.

REMARKS.--Estimated daily discharges: Dec. 16 to Apr. 2. Records poor. Flow regulated to some extent since 1964 by Keith Sebelius Lake (station 06847950) 48.4 mi upstream and by irrigation development upstream from station.

AVERAGE DISCHARGE.--45 years, (water years 1929-32, 1945-85), 33.2 ft³/s, 24,050 acre-ft per yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s June 23, 1947, gage height, 21.04 ft, site and datum then in use, from rating curve extended above 6,500 ft³/s on basis of contracted-opening measurement of 11,300 ft³/s; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 504 ft³/s May 14, gage height, 10.92 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.60	.00	.00	.10	.00	.00	.00
2	.00	.00	.00	.00	.00	.35	.00	.00	.06	.00	.00	.00
3	.00	.00	.00	.00	.00	.25	.00	.00	.05	.00	.00	.00
4	.00	.00	.00	.00	.00	.15	.00	.00	.04	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.40
14	.00	.00	.00	.00	.50	.00	.00	350	.00	.00	.00	1.3
15	.00	.00	.00	.00	1.1	.00	.00	254	.00	.00	.00	.90
16	.00	.00	.00	.00	2.5	.00	.00	131	.00	.00	.00	.40
17	.00	.00	.00	.00	5.0	.00	.00	48	.00	.00	.00	3.2
18	.00	.00	.00	.00	16	.00	.00	19	.00	.00	.00	1.2
19	.00	.00	.00	.00	50	.00	.00	7.7	.00	.00	.00	.37
20	.00	.00	.00	.00	100	.00	.00	3.6	.00	.00	.00	.20
21	.00	.00	.00	.00	60	.00	.00	1.9	.00	.00	.00	.13
22	.00	.00	.00	.00	30	.00	.00	1.3	.00	.00	.00	.11
23	.00	.00	.00	.00	19	.00	.00	.88	.00	.00	.00	.06
24	.00	.00	.00	.00	10	.00	.00	.52	.00	.00	.00	.03
25	.00	.00	.00	.00	4.0	.00	.00	.29	.00	.00	.00	.01
26	.00	.00	.00	.00	2.0	.00	.00	.15	.00	.00	.00	.00
27	.00	.00	.00	.00	1.1	.00	.00	.20	.00	.00	.00	.00
28	.00	.00	.00	.00	.80	.00	.00	.20	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.17	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.20	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.14	---	.00	.00	---
TOTAL	.00	.00	.00	.00	302.00	1.35	.00	819.25	.45	.00	.00	8.31
MEAN	.000	.000	.000	.000	10.8	.044	.000	26.4	.015	.000	.000	.28
MAX	.00	.00	.00	.00	100	.60	.00	350	.10	.00	.00	3.2
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	599	2.7	.00	1620	.9	.00	.00	16
CAL YR 1984	TOTAL	485.75	MEAN	1.33	MAX	30	MIN	.00	AC-FT	963		
WTR YR 1985	TOTAL	1131.36	MEAN	3.10	MAX	350	MIN	.00	AC-FT	2240		

KANSAS RIVER BASIN

06849000 HARLAN COUNTY LAKE NEAR REPUBLICAN CITY, NE

LOCATION.--Lat 40°04'10", long 99°12'30", in sec.11, T.1 N., R.17 W., Harlan County, Hydrologic Unit 10250009, at left end of spillway on upstream side of Harlan County Dam on Republican River, 2 mi southeast of Republican City and 8 mi southeast of Alma.

DRAINAGE AREA.--20,750 mi², approximately, of which about 13,530 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1965 published as Harlan County Reservoir near Republican City.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam with gravity-type concrete spillway section; storage began Nov. 14, 1952. Capacity, 327,600 acre-ft between elevations 1,885.0 ft, sill of outlet gates, and 1,946.0 ft, top of storage pool. Top of flood-control pool at elevation 1,973.5 ft, capacity, 825,800 acre-ft. Top of superstorage flood-control pool at elevation 1,975.5 ft, capacity, 872,700 acre-ft. Figures given herein represent total contents. Water used for irrigation is the Bostwick irrigation project.

COOPERATION.--Capacity table furnished by Corps of Engineers (revised Jan. 1, 1982).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 497,700 acre-ft Apr. 6, 1960, elevation, 1,955.67 ft; minimum since operation of reservoir began, 110,300 acre-ft Oct. 22 to Nov. 6, 1953, elevation, 1,922.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 319,300 acre-ft June 11, elevation, 1,945.37 ft; minimum, 225,400 acre-ft Oct. 1-3, elevation, 1,937.18 ft.

Capacity table, (elevation, in feet, and contents, in acre-feet)

1,935	203,900	1,945	314,600
1,940	255,200	1,950	383,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225400	231600	237300	243800	251200	266200	280600	294100	316800	311000	272000	246400
2	225400	231500	237400	244000	251300	267000	281100	294400	316800	309800	271600	245500
3	225400	232100	237400	244100	251300	269200	281700	294800	316800	308400	271300	245100
4	226500	232100	237500	244200	251600	268300	282000	295300	317400	306700	271400	244600
5	226800	232100	237700	244600	252000	268400	282400	295600	317700	305500	271200	245000
6	226900	232200	237700	245000	252000	269300	282700	296000	317900	303600	271100	244700
7	227000	232500	237900	245000	252100	269700	283000	296400	318300	302200	270400	244200
8	227100	232600	238000	245400	252300	270200	283100	296600	318200	300600	269600	243900
9	227100	233300	238300	246400	252700	270600	283500	297100	318800	299100	269100	243500
10	227200	232900	238500	246500	252800	271100	284000	298000	319200	297100	268000	243200
11	227300	233100	239000	246700	253100	271600	284500	298500	319000	295400	267100	243100
12	227400	233200	239100	246700	253300	271600	285100	298600	318800	293700	266800	243300
13	227900	233500	240200	247000	253400	272100	285200	302900	318700	291900	265600	245400
14	228800	233800	240200	247100	253500	272400	285400	306100	318800	301200	265000	246000
15	228600	233800	240600	247500	253700	272900	285800	308500	318300	287500	263700	246100
16	229600	233800	240500	247700	253700	273300	286300	309800	318700	285700	262500	246600
17	229400	234000	241000	247800	253900	273600	286700	310600	318700	283400	261700	246900
18	229900	234100	241100	247900	254100	274200	287000	311300	317800	281600	260200	246900
19	229700	234200	241400	248300	254600	274600	287300	312000	317500	279500	259000	247100
20	229800	234500	241500	248400	255600	275200	287700	312400	316600	278800	257900	247000
21	229900	234600	241800	248600	257700	275500	287800	312900	316200	279300	256900	247100
22	230100	235000	241900	248800	259600	276300	289000	313300	315700	279100	256000	247400
23	230300	235100	242200	249000	260900	276700	288800	313700	314900	277800	255100	247300
24	230400	235300	242300	249200	262000	277000	288900	313800	314200	278000	254100	247000
25	230800	235800	242400	249400	263200	277400	289200	314300	313500	277500	253200	247000
26	230900	236200	242700	249600	263800	277700	290100	314400	312800	276700	252200	246700
27	231000	236400	242800	249700	264700	278400	290300	314800	311900	275600	251000	246900
28	231100	236500	243100	249900	265500	278600	290700	314900	312500	274700	250000	246700
29	231300	236700	243300	250200	---	278800	292700	315900	312400	273600	249600	247800
30	231300	237000	243500	250600	---	279900	293600	316400	311800	273100	248600	247800
31	231800	---	243700	250900	---	280400	---	316800	---	272600	247700	---
MAX	231800	237000	243700	250900	265500	280400	293600	316800	319200	311000	272000	247800
MIN	225400	231500	237300	243800	251200	266200	280600	294100	311800	272600	247700	243100
(†)	1937.80	1938.30	1938.94	1939.60	1940.92	1942.21	1943.32	1945.17	1944.78	1941.54	1939.31	1939.32
(††)	+6100	+5200	+6700	+7200	+14600	+14900	+13200	+23200	-5000	-39200	-24900	+100
CAL YR 1984	MEAN	279200		MAX	342800	MIN	225400	(††)	-19100			
WTR YR 1985	MEAN	265400		MAX	319200	MIN	225400	(††)	+22100			

(†) Elevation, in feet, at end of month.

(††) Change in contents, in acre-feet.

06849500 REPUBLICAN RIVER BELOW HARLAN COUNTY DAM, NE

LOCATION.--Lat 40°04'45", long 99°10'05", in SW1/4 sec.6, T.1 N., R.16 W., Franklin County, Hydrologic Unit 10250016, on left bank 1.4 mi west of Naponee, 1.4 mi upstream from Turkey Creek, and 2.8 mi downstream from Harlan County Dam.

DRAINAGE AREA.--20,760 mi², approximately, of which about 13,550 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--December 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,863.38 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Estimated daily discharges: Nov. 17 to Dec. 3, Dec. 13-16, Dec. 24 to Feb. 20. Records good except for periods of estimated record, which are poor. Flow completely regulated by Harlan County Lake (station 06849000) and partially regulated by six upstream reservoirs.

AVERAGE DISCHARGE.--32 years (1953-85), 254 ft³/s, 184,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,320 ft³/s June 25, 1957, gage height, 8.65 ft; minimum daily, 1.5 ft³/s Apr. 28, 29, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1, 1935, discharge, about 260,000 ft³/s, from slope-area measurement near Bloomington.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 880 ft³/s May 14, gage height, 3.57 ft; minimum daily, 3.6 ft³/s Nov. 10, 11, 15, 16, Mar. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	5.4	3.7	8.0	6.4	11	4.7	11	7.2	519	205	225
2	5.4	4.7	3.7	9.0	7.0	6.0	4.7	6.0	7.9	519	186	222
3	4.7	4.1	11	10	8.0	6.6	4.7	4.7	7.2	511	79	219
4	7.2	4.1	11	11	9.0	6.0	4.7	4.1	11	515	14	191
5	8.6	4.1	11	12	8.0	4.7	4.7	4.1	9.9	511	11	96
6	6.0	4.1	11	13	9.0	4.7	4.7	4.1	7.9	506	79	12
7	6.0	4.7	11	12	10	4.7	4.7	5.4	6.6	506	178	7.9
8	6.0	4.1	11	12	10	4.7	4.7	4.7	5.4	528	175	7.2
9	6.0	4.1	11	10	13	4.7	4.7	4.1	6.0	564	175	7.2
10	6.6	3.6	11	8.0	18	4.7	4.7	4.7	9.9	578	175	7.2
11	6.6	3.6	11	7.0	17	4.7	4.7	8.6	26	634	175	7.2
12	8.6	4.1	11	6.2	18	4.7	4.7	5.4	5.4	653	191	11
13	4.7	4.1	11	8.0	17	4.7	4.7	75	4.7	713	234	79
14	6.6	4.1	10	11	15	4.1	4.7	651	13	754	258	14
15	9.2	3.6	9.0	10	12	4.1	4.7	56	48	770	258	11
16	9.9	3.6	10	11	11	4.1	4.1	23	51	797	258	9.2
17	8.6	3.7	11	12	11	4.1	4.1	16	51	797	277	7.9
18	7.2	3.8	12	14	12	4.1	4.1	13	88	802	330	7.2
19	6.6	3.7	11	13	15	4.1	4.1	11	155	792	348	6.6
20	5.4	3.8	11	8.0	25	4.1	4.1	9.9	165	776	338	6.6
21	5.4	3.9	11	9.0	208	4.1	4.1	9.2	165	303	320	6.0
22	5.4	3.8	11	10	36	4.1	4.7	8.6	165	152	300	6.0
23	5.4	3.7	11	11	19	4.1	5.4	7.2	210	300	280	6.0
24	6.6	3.8	10	11	15	4.7	5.4	6.6	287	317	264	6.0
25	6.0	4.0	8.0	12	14	4.7	5.4	6.0	404	317	261	6.0
26	5.4	4.0	9.0	10	13	4.7	5.4	6.0	498	334	261	6.0
27	4.7	3.9	10	8.0	13	4.7	6.0	6.0	452	370	261	6.0
28	4.7	3.8	11	7.0	13	3.6	5.4	6.0	440	381	261	6.0
29	4.7	3.8	12	8.0	---	3.6	5.4	7.2	468	381	252	6.6
30	4.7	3.8	10	9.0	---	4.7	11	7.2	502	341	231	6.6
31	4.7	---	9.0	6.2	---	4.7	---	7.2	---	261	228	---
TOTAL	192.3	119.6	314.4	306.4	582.4	148.3	149.2	999.0	4277.1	16202	6863	1215.4
MEAN	6.20	3.99	10.1	9.88	20.8	4.78	4.97	32.2	143	523	221	40.5
MAX	9.9	5.4	12	14	208	11	11	651	502	802	348	225
MIN	4.7	3.6	3.7	6.2	6.4	3.6	4.1	4.1	4.7	152	11	6.0
AC-FT	381	237	624	608	1160	294	296	1980	8480	32140	13610	2410
CAL YR 1984	TOTAL	75310.3		MEAN	206	MAX	981	MIN	3.6	AC-FT	149400	
WTR YR 1985	TOTAL	31369.1		MEAN	85.9	MAX	802	MIN	3.6	AC-FT	62220	

KANSAS RIVER BASIN

06851000 CENTER CREEK AT FRANKLIN, NE

LOCATION.--Lat 40°06'12", long 98°58'45", in NW1/4NE1/4 sec.35, T.2 N., R.15 W., Franklin County, Hydrologic Unit 10250016, on right bank at downstream side of bridge on State Highway 136, 1 mi northwest of Franklin and 3 mi upstream from mouth.

DRAINAGE AREA.--177 mi² approximately, of which about 56 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956. Annual maximums and occasional low-flow measurements, water years 1961-68. October 1968 to September 1975, October 1977 to current year.

REVISED RECORDS.--WSP 2119: 1963(M), 1965(M), drainage area. WRD NE-83: 1981-82(P).

GAGE.--Water-stage recorder. Datum of gage is 1,858.34 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Dec. 19, 1952, nonrecording gage at site 1.5 mi downstream at datum 30.27 ft lower and Dec. 19, 1952, to Sept. 30, 1956, at present site at datum 0.84 ft higher. Sept. 7, 1961, to Sept. 30, 1968, crest-stage gage and Oct. 1, 1968, to Sept. 30, 1975, recording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 13, 14, 24-28, Jan. 1, 2, 9-15, 19-22, and Jan. 30 to Feb. 17. Records fair except for periods of estimated record, which are poor. Two small diversions above station for irrigation.

AVERAGE DISCHARGE.--23 years (1948-56, 1968-75, 1978-85) 8.06 ft³/s, 5,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft³/s Sept. 20, 1950, gage height, 6.8 ft, from floodmark, site and datum then in use, from rating curve extended above 420 ft³/s on basis of slope-area measurement of peak flow; no flow at times during 1948-50.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	1900	167	2.73	Aug. 3	0815	119	2.48
May 10	2130	334	3.69	Sept. 5	0930	164	2.74
May 14	1430	*1170	*6.45	Sept. 14	1000	148	2.65

Minimum daily discharge, 4.4 ft³/s July 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	8.4	6.1	6.6	6.6	7.9	7.7	8.9	6.2	4.9	6.3	7.1
2	6.7	8.4	6.0	6.4	6.4	7.9	7.5	7.8	5.8	4.8	6.6	7.4
3	7.0	8.2	6.4	6.2	7.0	8.9	7.4	7.6	6.2	5.0	31	7.3
4	7.0	7.9	6.7	5.9	7.2	8.5	7.3	7.6	7.0	5.9	8.4	8.4
5	7.1	7.9	6.6	6.0	6.8	8.8	7.3	7.6	6.8	6.2	6.5	27
6	6.3	8.0	6.6	5.9	6.8	8.7	7.7	7.5	6.6	5.0	6.1	12
7	6.1	8.0	6.6	5.4	7.0	8.6	7.7	7.6	6.5	5.1	6.0	8.3
8	6.0	7.8	6.5	5.0	6.8	8.3	8.0	7.6	6.7	6.2	6.0	7.8
9	6.4	7.9	6.4	5.2	8.0	8.2	7.7	7.2	7.0	5.2	5.8	7.2
10	6.5	7.9	6.6	5.4	8.0	7.9	8.0	25	7.1	4.4	6.1	8.6
11	6.4	7.5	6.4	5.6	7.8	7.6	8.1	9.3	7.0	5.9	6.2	8.9
12	6.8	7.1	5.9	5.4	8.0	7.6	8.1	6.3	6.7	5.6	4.9	10
13	6.9	7.1	6.0	6.0	8.2	7.0	7.9	46	6.7	6.3	4.9	39
14	6.7	7.1	6.4	6.6	8.4	7.0	7.8	642	6.9	6.3	4.6	107
15	7.3	6.8	6.9	6.8	8.2	7.0	8.1	140	7.0	6.0	5.2	22
16	8.2	6.4	7.1	7.0	8.0	7.0	8.1	22	7.1	5.6	5.9	5.6
17	7.4	6.4	6.9	6.6	8.0	7.2	8.1	12	6.8	5.8	5.5	5.6
18	6.7	6.3	6.7	6.1	8.1	7.1	8.2	11	6.6	7.8	5.9	6.0
19	6.7	6.2	6.8	6.6	9.4	7.1	8.3	10	6.9	7.6	5.8	6.3
20	6.7	6.4	7.2	6.8	10	7.0	8.6	9.3	7.1	7.3	6.0	6.1
21	6.8	6.7	7.1	7.2	103	7.0	8.7	8.1	7.1	12	5.9	6.3
22	7.4	6.6	7.6	7.4	66	7.4	8.7	7.1	7.0	10	6.3	6.3
23	7.5	6.7	7.5	7.7	13	7.2	8.8	6.9	7.5	8.4	6.1	6.0
24	7.5	6.5	7.0	7.9	5.9	6.9	8.2	6.7	6.1	8.8	7.8	5.9
25	7.8	6.7	7.6	8.4	5.8	7.0	8.7	6.8	5.2	8.5	7.1	6.2
26	8.2	6.4	7.8	7.6	6.4	7.4	8.3	7.0	6.9	8.3	6.9	5.8
27	8.1	6.4	7.6	7.3	6.8	7.5	7.8	6.6	6.6	8.2	7.1	5.5
28	8.4	6.4	7.4	7.4	7.4	7.4	7.8	6.9	6.6	7.2	7.3	4.8
29	8.4	6.4	7.4	7.2	---	7.2	8.3	12	7.1	7.3	7.2	8.1
30	8.4	6.4	6.7	7.4	---	7.7	9.8	38	5.8	7.4	6.9	8.3
31	8.4	---	6.7	7.0	---	7.6	---	35	---	7.1	7.4	---
TOTAL	222.8	212.9	211.2	204.0	369.0	235.6	242.7	1143.4	200.6	210.1	219.7	380.8
MEAN	7.19	7.10	6.81	6.58	13.2	7.60	8.09	36.9	6.69	6.78	7.09	12.7
MAX	8.4	8.4	7.8	8.4	103	8.9	9.8	642	7.5	12	31	107
MIN	6.0	6.2	5.9	5.0	5.8	6.9	7.3	6.3	5.2	4.4	4.6	4.8
AC-FT	442	422	419	405	732	467	481	2270	398	417	436	755
CAL YR 1984	TOTAL	3559.1	MEAN	9.72	MAX	206	MIN	3.2	AC-FT	7060		
WTR YR 1985	TOTAL	3852.8	MEAN	10.6	MAX	642	MIN	4.4	AC-FT	7640		

06851500 THOMPSON CREEK AT RIVERTON, NE

LOCATION.--Lat 40°05'21", long 98°45'38", in NW1/4NW1/4 sec.2, T.1 N., R.13 W., Franklin County, Hydrologic Unit 10250016, on left bank at downstream side of bridge on State Highway 136, at west edge of Riverton, 240 ft upstream from Burlington Northern Inc. bridge, and 0.5 mi upstream from mouth.

DRAINAGE AREA.--279 mi², of which about 190 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956, October 1968 to September 1975. Annual maximums, water years 1962-68 and occasional low-flow measurements, water years 1961-68. October 1977 to current year.

REVISED RECORDS.--WRD Nebr. 1972: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,753.38 ft above National Geodetic Vertical Datum of 1929. Apr. 1 to Oct. 1, 1948, nonrecording gage 240 ft downstream at datum 2.32 ft higher. Oct. 1, 1948, to July 11, 1950, water-stage recorder at present site at datum 1.32 ft higher, July 12, 1950, to Sept. 30, 1956, and Oct. 1, 1968, to Sept. 30, 1975, at present site and datum. Sept. 7, 1961, to Sept. 30, 1968, crest-stage gage at present site and datum. Non-recording gage only, June 27, 1983 to Mar. 29, 1984 at site 240 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Oct. 1-8, Dec. 3, 6, 14, 15, 18, 25-29, Jan. 1-3, 9-14, 20-23, Jan. 30 to Feb. 9, Feb. 20-25. Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--23 years (1948-56, 1968-75, 1978-85), 31.8 ft³/s, 23,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s July 9, 1950, gage height, 13.22 ft, present datum, by slope-area measurement; minimum daily, 8.1 ft³/s Dec. 19, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	unknown	440	a5.98	May 30	0645	513	6.68
May 11	0500	840	7.57	July 21	1130	747	7.29
May 14	0730	*3930	*b11.42	Aug. 3	1130	1940	a9.74
May 29	0930	769	7.41				

a From highwater mark.

b Maximum observed.

Minimum daily discharge, 13 ft³/s July 8, 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	20	20	19	14	29	21	29	27	18	17	27
2	16	20	19	22	15	28	20	23	21	18	17	27
3	16	21	20	21	16	31	20	22	20	17	804	27
4	17	20	20	21	18	30	19	22	25	14	272	27
5	17	20	19	21	17	28	19	22	24	14	112	107
6	17	19	19	21	17	29	20	21	24	15	58	83
7	18	20	19	19	19	27	20	22	23	15	39	30
8	18	20	19	19	19	26	20	21	23	13	30	23
9	19	20	20	18	22	24	20	21	22	14	29	24
10	24	19	21	18	20	24	20	41	22	14	27	22
11	20	19	22	18	31	24	18	364	22	16	31	23
12	20	19	22	17	27	24	19	47	20	17	30	37
13	21	20	24	19	23	25	18	206	22	16	30	67
14	22	20	22	23	23	26	19	2280	24	17	33	64
15	35	18	25	22	22	23	19	549	23	13	32	49
16	51	18	28	23	21	21	19	139	22	13	32	31
17	29	19	23	22	22	23	19	52	22	14	32	26
18	24	19	22	22	29	23	19	36	21	15	35	19
19	22	18	20	19	26	23	22	31	21	19	42	17
20	22	18	21	16	26	21	20	28	20	25	39	15
21	21	18	23	18	150	23	20	26	21	356	31	18
22	20	19	21	20	58	23	19	23	22	74	29	20
23	20	19	21	23	45	22	21	22	21	30	30	19
24	20	20	22	20	38	24	20	22	21	28	30	20
25	21	21	20	20	38	20	20	21	21	20	29	21
26	21	20	21	20	40	19	21	22	31	16	28	21
27	20	19	27	20	32	19	20	30	33	16	29	22
28	19	20	30	19	29	19	20	25	31	15	30	22
29	20	19	22	19	---	19	21	180	25	17	30	27
30	19	19	21	16	---	19	35	173	19	18	29	27
31	20	---	22	15	---	20	---	39	---	19	29	---
TOTAL	664	581	675	610	857	736	608	4559	693	926	2065	962
MEAN	21.4	19.4	21.8	19.7	30.6	23.7	20.3	147	23.1	29.9	66.6	32.1
MAX	51	21	30	23	150	31	35	2280	33	356	804	107
MIN	15	18	19	15	14	19	18	21	19	13	17	15
AC-FT	1320	1150	1340	1210	1700	1460	1210	9040	1370	1840	4100	1910
CAL YR 1984	TOTAL	13760	MEAN	37.6	MAX	885	MIN	11	AC-FT	27290		
WTR YR 1985	TOTAL	13936	MEAN	38.2	MAX	2280	MIN	13	AC-FT	27640		

KANSAS RIVER BASIN

06852000 ELM CREEK AT AMBOY, NE

LOCATION.--Lat 40°05'20", long 98°26'07", in NE1/4NW1/4 sec.3, T.1 N., R.10 W., Webster County, Hydrologic Unit 10250016, on left bank at downstream side of bridge on State Highway 136 at east edge of Amboy, 2.5 mi upstream from mouth, and 4.5 mi east of Red Cloud.

DRAINAGE AREA.--39.2 mi².

PERIOD OF RECORD.--April 1948 to December 1953. Annual maximums, water years 1959, 1961-77 and occasional low flow measurements, water years 1954-77. October 1977 to current year.

REVISED RECORDS.--WRD NE-83: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 1,659.07 ft above National Geodetic Vertical Datum of 1929. Prior to July 17, 1952, nonrecording gage at upstream side of bridge at datum 7.26 ft higher, and July 17, 1952, to Jan. 4, 1954, water-stage recorder, present site, at datum 6.26 ft higher, and Sept. 6, 1961, to Sept. 30, 1977, crest-stage gage at present site and datum.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 4, Dec. 6-8, 13-26, Jan. 2-5, 11-15, 19-29, Jan 31 to Feb. 13, and Feb. 16. Records good except for periods of estimated record, which are poor. Natural flow affected by pump irrigation development above station.

AVERAGE DISCHARGE.--13 years (water years 1949-53, 1978-85), 22.2 ft³/s, 16,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,800 ft³/s Sept. 29, 1983, gage height, 16.96 ft, from floodmark, from rating curve extended above 6,400 ft³/s on basis of velocity-area study; maximum gage height, 17.05 ft July 4, 1959; minimum daily discharge, 7.8 ft³/s Aug. 19, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft³/s Aug. 3, gage height, 14.62 ft; minimum daily, 7.5 ft³/s Aug. 2, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	13	12	11	16	16	24	21	12	8.2	11
2	12	14	12	10	9.0	16	16	19	17	12	7.5	11
3	12	14	13	9.4	10	19	16	16	16	12	973	10
4	12	14	14	12	12	16	16	16	17	12	388	11
5	13	14	14	13	12	16	16	16	16	12	61	12
6	13	14	14	14	11	16	16	15	15	13	34	11
7	12	14	13	14	12	16	16	15	15	12	25	11
8	12	14	14	14	13	16	16	15	15	12	21	12
9	12	14	15	15	13	16	16	15	14	12	18	12
10	13	14	14	14	15	16	16	15	15	11	17	13
11	13	14	14	12	15	16	16	16	15	11	16	13
12	13	15	14	10	14	16	16	16	15	10	16	16
13	13	15	14	11	14	16	16	34	15	11	14	21
14	13	14	14	13	14	16	15	365	15	10	13	16
15	16	14	13	14	14	15	15	83	15	9.5	14	15
16	16	14	13	15	15	15	16	26	14	9.6	13	14
17	15	14	14	15	15	15	16	21	14	9.0	13	14
18	14	14	14	14	16	15	16	20	14	8.8	13	13
19	13	13	13	14	35	15	16	19	14	11	14	13
20	13	14	13	12	75	15	16	18	14	10	15	13
21	13	14	13	13	127	15	16	17	14	190	15	15
22	13	14	13	13	50	15	16	17	14	35	14	14
23	13	14	13	13	25	16	16	16	14	14	15	14
24	13	14	12	14	19	16	16	16	14	13	20	13
25	13	14	11	14	18	16	17	17	13	15	13	14
26	13	13	12	15	17	16	17	17	14	11	13	13
27	13	13	15	15	16	16	17	17	13	8.8	12	13
28	13	13	24	15	16	15	16	16	12	8.3	13	13
29	14	13	20	15	---	15	16	25	11	8.2	13	15
30	13	13	16	15	---	16	25	38	11	9.2	13	16
31	13	---	14	13	---	16	---	54	---	11	12	---
TOTAL	405	415	435	412.4	633.0	489	490	1034	436	543.4	1846.7	402
MEAN	13.1	13.8	14.0	13.3	22.6	15.8	16.3	33.4	14.5	17.5	59.6	13.4
MAX	16	15	24	15	127	19	25	365	21	190	973	21
MIN	11	13	11	9.4	9.0	15	15	15	11	8.2	7.5	10
AC-FT	803	823	863	818	1260	970	972	2050	865	1080	3660	797
CAL YR 1984	TOTAL	7912.9		MEAN	21.6	MAX	297	MIN	9.2	AC-FT	15700	
WTR YR 1985	TOTAL	7541.5		MEAN	20.7	MAX	973	MIN	7.5	AC-FT	14960	

06852500 COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE

LOCATION.--Lat 40°00'15", long 98°07'55", in SW1/4SE1/4 sec.32, T.1 N., R.7 W., Nuckolls County, Nebraska, Hydrologic Unit 10250016, on left bank 0.2 mi upstream from Nebraska-Kansas State line and 3.5 mi southwest of Superior, NE.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,612.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Canal diverts from Republican River at Courtland diversion dam in sec.7, T.1 N., R.9 W. Water is used for irrigation in Nebraska and Kansas; figures published herein represent that portion which flows into Kansas.

AVERAGE DISCHARGE.--31 years, 78.1 ft³/s, 56,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 781 ft³/s Sept. 2, 1973, gage height, 5.05 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 534 ft³/s July 20; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	47	.00	.00	.00	.00	.00	.00	62	338	174	126
2	65	40	.00	.00	.00	.00	.00	.00	64	332	126	126
3	65	20	.00	.00	.00	.00	.00	.00	61	334	160	128
4	63	.00	.00	.00	.00	.00	.00	.00	62	330	136	122
5	66	.00	.00	.00	.00	.00	.00	.00	60	328	71	101
6	95	.00	.00	.00	.00	.00	.00	.00	60	328	39	91
7	96	.00	.00	.00	.00	.00	.00	.00	59	326	38	88
8	91	.00	.00	.00	.00	.00	.00	.00	63	328	49	84
9	84	.00	.00	.00	.00	.00	.00	.00	62	328	58	73
10	89	.00	.00	.00	.00	.00	.00	.00	83	330	60	58
11	90	.00	.00	.00	.00	.00	.00	.00	100	332	60	44
12	88	.00	.00	.00	.00	.00	.00	.00	102	352	77	29
13	88	.00	.00	.00	.00	.00	.00	.00	103	376	100	16
14	87	.00	.00	.00	.00	.00	.00	.00	89	388	106	11
15	111	.00	.00	.00	.00	.00	.00	.00	85	452	100	7.0
16	133	.00	.00	.00	.00	.00	.00	.00	84	508	98	9.2
17	140	.00	.00	.00	.00	.00	.00	.00	101	520	121	11
18	139	.00	.00	.00	.00	.00	.00	.00	114	522	149	9.2
19	129	.00	.00	.00	.00	.00	.00	.00	121	522	171	13
20	122	.00	.00	.00	.00	.00	.00	.00	125	534	211	1.9
21	119	.00	.00	.00	.00	.00	.00	.00	142	529	240	.00
22	114	.00	.00	.00	.00	.00	.00	87	168	456	254	.00
23	111	.00	.00	.00	.00	.00	.00	104	180	352	242	.00
24	110	.00	.00	.00	.00	.00	.00	96	190	294	222	.00
25	110	.00	.00	.00	.00	.00	.00	88	195	296	209	.00
26	117	.00	.00	.00	.00	.00	.00	88	229	294	209	.00
27	120	.00	.00	.00	.00	.00	.00	88	296	290	203	.00
28	117	.00	.00	.00	.00	.00	.00	72	326	294	195	.00
29	110	.00	.00	.00	---	.00	.00	70	330	308	188	.00
30	95	.00	.00	.00	---	.00	.00	74	342	326	182	.00
31	65	---	.00	.00	---	.00	---	60	---	280	149	---
TOTAL	3096	107.00	.00	.00	.00	.00	.00	827.00	4058	11527	4397	1148.30
MEAN	99.9	3.57	.00	.00	.00	.00	.00	26.7	135	372	142	38.3
MAX	140	47	.00	.00	.00	.00	.00	104	342	534	254	128
MIN	63	.00	.00	.00	.00	.00	.00	.00	59	280	38	.00
AC-FT	6140	212	.00	.00	.00	.00	.00	1640	8050	22860	8720	2280
CAL YR 1984	TOTAL	36888.00	MEAN	101	MAX	612	MIN	.00	AC-FT	73170		
WTR YR 1985	TOTAL	25160.30	MEAN	68.9	MAX	534	MIN	.00	AC-FT	49910		

KANSAS RIVER BASIN

06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1962 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
10...	1100	9.4	730	7.9	16.0	8.9	--	--	340	280	84	18
NOV												
19...	1145	104	705	8.4	2.5	13.5	18	K46	220	320	98	18
DEC												
04...	1745	109	745	8.4	.5	14.6	--	K14	K60	330	100	19
JAN												
16...	1130	127	840	8.0	.0	10.6	--	780	K24	390	110	27
FEB												
11...	1835	156	705	8.1	.0	10.3	18	51	K43	300	93	17
MAR												
13...	1315	152	750	8.1	7.5	11.8	--	K93	84	350	110	19
APR												
02...	0915	148	715	8.3	7.0	9.9	--	350	76	330	100	19
MAY												
07...	1510	132	770	8.4	25.0	8.1	59	100	250	330	100	19
JUN												
18...	1500	30	750	8.3	26.0	14.8	--	420	81	330	99	19
JUL												
17...	1150	33	665	8.5	28.0	7.7	--	480	540	230	59	19
AUG												
13...	1445	123	710	7.9	28.0	7.6	27	570	120	260	71	20
SEP												
04...	1620	176	700	8.5	26.5	8.7	--	K220	260	240	64	20

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
10...	34	.9	110	20	36	.80	.060	.44	.50	1.3	.160	3.5
NOV												
19...	35	.9	110	20	157	1.1	.100	.70	.80	1.9	.190	3.6
DEC												
04...	36	.9	120	22	21	1.6	.050	.85	.90	2.5	.120	3.6
JAN												
16...	51	1	110	21	10	2.1	.120	.48	.60	2.7	.140	3.0
FEB												
11...	39	1	110	22	10	2.0	.120	.48	.60	2.6	.120	3.1
MAR												
13...	36	.9	130	22	20	1.2	.070	1.1	1.2	2.4	.160	3.4
APR												
02...	36	.9	120	24	28	1.1	.060	.64	.70	1.8	.120	4.3
MAY												
07...	38	1	120	23	65	1.1	.060	.94	1.0	2.1	.230	6.1
JUN												
18...	38	1	130	24	61	.70	.080	1.6	1.7	2.4	.220	8.4
JUL												
17...	39	1	90	27	163	1.0	.050	.85	.90	1.9	.240	6.3
AUG												
13...	40	1	110	24	116	.70	.040	.46	.50	1.2	.220	6.5
SEP												
04...	42	1	93	25	47	.80	.030	.77	.80	1.6	.160	5.9

06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 19...	1145	--	1	6	5	1	.9	--	<1	<10
FEB 11...	1835	3	<1	2	2	6	<.1	<1	<1	10
MAY 07...	1510	5	<1	4	5	2	--	--	<1	20
AUG 13...	1445	7	<1	--	2	5	.1	3	1	30

KANSAS RIVER BASIN

06853020 REPUBLICAN RIVER AT GUIDE ROCK, NE

LOCATION (REVISED).--Lat 40°03'49", long 98°19'53", in NE1/4SE1/4 sec.9, T.1 N., R.9 W., Webster County, Hydrologic Unit 10250016, on right downstream bank at Nebraska State Highway 78 bridge, 0.2 mi downstream from Minnie Creek and 0.5 mi south of Guide Rock. Station is 3.1 river miles downstream from station 06853000, Republican River near Guide Rock, previous site.

DRAINAGE AREA.--22,090 mi², approximately, of which about 14,600 mi² contributes directly to surface runoff (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1950 to current year. August 1950 to September 1984 published as Republican River near Guide Rock (06853000).

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,616.15 ft above National Geodetic Vertical Datum of 1929, levels by U.S. Corps of Engineers. Prior to Oct. 1, 1959, at datum 12.98 ft higher, and Oct. 1, 1959 to Nov. 28, 1984, at datum 7.98 ft higher, both at site 3.1 miles upstream.

REMARKS.--Estimated daily discharges: Dec. 16-28, Dec. 31 to Jan. 5, Jan. 10 to Feb. 23. Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station, by regulation of upstream reservoirs, and since Nov. 14, 1952, by storage in Harlan County Lake (station 06849000).

AVERAGE DISCHARGE.--35 years, 334 ft³/s, 242,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,200 ft³/s June 16, 1957, gage height, 20.73 ft, at site and datum then in use; minimum daily, 0.1 ft³/s May 26, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1 or 2, 1935, discharge, about 250,000 ft³/s, from slope-area measurements near Bloomington and Hardy.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,480 ft³/s May 15, gage height, 13.63 ft; minimum daily, 27 ft³/s Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	50	109	86	105	213	153	210	221	43	227	144
2	10	90	107	90	120	202	149	193	157	51	238	157
3	9.9	93	105	100	128	206	146	162	124	51	2770	161
4	13	92	108	115	128	203	144	149	118	41	3200	168
5	16	92	116	140	120	183	140	142	121	35	692	198
6	8.8	89	96	162	125	180	135	135	114	33	424	282
7	6.2	90	101	149	150	177	134	130	103	26	343	241
8	2.9	93	120	140	150	173	134	127	91	27	270	165
9	4.6	93	133	96	148	167	134	125	81	24	220	129
10	6.7	92	123	94	150	164	136	122	68	26	195	132
11	7.1	90	114	88	155	164	136	196	54	22	175	143
12	6.8	93	113	84	160	159	134	399	47	30	154	167
13	5.7	96	94	100	160	154	135	225	48	36	124	281
14	8.3	96	76	112	165	151	133	3000	44	42	96	506
15	21	95	114	120	173	151	133	6680	47	62	102	431
16	21	95	140	125	170	149	135	2020	40	38	112	304
17	21	95	128	130	160	148	135	695	38	30	97	243
18	21	101	115	145	190	147	135	460	30	22	84	207
19	6.8	106	105	130	220	149	134	352	26	28	113	193
20	6.4	108	108	120	260	145	132	262	25	44	121	168
21	4.7	111	110	120	350	144	129	177	44	1430	112	170
22	5.7	115	105	123	470	145	126	148	40	1320	103	161
23	7.1	116	100	125	640	149	136	130	36	232	97	156
24	6.8	116	105	128	445	147	134	121	39	179	127	151
25	8.7	119	120	135	354	143	129	114	29	178	119	146
26	7.1	120	130	138	306	143	134	102	34	141	104	142
27	5.4	114	150	135	255	143	136	97	101	118	102	139
28	2.7	111	190	130	226	142	133	118	75	117	97	136
29	4.7	110	220	125	---	139	132	368	47	109	103	144
30	9.6	109	158	120	---	144	175	740	32	105	116	164
31	23	---	100	110	---	153	---	445	---	152	124	---
TOTAL	298.7	2990	3713	3715	6183	4977	4111	18344	2074	4792	10961	5929
MEAN	9.64	99.7	120	120	221	161	137	592	69.1	155	354	198
MAX	23	120	220	162	640	213	175	6680	221	1430	3200	506
MIN	2.7	50	76	84	105	139	126	97	25	22	84	129
AC-FT	592	5930	7360	7370	12260	9870	8150	36390	4110	9500	21740	11760
CAL YR 1984	TOTAL	110887.2		MEAN	303	MAX	3080	MIN	2.7	AC-FT	219900	
WTR YR 1985	TOTAL	68087.7		MEAN	187	MAX	6680	MIN	2.7	AC-FT	135100	

06853500 REPUBLICAN RIVER NEAR HARDY, NE

LOCATION.--Lat 39°59'33", long 97°55'53", in NE1/4 NE1/4 SE1/4 sec.1, T.1 S., R.6 W., in Kansas, Republic County, Hydrologic Unit 10250016, on right bank at upstream side of highway bridge, 1.2 mi southwest of Hardy and at mile 141.2.

DRAINAGE AREA.--22,401 mi², of which about 7,500 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1904 to September 1915 (no winter records), April 1931 to current year. Prior to May 1932, published as "at Bostwick." Records for June 1896 to November 1903 published as "near Superior" in 18th to 22nd Ann. Repts., inclusive, Pt. 4, and WSP 75, 84, and 99, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-09, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft above National Geodetic Vertical Datum of 1929. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Jan. 9 to Feb. 26. Records good except those for estimated daily discharges, which are poor. Natural flow affected by irrigation development upstream from station and by storage in reservoirs in Colorado, Kansas, and Nebraska. Considerable regulation since 1952 by Harlan County Lake (station 06849000).

AVERAGE DISCHARGE.--21 years (water years 1914, 1933-52), 882 ft³/s, 639,000 acre-ft per yr; 28 years (water years 1958-85, since conservation pool at Harlan County Lake was first filled), 382 ft³/s, 276,800 acre-ft per yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 225,000 ft³/s June 2, 1935, gage height, 19.4 ft, based on records for stations upstream; no flow Aug. 9-19, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, that of June 2, 1935, and 17.00 ft June 24, 1947, discharge, 100,000 ft³/s, based on records for upstream stations.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,130 ft³/s Aug. 4, gage height, 11.29 ft; minimum discharge, 42 ft³/s Oct. 1, 2, 9, and 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	57	137	155	103	279	190	307	563	158	349	190
2	43	75	135	180	98	253	194	281	318	153	375	216
3	44	93	135	208	116	248	193	243	241	153	3390	217
4	45	116	133	226	127	247	191	216	223	143	6460	213
5	55	118	141	226	123	236	187	202	216	131	2580	225
6	70	118	140	230	112	224	182	194	217	118	882	252
7	51	120	135	233	104	222	178	188	211	122	647	315
8	47	120	135	219	140	220	177	185	201	113	540	251
9	43	121	152	175	170	215	176	178	193	100	462	177
10	43	126	169	145	210	215	180	175	221	89	435	147
11	43	122	164	140	184	212	181	172	388	82	411	159
12	44	122	151	115	171	206	181	307	188	70	391	181
13	46	129	169	120	198	204	181	461	162	79	330	239
14	49	130	238	125	220	200	176	2280	157	100	273	356
15	78	129	282	125	220	198	175	3910	150	98	240	520
16	80	125	421	130	210	195	175	5170	149	136	257	443
17	98	124	540	130	228	193	175	1420	143	110	258	351
18	86	124	567	125	250	191	173	865	136	82	236	291
19	80	125	523	130	260	188	174	690	122	74	229	258
20	62	127	477	115	270	188	184	558	115	86	248	255
21	55	127	528	110	295	185	179	374	105	622	248	241
22	50	130	523	100	360	186	193	261	130	2050	235	240
23	48	134	483	130	495	189	184	241	133	900	213	231
24	49	136	462	145	575	189	183	231	118	359	211	216
25	50	136	376	150	585	185	182	212	118	293	247	206
26	51	136	383	150	590	185	185	201	134	270	236	199
27	52	136	391	145	429	185	188	193	189	232	208	192
28	49	133	342	130	329	185	188	186	220	212	187	186
29	47	131	336	135	---	179	187	222	198	208	171	200
30	46	133	291	150	---	180	212	772	174	243	175	233
31	51	---	201	117	---	186	---	929	---	295	179	---
TOTAL	1697	3653	9260	4714	7172	6368	5504	21824	5833	7881	21303	7400
MEAN	54.7	122	299	152	256	205	183	704	194	254	687	247
MAX	98	136	567	233	590	279	212	5170	563	2050	6460	520
MIN	42	57	133	100	98	179	173	172	105	70	171	147
AC-FT	3370	7250	18370	9350	14230	12630	10920	43290	11570	15630	42250	14680
CAL YR 1984	TOTAL	170416	MEAN 466	MAX 3780	MIN 34	AC-FT 338000						
WTR YR 1985	TOTAL	102609	MEAN 281	MAX 6460	MIN 42	AC-FT 203500						

KANSAS RIVER BASIN

06879900 BIG BLUE RIVER AT SURPRISE, NE

LOCATION.--Lat 41°06'05", long 97°18'35", in NW1/4NW1/4 sec.15, T.13 N., R.1 E., Butler County, Hydrologic Unit 10270201, on left bank 50 ft downstream from bridge on county road at south edge of Surprise.

DRAINAGE AREA.--345 mi².

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1965, published as North Branch Big Blue River at Surprise.

GAGE.--Water-stage recorder and concrete broad-crested weir control. Elevation of gage is 1,520 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good above 5 ft³/s and poor below.

AVERAGE DISCHARGE.--21 years, 28.0 ft³/s, 20,290 acre-ft/yr; median of yearly mean discharges, 25 ft³/s, 18,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s July 19, 1965, gage height, 11.52 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 6	0630	331	3.46	Aug. 15	0030	351	3.77
July 20	2100	*2240	*8.91	Sept. 14	0500	609	4.69
July 24	2330	387	3.90				

Minimum daily discharge, 0.15 ft³/s Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.51	.54	5.0	1.1	11	1.3	30	1.3	2.6	8.9	4.1
2	1.4	.62	.37	3.4	1.2	7.0	1.5	22	1.4	2.1	6.6	2.6
3	1.7	.97	.70	3.4	.74	20	1.3	36	1.4	2.9	6.7	2.0
4	2.0	.95	.85	7.4	.97	76	1.0	19	4.0	2.2	11	1.5
5	2.4	1.2	.49	5.3	1.3	178	.73	7.9	6.9	1.7	8.7	3.0
6	2.8	.93	.42	2.7	1.4	197	.69	3.3	4.4	1.7	25	4.7
7	4.3	.25	.75	2.2	.89	53	.95	2.1	2.8	.29	34	5.2
8	2.5	.78	.60	1.9	.97	36	.86	4.8	2.2	2.2	11	2.1
9	2.4	.54	.57	1.6	1.2	30	1.1	3.5	2.1	3.4	5.9	1.6
10	5.0	.17	.77	1.6	1.2	20	1.3	2.2	1.9	3.3	3.7	1.8
11	3.4	.89	.57	.81	1.2	12	1.4	1.6	3.4	7.9	3.2	2.6
12	2.5	1.5	.36	.99	1.6	7.1	1.2	.68	3.9	11	4.0	66
13	2.2	1.0	.21	1.1	1.4	5.2	.86	2.6	2.5	15	13	445
14	2.4	1.3	.15	1.1	1.7	3.7	1.0	95	1.6	10	197	508
15	3.7	.92	.46	.67	1.4	3.0	.84	148	1.8	9.5	261	442
16	3.2	.80	2.1	1.1	2.1	2.9	.78	160	1.6	8.5	53	315
17	2.2	.60	1.5	1.4	2.0	2.5	1.1	180	1.5	8.9	91	75
18	2.2	.43	1.3	1.6	2.4	2.2	.79	179	3.4	12	81	40
19	3.0	.22	1.1	1.3	4.0	2.1	.76	52	3.2	917	37	30
20	2.5	.39	1.2	.45	6.1	1.9	1.3	38	2.2	1870	18	19
21	2.0	.42	1.8	.67	54	2.0	1.3	15	2.0	1760	8.7	15
22	1.6	.44	1.6	.72	44	1.9	1.5	7.7	1.2	776	5.4	12
23	1.9	.30	1.7	1.2	46	2.1	1.0	4.8	1.6	139	3.7	9.3
24	1.9	.39	1.1	1.3	28	1.7	.98	3.1	10	259	3.3	6.5
25	2.1	.38	.81	1.7	18	1.7	1.5	3.2	9.4	253	3.6	5.8
26	2.4	.32	.83	1.5	13	1.6	4.2	2.6	3.7	59	3.6	4.4
27	1.7	2.3	2.1	1.6	7.7	1.2	7.2	1.7	70	36	3.8	3.6
28	.68	1.9	18	1.7	9.7	.99	5.1	2.1	26	26	3.4	2.6
29	.72	.67	20	1.6	---	.50	3.3	3.1	8.1	18	3.9	3.2
30	.63	.57	21	1.6	---	.57	19	2.7	3.9	14	3.9	9.9
31	.32	---	11	1.4	---	1.2	---	1.9	---	12	3.6	---
TOTAL	69.15	22.66	94.95	60.01	255.27	686.06	65.84	1035.58	189.4	6244.19	926.6	2043.5
MEAN	2.23	.76	3.06	1.94	9.12	22.1	2.19	33.4	6.31	201	29.9	68.1
MAX	5.0	2.3	21	7.4	54	197	19	180	70	1870	261	508
MIN	.32	.17	.15	.45	.74	.50	.69	.68	1.2	.29	3.2	1.5
AC-FT	137	45	188	119	506	1360	131	2050	376	12390	1840	4050
CAL YR 1984	TOTAL	20194.85		MEAN	55.2	MAX	1520	MIN	.03	AC-FT	40060	
WTR YR 1985	TOTAL	11693.21		MEAN	32.0	MAX	1870	MIN	.15	AC-FT	23190	

06880000 LINCOLN CREEK NEAR SEWARD, NE

LOCATION.--Lat 40°54'57", long 97°08'43", in NW1/4NE1/4 sec.24, T.11 N., R.2 E., Seward County, Hydrologic Unit 10270201, on left bank at downstream side of county road bridge (revised), 2 mi west of Seward, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--446 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to September 1973, March 1974 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,429.27 ft above National Geodetic Vertical Datum of 1929. June 27, 1984 to June 2, 1985 at temporary site upstream from county road at same datum.

REMARKS.--Estimated daily discharges: Nov. 22 to Dec. 3 and Dec. 29 to Feb. 20. Records fair except for periods of estimated record, which are poor. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--31 years, (1953-73, 1975-85) 49.9 ft³/s, 36,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s June 17, 1957, gage height, 20.53 ft; minimum daily, 1.3 ft³/s July 31, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 22	0630	508	10.74	Aug. 13	2330	358	9.20
May 14	1630	560	11.16	Aug. 17	1700	407	9.82
July 19	2100	*5300	*19.60	Sept. 15	1200	565	11.20
Aug. 7	0730	520	10.83				

Minimum daily discharge, 12 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	19	19	36	19	24	22	34	29	24	61	26
2	13	18	19	38	20	23	23	37	29	59	64	24
3	13	18	18	32	21	23	23	61	27	82	60	24
4	14	18	20	25	22	135	23	88	25	43	57	24
5	15	17	18	19	23	161	23	40	23	33	52	25
6	16	16	20	20	24	39	23	31	24	29	81	25
7	18	16	16	21	23	32	23	29	25	28	465	24
8	20	16	18	20	24	60	23	27	25	32	346	22
9	17	18	16	19	25	67	23	25	25	31	261	22
10	18	17	17	18	28	29	24	25	26	32	288	22
11	17	16	17	18	26	24	24	38	26	32	199	23
12	17	16	17	17	28	26	24	24	25	30	78	23
13	17	16	16	18	29	25	24	28	26	30	102	267
14	20	18	20	18	32	24	24	415	26	33	200	418
15	29	20	18	18	35	23	25	468	26	35	69	550
16	29	17	19	18	38	23	25	394	26	36	46	521
17	36	17	18	18	42	22	26	294	25	37	328	478
18	40	18	21	19	49	22	26	273	25	42	276	200
19	40	19	17	18	70	23	26	289	25	2960	201	110
20	29	18	16	19	110	23	29	220	25	4470	255	76
21	23	18	16	20	191	22	27	75	24	3360	191	53
22	21	17	15	21	429	22	27	46	24	2240	102	43
23	19	17	15	21	251	23	27	39	24	1180	58	52
24	21	17	15	21	94	23	27	36	24	428	45	35
25	22	18	16	21	39	22	28	38	24	372	41	31
26	21	18	16	21	34	22	32	38	24	184	37	28
27	20	17	20	20	31	22	31	35	26	118	33	27
28	20	17	69	20	29	21	31	34	30	101	30	25
29	19	17	80	19	---	21	30	33	35	70	29	30
30	20	18	40	19	---	21	31	32	25	90	27	59
31	19	---	35	19	---	22	---	30	---	63	26	---
TOTAL	655	522	697	651	1786	1069	774	3276	773	16304	4108	3287
MEAN	21.1	17.4	22.5	21.0	63.8	34.5	25.8	106	25.8	526	133	110
MAX	40	20	80	38	429	161	32	468	35	4470	465	550
MIN	12	16	15	17	19	21	22	24	23	24	26	22
AC-FT	1300	1040	1380	1290	3540	2120	1540	6500	1530	32340	8150	6520
CAL YR 1984	TOTAL	48196	MEAN	132	MAX	1910	MIN	11	AC-FT	95600		
WTR YR 1985	TOTAL	33902	MEAN	92.9	MAX	4470	MIN	12	AC-FT	67240		

KANSAS RIVER BASIN

06880000 LINCOLN CREEK NEAR SEWARD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-70, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
30...	1045	20	--	8.1	8.0	10.9	--	310	2000	230	69	14
NOV												
06...	1200	16	600	8.2	6.0	11.5	13	K2400	1100	240	73	14
DEC												
04...	1025	14	590	7.5	.5	13.8	--	K14	200	250	77	15
FEB												
01...	1245	22	666	7.9	.0	15.8	--	K12	160	300	93	16
MAR												
04...	1200	203	472	7.6	4.0	10.9	130	930	34000	170	50	11
27...	1145	22	608	8.1	12.0	9.8	--	K210	1700	280	85	16
MAY												
01...	1315	34	580	7.8	17.0	8.5	--	K1500	6000	250	74	15
21...	1030	71	235	7.4	17.0	7.5	85	6700	14000	74	21	5.2
JUN												
19...	1110	25	580	8.5	18.0	10.2	--	1000	1500	260	78	16
JUL												
16...	1220	37	530	7.9	25.0	8.1	--	2700	5400	210	63	14
AUG												
13...	1012	52	315	7.6	21.5	6.5	57	2400	8000	110	33	7.5
SEP												
04...	1145	24	520	7.7	23.0	6.8	--	670	3000	240	73	14

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
30...	28	.8	48	9.0	46	3.2	.070	1.4	1.5	4.7	.500	6.7
NOV												
06...	28	.8	51	9.2	41	3.2	.030	1.4	1.4	4.6	.390	3.4
DEC												
04...	29	.8	52	10	39	3.0	.030	.97	1.0	4.0	.320	3.9
FEB												
01...	27	.7	64	9.8	16	4.3	.130	.87	1.0	5.3	.340	2.0
MAR												
04...	25	.9	48	11	1580	4.5	.470	6.5	7.0	12	1.70	39
27...	30	.8	52	7.1	306	3.6	.120	3.1	3.2	6.8	.720	10
MAY												
01...	29	.8	53	10	380	2.8	.350	.95	1.3	4.1	.360	9.3
21...	9.1	.5	23	4.3	452	3.4	.640	1.9	2.5	5.9	.890	52
JUN												
19...	29	.8	56	9.7	139	1.8	.050	1.7	1.7	3.5	.560	2.6
JUL												
16...	28	.9	54	11	454	4.3	.060	1.0	1.1	5.4	.470	12
AUG												
13...	13	.6	25	5.4	--	2.3	.110	1.1	1.2	3.5	.490	18
SEP												
04...	28	.8	49	8.3	144	3.0	.030	1.5	1.5	4.5	.420	8.3

06880500 BIG BLUE RIVER AT SEWARD, NE

LOCATION (REVISED).--Lat 40°54'10", long 97°06'40", in SE1/4SW1/4 sec.20, T.11 N., R.3 E., Seward County, Hydrologic Unit 10270201, at downstream end of right abutment of bridge on U.S. Highway 34 at west edge of Seward, 1.7 mi upstream from Plum Creek and 0.2 mi downstream from Lincoln Creek.

DRAINAGE AREA.--1,099 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 1919: Drainage area. WDR NE-80-1: 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 1,421.49 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1969, at present site and datum. Dec. 19, 1969 to Nov. 7, 1983 at site 1.2 mi downstream at datum 6.33 ft lower.

REMARKS.--Estimated daily discharges: Dec. 5-11 and Dec. 21 to Feb. 25. Records good except for periods of estimated record, which are poor. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--32 years, 126 ft³/s, 91,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s June 18, 1957, gage height, 22.34 ft; maximum gage height, 22.83 ft June 16, 1967; from stage readings during 1967 flood, gage height at downstream site and datum was approximately 25.66 ft; no flow July 30, 31, 1955, result of irrigation pumping.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 15	1600	1410	10.98	Aug. 17	2400	1010	8.26
July 20	0900	*5710	*20.28	Sept. 15	0500	1450	11.03

Minimum daily discharge, 21 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	38	46	88	45	92	64	349	66	54	87	51
2	24	38	46	70	43	90	61	462	58	64	87	49
3	25	37	36	58	46	98	82	215	54	112	83	48
4	25	39	44	52	46	248	95	198	53	67	74	47
5	26	42	35	48	45	758	83	146	56	51	69	50
6	31	39	28	50	47	305	70	101	76	42	72	50
7	34	40	31	52	47	265	66	81	76	34	527	51
8	60	41	38	46	48	242	62	69	70	39	437	53
9	58	41	37	41	52	196	58	56	64	39	328	50
10	45	40	37	39	50	138	57	51	58	38	324	49
11	41	43	40	38	47	113	56	73	52	41	247	49
12	41	58	46	36	49	99	56	80	50	35	111	50
13	39	54	39	38	52	93	56	78	53	38	155	592
14	46	49	43	38	50	83	53	816	54	42	519	1300
15	71	49	58	37	50	78	53	1380	57	46	710	1440
16	61	47	79	37	56	74	53	1070	52	49	588	1300
17	135	45	79	38	60	70	54	708	51	41	860	1130
18	120	45	108	38	70	66	54	614	48	38	868	596
19	121	44	105	35	80	65	53	634	47	3170	586	267
20	83	43	71	36	110	63	58	524	45	5510	492	196
21	69	42	56	39	200	63	55	302	43	4640	348	148
22	57	41	52	43	350	61	66	174	42	3780	195	121
23	48	42	47	47	700	61	63	115	39	2940	126	141
24	43	42	44	50	500	63	61	96	42	1690	97	119
25	43	43	43	52	300	66	71	82	42	881	84	111
26	40	45	44	52	142	63	89	73	41	763	76	93
27	39	45	46	52	112	59	130	67	49	387	68	80
28	37	43	60	50	101	57	159	62	50	199	62	71
29	38	43	160	49	---	62	124	65	114	132	58	75
30	37	43	140	48	---	62	105	67	82	127	54	123
31	38	---	110	47	---	64	---	67	---	100	53	---
TOTAL	1596	1301	1848	1444	3498	3917	2167	8875	1684	25189	8445	8500
MEAN	51.5	43.4	59.6	46.6	125	126	72.2	286	56.1	813	272	283
MAX	135	58	160	88	700	758	159	1380	114	5510	868	1440
MIN	21	37	28	35	43	57	53	51	39	34	53	47
AC-FT	3170	2580	3670	2860	6940	7770	4300	17600	3340	49960	16750	16860
CAL YR 1984	TOTAL	122387	MEAN	334	MAX	4970	MIN	21	AC-FT	242800		
WTR YR 1985	TOTAL	68464	MEAN	188	MAX	5510	MIN	21	AC-FT	135800		

KANSAS RIVER BASIN

06880500 BIG BLUE RIVER AT SEWARD, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 16...	1050	59	710	7.8	13.0	7.2	--	2800	32000	280	76	21
NOV 06...	1250	37	801	8.2	6.5	13.1	19	K1800	840	340	100	23
DEC 04...	0910	43	778	7.5	.5	16.1	--	K21	210	330	96	23
FEB 01...	1030	45	719	8.2	.0	15.6	--	260	200	320	95	20
MAR 04...	1310	178	569	7.9	3.5	12.4	58	K70	3800	230	66	15
27...	1030	60	718	8.0	11.0	9.7	--	K70	3100	330	96	21
MAY 01...	1500	484	800	7.7	16.5	9.0	--	8300	11000	340	94	25
21...	0900	313	295	7.8	17.5	7.9	120	71000	10000	110	30	7.6
JUN 19...	0900	48	645	--	20.0	8.1	--	K760	1100	280	79	19
JUL 16...	1020	50	580	8.7	25.0	6.0	--	2000	2200	230	67	16
AUG 13...	0918	82	342	7.6	21.5	7.0	58	2000	6600	130	36	8.7
SEP 04...	1330	46	633	7.6	24.0	6.0	--	430	1800	270	79	18

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 16...	41	1	110	11	121	1.4	.080	2.0	2.1	3.5	.450	10
NOV 06...	41	1	110	10	35	2.5	.020	1.7	1.7	4.2	.370	5.1
DEC 04...	42	1	110	9.5	20	1.9	.030	1.2	1.2	3.1	.280	5.1
FEB 01...	43	1	87	10	15	3.9	.120	1.1	1.2	5.1	.330	3.1
MAR 04...	29	.9	69	8.9	532	2.9	.900	2.8	3.7	6.6	.950	15
27...	38	1	80	6.5	157	2.9	.100	1.3	1.4	4.3	.660	13
MAY 01...	44	1	120	9.4	772	2.0	.260	1.4	1.7	3.7	.650	42
21...	13	.6	40	4.3	584	2.9	.310	3.8	4.1	7.0	.720	25
JUN 19...	33	.9	82	9.5	148	1.2	.070	1.2	1.3	2.5	.490	9.9
JUL 16...	32	.9	72	12	268	3.4	.080	1.3	1.4	4.8	.470	15
AUG 13...	15	.6	31	6.8	--	2.1	.120	.98	1.1	3.2	.460	17
SEP 04...	32	.9	69	8.5	108	2.1	.090	.71	.80	2.9	.410	7.3

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE

LOCATION.--Lat 40°43'52", long 97°10'38", in SW1/4SW1/4 sec.23, T.9 N., R.2 E., Seward County, Hydrologic Unit 10270203, on right bank 60 ft downstream from bridge on county road, 6.2 mi northwest of Dorchester, and 19 mi upstream from mouth.

DRAINAGE AREA.--1,206 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1958 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,403.48 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1970, on bridge pier 60 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 4-13 and Dec. 17 to Feb. 20. Records good except for periods of estimated record, which are poor. Some diversion by pumping for irrigation above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--27 years, 180 ft³/s, 130,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s Mar. 20, 1969, gage height, 20.34 ft; minimum daily, 12 ft³/s Dec. 31, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1950, reached a stage of 24.8 ft, present datum, from floodmarks, discharge, 49,400 ft³/s, from contracted-opening and flow-over-road measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 16	2330	*5130	*17.67	July 20	1800	4690	17.27

Minimum daily discharge, 47 ft³/s Dec. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	65	59	140	70	117	77	109	212	137	159	99
2	55	65	58	150	74	103	77	130	191	159	130	91
3	54	66	55	160	78	105	77	136	182	123	141	88
4	55	67	50	160	72	102	72	121	171	111	192	89
5	57	64	48	150	70	132	72	102	153	107	174	77
6	68	63	47	120	74	150	71	93	139	112	211	77
7	149	63	54	90	70	136	71	87	131	120	268	77
8	119	62	58	74	74	160	72	80	124	121	658	69
9	105	62	60	80	78	147	71	76	117	113	447	67
10	79	63	62	70	82	117	70	74	113	111	352	63
11	71	62	60	62	84	96	70	111	108	122	219	62
12	75	63	58	58	84	86	69	264	104	133	155	71
13	70	63	58	70	88	82	69	484	103	154	123	156
14	71	62	167	66	90	76	69	1090	103	170	139	774
15	85	60	112	64	88	73	69	1760	108	174	213	1010
16	107	59	102	68	94	71	69	2910	112	155	131	909
17	222	60	96	70	100	69	69	4220	103	153	161	962
18	384	60	94	68	102	69	69	3000	95	156	563	1050
19	268	60	100	56	110	68	70	2200	92	515	319	791
20	174	58	94	54	112	68	81	833	91	3440	239	276
21	129	60	90	64	134	68	80	484	90	2900	209	203
22	108	61	84	70	222	68	81	364	86	1160	179	168
23	96	61	76	76	256	71	80	294	85	583	134	149
24	88	62	70	78	257	71	76	262	83	373	104	130
25	83	63	70	80	222	72	87	227	108	329	90	115
26	78	62	90	74	196	69	115	205	292	242	83	101
27	74	61	88	78	145	71	113	189	170	185	76	93
28	71	59	120	78	129	69	108	175	226	166	71	87
29	68	60	190	76	---	68	101	228	281	171	71	91
30	67	60	170	68	---	70	98	199	164	150	80	115
31	66	---	130	64	---	76	---	204	---	164	93	---
TOTAL	3250	1856	2670	2636	3255	2800	2373	20711	4137	12809	6184	8110
MEAN	105	61.9	86.1	85.0	116	90.3	79.1	668	138	413	199	270
MAX	384	67	190	160	257	160	115	4220	292	3440	658	1050
MIN	54	58	47	54	70	68	69	74	83	107	71	62
AC-FT	6450	3680	5300	5230	6460	5550	4710	41080	8210	25410	12270	16090
CAL YR 1984	TOTAL	158897		MEAN	434	MAX	6400	MIN	38	AC-FT	315200	
WTR YR 1985	TOTAL	70791		MEAN	194	MAX	4220	MIN	47	AC-FT	140400	

KANSAS RIVER BASIN

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-70, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
18...	1435	376	283	7.4	7.5	13.2	--	K95000	K580000	88	26	5.6
NOV												
29...	1415	62	610	7.8	4.5	16.8	11	K43	100	260	81	14
JAN												
04...	1430	161	428	7.7	.0	9.4	--	K1500	K43000	150	44	8.6
29...	1100	75	610	7.3	.0	18.4	--	K3	620	230	71	13
FEB												
28...	0945	127	426	7.3	4.5	14.8	--	K120	6400	150	45	9.0
MAR												
26...	0820	72	581	7.8	9.0	10.2	--	K230	1200	250	78	14
APR												
23...	1030	79	722	8.4	16.0	6.7	--	1200	820	220	66	13
MAY												
21...	1200	499	220	--	19.0	6.5	90	K67000	150000	72	21	4.7
JUN												
05...	1030	151	520	8.2	16.0*	8.0	--	4000	19000	180	54	11
JUL												
01...	1100	136	305	7.6	23.0	7.3	--	58000	320000	41	12	2.7
AUG												
29...	1048	71	500	7.9	22.5	8.0	--	K720	4800	190	57	11
SEP												
24...	0930	132	338	7.5	12.0	9.3	--	K8000	K17000	120	35	7.4

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
18...	13	.6	28	10	684	1.8	.160	4.4	4.6	6.4	1.10	27
NOV												
29...	36	1	63	20	10	1.9	.020	.68	.70	2.6	.490	2.2
JAN												
04...	21	.8	35	16	318	2.6	1.30	2.8	4.1	6.7	.860	16
29...	33	1	59	18	8	2.5	.420	.88	1.3	3.8	.590	2.1
FEB												
28...	24	.9	39	16	328	2.2	1.30	2.2	3.5	5.7	1.00	17
MAR												
26...	33	.9	62	18	127	2.6	<.010	--	1.5	4.1	.690	6.6
APR												
23...	35	1	62	20	201	.80	.140	2.8	2.9	3.7	.800	8.4
MAY												
21...	9.3	.5	24	6.4	1110	1.8	.370	1.5	1.9	3.7	.650	31
JUN												
05...	35	1	50	27	1	2.9	.340	.76	1.1	4.0	.470	16
JUL												
01...	7.9	.6	23	9.2	1570	2.8	.500	2.1	2.6	5.4	1.00	31
AUG												
29...	24	.8	50	12	123	2.4	.050	.75	.80	3.2	.500	--
SEP												
24...	15	.6	28	13	105	1.8	.500	.70	1.2	3.0	.760	8.6

06881000 BIG BLUE RIVER NEAR CRETE, NE

LOCATION.--Lat 40°35'47", long 96°57'36", in SW1/4SE1/4 sec.3, T.7 N., R.4 E., Saline County, Hydrologic Unit 10270202, on right bank on downstream side of county road bridge, 1.8 mi south of Missouri Pacific Railroad station in Crete, 3.3 mi downstream from Walnut Creek, and 3.6 mi upstream from Squaw Creek.

DRAINAGE AREA.--2,716 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1945 to current year. Prior to Oct. 1, 1953, discharge published only for stages above 12.0 ft because of variable backwater from dam downstream until 1952 and diurnal fluctuation from powerplant upstream in 1952-53.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,311.7 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 20, 1954, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 4-8, 10-14, Dec. 20 to Jan. 6, and Jan. 11 to Feb. 21. Records good except for periods of estimated record, which are poor. Natural flow of stream affected by ground-water and surface-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--32 years (1953-85), 380 ft³/s, 275,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft³/s July 10, 1950, gage height, 28.74 ft; maximum gage height, 29.80 ft June 16, 1967; minimum daily discharge, 6.0 ft³/s Aug. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 18	1000	5240	20.79	July 22	0500	*8430	*24.87

Minimum daily discharge, 90 ft³/s Dec. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	172	147	300	125	373	205	294	362	263	388	177
2	125	168	144	270	130	333	208	649	356	217	348	182
3	127	168	125	350	130	312	219	700	322	218	322	171
4	130	166	112	380	135	305	231	466	302	183	320	164
5	136	166	106	350	130	415	242	420	288	180	348	164
6	159	167	90	300	125	903	234	355	286	169	334	159
7	163	166	110	257	120	564	217	313	278	146	356	158
8	238	162	130	227	135	496	205	277	274	135	795	161
9	227	163	164	202	140	491	197	246	263	131	994	152
10	234	164	140	165	145	437	189	230	249	119	742	154
11	200	163	130	160	135	360	182	218	235	114	643	148
12	180	165	120	150	130	309	181	235	223	124	500	153
13	180	168	110	160	145	284	180	476	216	134	331	257
14	178	179	130	170	150	266	175	1120	214	150	734	1160
15	199	172	182	150	150	251	173	3220	218	170	917	2210
16	261	164	408	140	160	237	171	3780	222	176	860	2390
17	346	163	316	140	150	225	167	4160	226	156	868	2220
18	495	158	451	130	150	213	164	5050	210	150	1420	2040
19	631	156	506	125	160	208	162	3870	197	547	1390	1550
20	495	155	490	120	180	200	160	2750	186	3790	863	889
21	372	153	390	125	200	196	163	1390	181	6730	701	543
22	286	150	290	130	410	194	184	947	178	8070	580	432
23	250	150	230	183	821	198	174	704	172	5990	432	383
24	225	150	210	135	1130	198	174	561	170	4310	323	434
25	210	151	190	125	946	200	178	498	184	2570	264	364
26	202	153	180	120	640	197	195	432	206	1350	233	308
27	196	153	170	115	489	206	247	394	341	1040	214	276
28	187	153	220	110	419	197	290	359	245	680	196	242
29	181	150	500	120	---	190	331	356	279	514	184	244
30	178	147	520	130	---	193	309	466	327	448	176	299
31	173	---	380	125	---	205	---	392	---	405	175	---
TOTAL	7289	4815	7391	5664	7880	9356	6107	35328	7410	39379	16951	18184
MEAN	235	161	238	183	281	302	204	1140	247	1270	547	606
MAX	631	179	520	380	1130	903	331	5050	362	8070	1420	2390
MIN	125	147	90	110	120	190	160	218	170	114	175	148
AC-FT	14460	9550	14660	11230	15630	18560	12110	70070	14700	78110	33620	36070
CAL YR 1984 TOTAL	373067			MEAN	1019	MAX	10100	MIN	90	AC-FT	740000	
WTR YR 1985 TOTAL	165754			MEAN	454	MAX	8070	MIN	90	AC-FT	328800	

KANSAS RIVER BASIN

06881200 TURKEY CREEK NEAR WILBER, NE

LOCATION.--Lat 40°28'48", long 97°00'43", in NE1/4NE1/4 sec.19, T.6 N., R.4 E., Saline County, Hydrologic Unit 10270204, on left bank near downstream side of bridge on State Highway 41, 2.8 mi west of Wilber.

DRAINAGE AREA.--460 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,322.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 10, 1970, at site 0.2 mile downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 1 to Jan. 27, Jan. 30 to Feb. 20, and Aug. 8-28. Records fair except for periods of estimated record, which are poor. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--26 years, 90.7 ft³/s, 65,710 acre-ft/yr; median of yearly mean discharges, 64 ft³/s, 46,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s June 13, 1984, gage height, 21.43 ft, from highwater mark; no flow Sept. 20, 21, 24, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 18	0100	*1190	*11.82	No other peak greater than base discharge.			

Minimum daily discharge, 3.0 ft³/s Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	14	15	36	9.0	57	24	28	28	81	15	3.6
2	7.2	14	14	38	8.1	53	27	28	27	45	15	5.2
3	7.6	14	11	45	7.6	51	30	57	28	32	20	8.1
4	7.7	14	12	47	8.8	48	32	55	26	26	25	12
5	8.9	14	10	24	8.5	47	30	37	25	22	26	11
6	12	14	9.0	11	8.6	40	27	28	24	19	27	11
7	11	14	12	12	8.9	39	25	24	24	18	40	13
8	99	14	16	9.0	9.6	37	23	21	24	18	60	13
9	130	14	19	6.6	9.4	34	22	19	24	17	50	13
10	72	14	21	5.6	8.8	33	22	18	24	19	41	13
11	51	14	24	4.2	8.6	31	22	16	24	17	31	14
12	39	14	25	3.5	8.3	31	22	16	24	19	20	18
13	30	14	26	4.0	8.1	30	24	27	48	19	15	253
14	24	15	32	5.8	8.1	29	22	230	62	16	18	234
15	22	14	60	6.8	8.4	28	22	648	57	19	20	463
16	19	15	40	7.4	8.7	27	21	843	43	17	17	535
17	32	14	27	8.3	9.2	25	21	1080	33	15	33	309
18	144	13	25	10	10	25	21	693	29	15	45	240
19	299	13	27	9.0	15	23	20	161	72	15	25	171
20	161	13	28	4.8	50	23	21	91	67	14	21	52
21	94	13	32	4.3	193	23	21	69	40	14	16	31
22	61	13	30	3.7	235	22	22	56	30	14	13	30
23	43	13	27	4.5	252	22	23	47	31	14	11	30
24	32	15	29	5.2	188	22	24	42	32	14	9.3	25
25	26	15	32	7.4	153	23	24	40	23	13	8.4	21
26	22	15	36	10	105	22	28	59	23	13	7.2	20
27	19	15	43	13	77	22	28	41	28	13	6.2	20
28	17	15	44	16	74	23	30	37	19	13	5.3	18
29	16	15	43	18	---	23	29	32	19	13	4.0	20
30	15	15	38	18	---	23	30	32	96	15	3.6	32
31	14	---	37	15	---	23	---	31	---	15	3.0	---
TOTAL	1543.3	423	844.0	413.1	1498.7	959	737	4606	1054	614	651.0	2638.9
MEAN	49.8	14.1	27.2	13.3	53.5	30.9	24.6	149	35.1	19.8	21.0	88.0
MAX	299	15	60	47	252	57	32	1080	96	81	60	535
MIN	7.2	13	9.0	3.5	7.6	22	20	16	19	13	3.0	3.6
AC-FT	3060	839	1670	819	2970	1900	1460	9140	2090	1220	1290	5230
CAL YR 1984	TOTAL	127193.3		MEAN	348	MAX	13100	MIN	5.9	AC-FT	252300	
WTR YR 1985	TOTAL	15982.0		MEAN	43.8	MAX	1080	MIN	3.0	AC-FT	31700	

06881200 TURKEY CREEK NEAR WILBER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-70, 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
18...	1115	148	430	7.6	10.0	9.0	--	4600	13000	170	50	10
NOV												
29...	1115	15	640	7.8	4.0	14.9	12	K36	K52	240	73	14
JAN												
03...	1350	43	262	7.5	.0	10.5	--	500	K22000	76	22	5.0
29...	1245	18	695	7.1	.5	14.9	--	100	1400	270	82	15
FEB												
28...	1120	72	328	7.3	1.0	15.0	62	K140	5900	120	34	7.4
MAR												
26...	1045	22	600	8.0	10.0	11.2	--	K93	K190	230	68	14
APR												
23...	1205	23	718	8.0	17.5	5.7	--	K140	320	240	73	15
MAY												
21...	1430	71	195	8.1	19.0	6.7	84	K3500	K6800	55	16	3.7
JUN												
05...	1230	24	540	8.2	17.0	8.8	--	770	4300	210	61	13
JUL												
01...	1245	79	162	7.8	23.5	6.2	--	30000	280000	98	29	6.3
AUG												
29...	1340	4.4	650	8.1	27.0	12.8	--	1400	5500	140	42	9.4
SEP												
24...	1210	24	230	7.6	13.0	8.4	--	2600	7500	60	17	4.2

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
18...	21	.7	44	13	188	.40	.030	1.6	1.6	2.0	.650	12
NOV												
29...	44	1	67	35	10	.20	.010	.39	.40	.60	.250	3.7
JAN												
03...	13	.7	35	13	9	2.5	1.50	2.7	4.2	6.7	.660	19
29...	42	1	70	29	8	1.4	.570	2.1	2.7	4.1	.320	2.3
FEB												
28...	17	.7	38	12	162	1.9	1.20	2.5	3.7	5.6	--	17
MAR												
26...	40	1	71	26	67	.20	.020	1.3	1.3	1.5	.330	5.7
APR												
23...	42	1	67	28	86	.20	.080	1.4	1.5	1.7	.280	5.2
MAY												
21...	10	.6	26	8.0	608	2.5	.250	1.5	1.7	4.2	.550	35
JUN												
05...	36	1	56	28	238	1.3	.150	.65	.80	2.1	.670	11
JUL												
01...	14	.6	18	6.0	1130	3.1	.330	2.8	3.1	6.2	1.80	52
AUG												
29...	66	2	57	81	150	2.2	.050	.85	.90	3.1	.400	--
SEP												
24...	14	.8	26	15	116	1.4	.290	1.4	1.7	3.1	.760	11

KANSAS RIVER BASIN

06881500 BIG BLUE RIVER AT BEATRICE, NE

LOCATION.--Lat 40°15'22", long 96°44'47", in SW1/4NW1/4 sec.3, T.3 N., R.6 E., Gage County, Hydrologic Unit 10270202, at left upstream corner of 6th Street and U.S. Highway 77 bridge in Beatrice, 0.7 mi south of the intersection of U.S. Highways 136 and 77, 1.2 mi downstream from Indian Creek, and 3.1 mi upstream from Bear Creek.

DRAINAGE AREA.--3,900 mi², of which about 3,830 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1910 to September 1915, (monthly discharge only for some periods, published in WSP 1310), 1954, 1960-65, 1967-69, 1971-74 (discharge measurements only), October 1974 to current year. Gage-height records collected 1905-10, 1916-74, are in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,219.90 ft above National Geodetic Vertical Datum of 1929. October 1910 to September 1915, non-recording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 2-7, 12-14, 20-28, Jan. 1 to Feb. 21, and Feb. 23, 24. Records good except for periods of estimated record, which are poor.

AVERAGE DISCHARGE.--16 years (water years 1911-15, 1975-85), 722 ft³/s, 523,100 acre-ft/yr; median of yearly mean discharges, 626 ft³/s, 454,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,100 ft³/s June 14, 1984, gage height, 31.27 ft; minimum daily, 20 ft³/s Aug. 15, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1902, 55,100 ft³/s June 14, 1984; maximum gage height, 33.02 ft Oct. 12, 1973, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 19	0100	5530	11.67	Sep. 13	1500	6210	12.66
July 24	1130	*7820	*14.30				

Minimum daily discharge, 140 ft³/s Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	260	237	450	230	557	275	444	571	440	650	280
2	171	253	220	300	240	502	277	415	480	407	547	274
3	170	255	210	340	250	467	300	638	460	315	1070	277
4	177	247	200	440	250	453	323	800	426	282	1400	266
5	215	236	190	480	240	413	328	613	404	254	794	248
6	231	238	170	520	240	433	330	539	388	231	670	238
7	208	239	200	470	260	810	315	473	371	224	1780	237
8	222	245	249	420	260	642	290	411	365	207	937	235
9	271	248	264	340	270	553	275	361	359	176	905	238
10	449	232	255	300	270	532	268	317	336	162	1130	247
11	372	233	237	280	270	515	256	294	315	156	896	254
12	331	235	200	260	270	446	250	277	308	152	782	285
13	299	237	170	340	270	402	300	314	291	148	657	4060
14	287	244	140	360	270	375	524	2260	293	164	495	3960
15	308	236	300	340	280	357	292	3820	317	169	658	2440
16	348	239	1120	340	280	336	256	4520	323	176	1020	3100
17	337	239	1510	320	290	319	241	4800	318	196	1040	3270
18	425	240	750	300	320	306	231	5180	390	182	1100	2810
19	520	248	531	290	360	295	234	5420	311	218	1650	2400
20	810	226	460	280	540	288	234	4520	298	426	1580	1850
21	673	226	420	270	740	282	227	3070	308	3140	1080	1190
22	533	225	430	270	1500	272	222	1810	265	4640	906	1170
23	421	226	380	270	1100	274	240	1280	269	6400	756	2310
24	367	223	330	270	1200	268	255	984	298	7650	765	912
25	348	220	280	260	1320	265	256	807	378	6040	578	687
26	309	226	300	240	1010	267	281	714	346	3000	443	590
27	287	226	320	250	780	273	287	654	318	1620	378	490
28	257	225	390	250	612	277	311	580	449	1240	338	432
29	249	224	495	240	---	272	377	533	366	886	339	448
30	244	231	715	230	---	263	438	531	321	841	326	670
31	283	---	1020	230	---	272	---	603	---	794	306	---
TOTAL	10295	7082	12693	9950	13922	11986	8693	47982	10642	40936	25976	35868
MEAN	332	236	409	321	497	387	290	1548	355	1321	838	1196
MAX	810	260	1510	520	1500	810	524	5420	571	7650	1780	4060
MIN	170	220	140	230	230	263	222	277	265	148	306	235
AC-FT	20420	14050	25180	19740	27610	23770	17240	95170	21110	81200	51520	71140
CAL YR 1984	TOTAL	709745	MEAN	1939	MAX	44400	MIN	140	AC-FT	1408000		
WTR YR 1985	TOTAL	236025	MEAN	647	MAX	7650	MIN	140	AC-FT	468200		

06882000 BIG BLUE RIVER AT BARNESTON, NE

LOCATION.--Lat 40°02'40", long 96°35'12", in NE1/4NW1/4 sec.24, T.1 N., R.7 E., Gage County, Hydrologic Unit 10270202, on right bank at right downstream end of bridge on State Highway 8, 0.6 mi southwest of Barneston, 1.3 mi upstream from Plum Creek, and 4.3 mi upstream from Nebraska-Kansas State line.

DRAINAGE AREA.--4,447 mi², of which about 4,370 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1932 to current year.

REVISED RECORDS.--WSP 896: 1932, 1935. WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,162.2 ft above National Geodetic Vertical Datum of 1929. Prior to June 9, 1941, water-stage recorder at site 0.3 mi downstream at datum 1.56 ft higher. June 9 to Nov. 17, 1941, nonrecording gage and Nov. 18, 1941, to Sept. 30, 1979, water-stage recorder at site 0.7 mi upstream at datum 2.0 ft higher.

REMARKS.--Estimated daily discharges: Dec. 3-7, 13-14, 21-29, and Jan. 2 to Feb. 16. Records fair except periods of estimated record, which are poor. Low flow regulated by powerplant 0.7 mi upstream. No large tributaries between station and Nebraska-Kansas State line. Some pump diversions for irrigation above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--53 years, 816 ft³/s, 591,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,700 ft³/s June 9, 1941, gage height, 34.3 ft; minimum daily, 1 ft³/s Nov. 30, 1945.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 13	1745	*12100	*17.68	No other peak greater than base discharge.			
Minimum daily discharge, 37 ft ³ /s May 11.							

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	266	250	600	210	889	349	851	597	416	761	302
2	224	259	257	400	220	745	340	631	470	487	572	288
3	210	263	240	300	230	690	355	511	439	370	1580	289
4	215	262	220	350	230	782	405	833	415	301	2820	298
5	220	264	200	450	230	633	395	708	398	291	1390	268
6	229	257	190	540	260	942	383	566	388	241	889	247
7	242	258	170	500	260	893	362	484	366	240	3370	235
8	262	263	207	400	260	944	350	419	368	242	2390	242
9	252	251	298	340	260	720	317	378	363	211	1460	249
10	435	236	338	330	260	660	305	217	369	180	1730	236
11	426	251	315	340	270	657	293	37	349	169	1140	243
12	363	254	287	370	270	577	278	266	329	156	917	251
13	319	278	270	360	270	521	279	296	329	149	752	5950
14	302	267	210	400	260	473	537	2250	312	165	858	7100
15	318	264	316	400	260	444	388	3950	329	203	950	3440
16	359	264	2170	360	260	426	294	4430	370	180	1200	2970
17	352	248	2790	340	266	408	263	4620	617	189	2030	3440
18	427	260	1190	290	282	394	255	4690	445	196	2020	3050
19	509	293	831	390	336	382	256	5090	369	641	2230	2610
20	929	267	666	400	534	165	260	4580	305	284	2170	2130
21	882	231	580	350	1860	95	253	3390	340	2140	1480	1600
22	680	231	450	270	2410	320	257	2040	294	4120	1140	1070
23	505	254	400	270	2080	337	250	1380	278	5600	917	3470
24	412	253	350	250	2020	333	278	871	398	7120	1060	1890
25	374	255	320	300	2010	343	273	476	369	6470	820	1090
26	330	283	300	240	1570	326	675	633	822	3540	521	847
27	317	279	350	180	1160	342	323	606	1540	1940	425	646
28	297	255	400	190	892	326	353	512	634	1450	373	552
29	299	267	500	190	---	304	393	478	527	1040	358	608
30	274	248	737	200	---	297	474	637	381	841	350	1540
31	272	---	1130	200	---	331	---	559	---	902	319	---
TOTAL	11439	7781	16932	10660	19500	15699	10193	47389	13510	40474	38992	47151
MEAN	369	259	546	344	696	506	340	1529	450	1306	1258	1572
MAX	929	293	2790	750	2410	944	675	5090	1540	7120	3370	7100
MIN	204	231	170	180	230	95	250	37	278	149	319	235
AC-FT	22690	15430	33580	21140	38680	31140	20220	94000	26800	80280	77340	93520
CAL YR 1984	TOTAL	840343		MEAN	2296	MAX	45700	MIN	170	AC-FT	1667000	
WTR YR 1985	TOTAL	279720		MEAN	766	MAX	7120	MIN	37	AC-FT	554800	

KANSAS RIVER BASIN

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-69, October 1980 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1966 to September 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C on several days in summer periods; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
17...	1100	359	633	7.8	13.0	13.2	--	K140	K200	210	63	14
NOV												
27...	1300	330	760	8.7	5.0	15.3	18	K50	K23	290	85	19
DEC												
26...	1355	370	652	7.9	.5	14.3	--	K370	4600	230	65	16
JAN												
22...	1045	273	840	8.2	.5	16.8	--	390	160	320	95	20
FEB												
21...	1300	1770	501	7.6	2.0	17.2	34	2100	K39000	180	52	12
MAR												
20...	1355	24	660	7.6	14.0	11.2	--	K62	660	250	73	17
APR												
17...	0948	271	540	7.4	18.0	9.6	--	K270	K440	180	52	13
MAY												
14...	1220	2680	682	7.4	17.5	9.6	21	2100	10000	230	67	15
JUN												
11...	1230	649	650	8.1	22.0	8.4	--	940	680	230	68	15
JUL												
10...	0915	163	558	8.2	27.5	8.6	--	K600	700	170	50	12
AUG												
06...	1100	828	310	7.4	25.0	7.3	42	2100	3600	93	26	6.7
SEP												
04...	0930	286	--	8.3	27.5	7.6	--	K46	K260	200	58	13

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
17...	44	1	69	37	57	2.0	.130	1.6	1.7	3.7	.660	7.5
NOV												
27...	59	2	88	43	18	2.0	.020	1.3	1.3	3.3	.550	6.1
DEC												
26...	42	1	89	26	41	3.5	.360	1.3	1.7	5.2	.550	7.9
JAN												
22...	60	2	90	46	25	3.5	.730	2.0	2.7	6.2	.620	4.0
FEB												
21...	34	1	56	22	312	2.7	.600	2.3	2.9	5.6	.730	11
MAR												
20...	48	1	78	32	198	3.0	.310	1.6	1.9	4.9	.700	8.5
APR												
17...	40	1	56	31	122	1.5	.310	1.9	2.2	3.7	.410	9.5
MAY												
14...	42	1	76	34	180	2.4	.130	1.2	1.3	3.7	.680	8.7
JUN												
11...	44	1	73	34	73	3.0	.180	1.1	1.3	4.3	.640	6.7
JUL												
10...	38	1	56	31	48	3.4	.090	1.0	1.1	4.5	.680	8.2
AUG												
06...	19	.9	28	12	312	2.4	.190	1.0	1.2	3.6	.530	18
SEP												
04...	42	1	57	37	51	2.3	.030	1.5	1.5	3.8	.630	8.3

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 27...	1300	--	1	2	8	2	.1	--	<1	10
FEB 21...	1300	4	<1	10	13	14	<.1	--	<1	30
MAY 14...	1220	7	1	19	11	5	.2	2	<1	40
AUG 06...	1100	8	1	30	22	15	.2	<1	<1	70

KANSAS RIVER BASIN

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE

LOCATION.--Lat 40°19'58", long 98°04'00", in SW1/4NW1/4 sec.12, T.4 N., R.7 W., Nuckolls County, Hydrologic Unit 10270206, on right bank 10 ft downstream from bridge on State Highway 14, 1 mi upstream from Walnut Creek, 3.2 mi southeast of Deweese, and 6 mi northwest of Angus.

DRAINAGE AREA.--979 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1953 to September 1972, October 1974 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,632.67 ft above National Geodetic Vertical Datum of 1929. Prior to May 16, 1957, non-recording gage and Oct. 1, 1974, to Mar. 24, 1981, recording gage at present site and datum; May 16, 1957, to Sept. 30, 1972, and Mar. 25, 1981 to Mar. 24, 1982, at site 1,500 ft upstream from bridge at present datum.

REMARKS.--Estimated daily discharges: Dec. 6, 7, 13-16, 18-28, Dec. 30 to Jan. 4, and Jan. 8 to Feb. 21. Records good except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--30 years (water years 1954-72, 1975-85), 149 ft³/s, 108,000 acre-ft/yr; median of yearly mean discharges, 129 ft³/s, 93,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,100 ft³/s Aug. 31, 1969, gage height, 18.57 ft; minimum daily, 6.3 ft³/s Sept. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 26, 1951, reached a stage of 14.9 ft, from information by local residents, discharge, 16,000 ft³/s, based on records for former station at Angus.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 14	2000	4850	9.10	Aug. 4	0400	*12600	*13.87

Minimum daily discharge, 34 ft³/s Dec. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	55	58	51	78	110	68	119	599	131	87	159
2	43	53	57	51	63	105	67	206	285	113	84	121
3	44	57	46	64	75	107	67	168	189	104	6060	104
4	45	57	53	88	84	143	68	127	164	96	10200	97
5	55	55	54	91	80	114	67	104	152	92	4760	97
6	56	55	55	57	72	104	66	89	135	93	1210	382
7	49	57	56	55	66	107	63	82	126	95	561	580
8	47	57	55	52	68	101	62	78	122	96	328	354
9	47	59	50	50	72	93	61	75	118	95	243	207
10	48	59	47	44	78	87	63	73	130	93	194	140
11	47	57	48	42	79	84	62	214	328	93	167	117
12	47	58	46	42	80	82	61	302	182	90	151	214
13	48	59	45	49	80	80	61	235	129	91	143	1150
14	51	59	80	58	82	77	60	3380	117	83	256	1350
15	62	58	150	66	86	74	61	3440	107	77	337	1060
16	65	57	140	75	88	74	59	1490	101	73	176	643
17	70	59	51	76	98	72	58	713	94	71	173	445
18	64	59	47	70	110	72	58	382	88	69	177	330
19	59	60	43	63	120	72	60	257	84	71	140	244
20	61	60	41	65	138	71	59	208	80	105	124	190
21	58	59	39	68	250	69	58	177	78	104	111	166
22	54	59	37	72	605	71	59	146	77	87	102	151
23	52	58	35	74	379	72	65	125	82	81	99	140
24	52	58	34	76	233	68	86	113	313	76	96	128
25	54	57	37	78	170	67	193	106	111	84	91	122
26	54	58	46	80	142	67	129	101	368	80	91	117
27	55	57	58	82	125	68	158	95	626	77	92	113
28	53	59	68	84	115	68	132	89	351	64	88	107
29	54	59	82	90	---	67	116	102	196	64	305	106
30	54	58	65	95	---	71	105	495	156	58	437	108
31	55	---	56	90	---	73	---	1190	---	67	285	---
TOTAL	1644	1732	1779	2098	3716	2590	2352	14481	5688	2673	27368	9242
MEAN	53.0	57.7	57.4	67.7	133	83.5	78.4	467	190	86.2	883	308
MAX	70	60	150	95	605	143	193	3440	626	131	10200	1350
MIN	41	53	34	42	63	67	58	73	77	58	84	97
AC-FT	3260	3440	3530	4160	7370	5140	4670	28720	11280	5300	54280	18330
CAL YR 1984	TOTAL	92375	MEAN	252	MAX	6100	MIN	31	AC-FT	183200		
WTR YR 1985	TOTAL	75363	MEAN	206	MAX	10200	MIN	34	AC-FT	149500		

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-70, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1979 to September 1981.

WATER TEMPERATURES: February 1979 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 508 microsiemens Feb. 14, 1980; minimum daily, 82 microsiemens May 4, 1979.

WATER TEMPERATURES: Maximum, 28.0°C Aug. 8, 9, 10, 1980; minimum, 1.0°C Jan. 29, 30, 31, Feb. 1, 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT												
10...	1615	48	505	8.0	19.5	9.8	--	--	280	210	64	11
NOV												
19...	1445	61	480	8.3	4.0	13.4	14	K42	92	200	63	11
DEC												
05...	1145	55	555	8.3	2.0	13.3	--	110	710	210	65	11
JAN												
16...	1430	75	510	7.8	.0	10.5	--	K27	K19	220	70	11
FEB												
12...	1050	80	540	7.6	.0	10.7	17	K15	K34	220	68	11
MAR												
13...	1605	78	475	8.0	10.5	10.3	--	250	K81	220	71	11
APR												
02...	1115	71	475	8.2	10.5	10.0	--	83	K32	220	70	11
MAY												
07...	1100	83	470	8.3	17.5	8.8	50	1000	1100	180	54	10
JUN												
18...	1130	88	481	8.1	22.0	9.2	--	460	330	200	63	11
JUL												
17...	1535	70	452	8.6	30.0	9.6	--	580	430	180	54	9.9
AUG												
13...	1145	145	428	8.0	25.0	7.8	19	430	280	160	48	9.2
SEP												
05...	0920	101	428	8.4	23.0	8.3	--	1500	2200	180	56	9.8

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT												
10...	19	.6	36	12	24	.90	.050	.15	.20	1.1	.350	2.3
NOV												
19...	19	.6	39	11	10	1.0	.040	.36	.40	1.4	.210	1.8
DEC												
05...	20	.6	38	11	13	1.2	.030	.47	.50	1.7	.220	2.0
JAN												
16...	19	.6	41	11	14	1.5	.090	.41	.50	2.0	.250	1.5
FEB												
12...	21	.6	41	12	17	1.5	.070	.33	.40	1.9	.240	1.5
MAR												
13...	19	.6	43	15	46	1.5	.040	.66	.70	2.2	.310	2.4
APR												
02...	20	.6	39	13	16	.90	.060	.44	.50	1.4	.200	2.2
MAY												
07...	18	.6	35	10	117	1.4	.030	.97	1.0	2.4	.360	4.4
JUN												
18...	18	.6	33	12	37	1.1	.040	.46	.50	1.6	.320	43
JUL												
17...	19	.6	37	12	167	.60	.060	2.0	2.1	2.7	.600	11
AUG												
13...	16	.6	31	10	87	1.0	.040	.36	.40	1.4	.460	4.7
SEP												
05...	16	.5	31	10	80	.90	.040	.46	.50	1.4	.330	4.4

KANSAS RIVER BASIN

06883570 LITTLE BLUE RIVER NEAR ALEXANDRIA, NE

LOCATION (REVISED).--Lat 40°12'25", long 97°23'18", in SE1/4SE1/4 sec.23, T.3 N., R.1 W., Thayer County, Hydrologic Unit 10270206, on left bank 10 ft upstream from bridge on State Highway 53, 2.7 mi south of Alexandria, 9.8 mi downstream from Dry Creek, and 5.7 mi upstream from Big Sandy Creek.

DRAINAGE AREA.--1,557 mi².

PERIOD OF RECORD.--July 1959 to September 1972 (published as "near Gilead"), April 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,359.29 ft above National Geodetic Vertical Datum of 1929. July 1959 to Sept. 30, 1972, at site 2.3 mi upstream at datum 12.0 ft higher. Apr. 23, 1974 to Aug. 7, 1984, at site 750 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 3-15, Dec. 19 to Feb. 23, May 14-21, Aug. 3-8, and Sept. 12-30. Records fair except for periods of estimated record, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--24 years (water years 1960-72, 1975-85), 247 ft³/s, 179,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft³/s Mar. 28, 1960, gage height, 17.30 ft, site and datum then in use; maximum gage height, 19.15 ft Aug. 5, 1985; minimum daily discharge, 2.9 ft³/s Aug. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 15	----	4600	unknown	Aug. 5	1230	*17100	a*19.15

a Observed, but may have been higher.

Minimum daily discharge, 55 ft³/s Jan. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	66	89	64	94	196	124	321	1320	225	421	437
2	68	64	88	60	95	183	121	284	776	185	381	275
3	65	67	65	63	100	187	112	230	438	152	6630	195
4	62	68	66	88	97	171	109	251	302	132	14100	158
5	67	67	65	105	94	173	107	187	240	122	16300	140
6	128	65	62	94	102	190	105	148	220	110	11900	133
7	125	64	66	80	98	164	102	122	201	103	4200	169
8	91	65	71	72	100	158	98	108	183	99	1900	676
9	76	67	74	64	102	156	98	97	172	98	1030	458
10	67	67	76	60	104	148	95	92	166	99	740	351
11	62	68	74	56	107	141	96	87	347	98	588	224
12	58	67	69	55	110	133	97	78	513	97	474	150
13	58	68	63	75	114	126	105	406	357	98	421	450
14	57	74	66	96	118	120	97	1520	233	98	759	1750
15	93	76	150	91	127	118	93	4200	271	102	465	1330
16	168	76	392	86	135	117	95	2550	216	93	619	1000
17	236	78	412	82	148	115	94	1500	200	87	491	700
18	198	83	312	76	165	114	91	820	146	86	352	520
19	137	84	165	74	187	113	93	580	131	91	349	410
20	106	80	138	72	240	114	109	425	127	91	294	345
21	94	82	120	77	370	113	119	300	120	156	261	300
22	83	83	94	83	600	115	124	248	110	778	235	270
23	74	77	82	88	1000	118	175	218	108	509	216	250
24	70	78	75	92	644	116	121	196	119	282	201	230
25	68	80	79	93	429	116	112	178	256	254	189	215
26	67	79	90	93	302	116	167	166	258	295	175	205
27	70	81	100	96	243	115	249	161	627	161	166	195
28	68	84	110	98	213	115	186	152	978	140	160	187
29	67	83	97	103	---	113	200	147	557	118	170	180
30	66	87	81	105	---	115	222	145	318	547	192	215
31	66	---	70	100	---	126	---	355	---	630	552	---
TOTAL	2787	2228	3561	2541	6238	4215	3716	16272	10010	6136	64931	12118
MEAN	89.9	74.3	115	82.0	223	136	124	525	334	198	2095	404
MAX	236	87	412	105	1000	196	249	4200	1320	778	16300	1750
MIN	57	64	62	55	94	113	91	78	108	86	160	133
AC-FT	5530	4420	7060	5040	12370	8360	7370	32280	19850	12170	128800	24040
CAL YR 1984	TOTAL	157566	MEAN	431	MAX	5930	MIN	42	AC-FT	312500		
WTR YR 1985	TOTAL	134753	MEAN	369	MAX	16300	MIN	55	AC-FT	267300		

06883940 BIG SANDY CREEK AT ALEXANDRIA, NE

LOCATION.--Lat 40°14'06", long 97°23'20", in SE1/4SE1/4 sec.11, T.3 N., R.1 W., Thayer County, Hydrologic Unit 10270206, on right bank 15 ft upstream from bridge on State Highway 53, 0.8 mi south of Alexandria.

DRAINAGE AREA.--607 mi².

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WRD NE-82-1: 1981(M).

GAGE.--Water stage recorder. Elevation of gage is 1,395 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 10 to Nov. 27, Jan. 9-23, and Sept. 22. Records good except for periods of estimated record, which are poor. Natural flow of stream affected by ground-water withdrawals and return flow from irrigated areas.

AVERAGE DISCHARGE.--6 years, 124 ft³/s, 89,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,900 ft³/s June 13, 1984, gage height, 16.71 ft; minimum daily, 16 ft³/s Apr. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 14	2300	2060	8.85	Aug. 6	2030	821	6.50
Aug. 3	1400	3050	10.39	Sept. 13	1400	*3480	*11.00
Aug. 6	0200	867	6.61				

Minimum daily discharge, 22 ft³/s Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	26	28	40	27	48	26	78	38	51	93	49
2	38	26	28	40	26	45	25	39	35	41	78	43
3	39	27	26	36	25	44	25	31	32	37	1670	34
4	39	27	26	36	25	42	25	30	31	42	1290	33
5	43	28	27	35	25	39	25	29	28	46	529	31
6	130	27	26	34	25	38	25	28	26	53	504	30
7	124	27	26	34	25	39	25	28	25	60	302	29
8	93	27	28	33	25	39	25	28	25	59	191	29
9	62	27	28	33	25	37	25	26	24	58	109	30
10	53	27	26	35	26	36	25	26	26	63	77	31
11	47	27	27	33	25	36	25	26	43	67	66	31
12	45	27	27	32	26	35	26	25	80	74	61	58
13	44	27	23	32	26	35	26	110	50	77	56	2450
14	46	27	22	32	25	34	25	1630	43	79	78	1350
15	79	28	23	32	25	32	25	1390	109	72	75	303
16	166	29	47	32	26	32	25	883	95	68	67	147
17	408	29	70	32	25	32	24	293	45	72	383	95
18	270	29	58	32	27	31	24	240	34	81	162	82
19	110	29	49	31	101	31	24	200	31	81	105	75
20	73	29	42	32	234	30	23	127	29	89	86	68
21	60	29	42	32	392	29	25	90	27	115	68	140
22	50	29	41	32	253	29	56	65	24	125	54	230
23	42	29	38	31	162	28	45	58	24	86	46	110
24	35	29	36	28	119	27	31	59	30	82	46	63
25	32	28	32	28	91	27	30	44	62	118	49	53
26	29	28	29	28	70	27	29	40	62	204	40	46
27	28	28	38	28	59	26	31	36	54	91	37	40
28	27	28	251	28	51	26	32	33	142	71	36	36
29	26	28	191	27	---	25	30	31	106	65	45	55
30	26	28	80	27	---	25	31	108	77	120	58	240
31	26	---	47	27	---	26	---	49	---	121	49	---
TOTAL	2327	834	1482	992	1991	1030	838	5880	1457	2468	6510	6011
MEAN	75.1	27.8	47.8	32.0	71.1	33.2	27.9	190	48.6	79.6	210	200
MAX	408	29	251	40	392	48	56	1630	142	204	1670	2450
MIN	26	26	22	27	25	25	23	25	24	37	36	29
AC-FT	4620	1650	2940	1970	3950	2040	1660	11660	2890	4900	12910	11920
CAL YR 1984	TOTAL	94219	MEAN	257	MAX	14100	MIN	22	AC-FT	186900		
WTR YR 1985	TOTAL	31820	MEAN	87.2	MAX	2450	MIN	22	AC-FT	63110		

KANSAS RIVER BASIN

06884000 LITTLE BLUE RIVER NEAR FAIRBURY, NE

LOCATION.--Lat 40°06'54", long 97°10'13", in NW1/4NE1/4 sec.26, T.2 N., R.2 E., Jefferson County, Hydrologic Unit 10270207, at right downstream wingwall of bridge on State Highway 15, 0.8 mi south of Fairbury, and 5.2 mi upstream from Rose Creek.

DRAINAGE AREA.--2,350 mi².

PERIOD OF RECORD.--May 1908 to September 1915, October 1928 to September 1956 (published as "near Endicott"), October 1956 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1086: 1941(M). WSP 1390: 1908(M), 1912, 1915, 1935, 1939, 1945(M). WSP 1510: 1947 (calendar year figures only). WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,282.19 ft above National Geodetic Vertical Datum of 1929. May 23, 1908, to Sept. 30, 1915, nonrecording gage at present site at different datum. Apr. 26, 1929, to Sept. 24, 1957, nonrecording gage or water-stage recorder at site 3.5 mi downstream at various datums.

REMARKS.--Estimated daily discharges: Dec. 4-10, 13-15, Dec. 17 to Feb. 22, and Aug. 13. Records good except for periods of estimated record, which are poor. Some regulation at low stage by thermoelectric plant above station. Natural flow of stream affected by irrigation development above station.

AVERAGE DISCHARGE.--64 years, 379 ft³/s, 274,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,900 ft³/s June 13, 1984, gage height, 16.98 ft; maximum gage height, 18.96 ft Oct. 12, 1973; minimum daily discharge, 14 ft³/s Nov. 22, 1929, discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 15	1100	6140	8.82	Sept. 13	1730	4530	7.42
Aug. 6	0500	*16600	a*13.55 ^a				

a Observed.

Minimum daily discharge, 85 ft³/s Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	128	127	118	143	292	192	484	985	374	584	501
2	99	123	124	124	150	263	178	512	862	286	390	417
3	100	126	113	128	156	258	171	382	545	231	5120	343
4	100	125	105	133	152	243	165	398	404	193	12100	311
5	116	124	94	129	150	225	159	341	321	179	14000	289
6	154	121	88	120	160	252	152	293	277	176	14700	277
7	280	123	86	110	158	222	154	257	261	178	5030	269
8	209	122	100	100	158	205	145	232	239	178	2030	449
9	159	124	120	95	158	197	142	212	221	172	1260	469
10	148	125	140	87	160	195	146	205	217	176	834	421
11	133	123	133	88	162	183	147	200	297	176	636	367
12	127	124	124	93	164	179	145	192	579	173	570	406
13	123	125	100	97	168	177	174	449	517	182	550	3150
14	124	126	85	103	170	167	164	3260	360	185	658	3210
15	155	126	100	110	175	162	147	5530	389	184	686	1870
16	273	124	421	107	190	159	141	4450	418	179	630	1430
17	467	124	330	102	205	153	135	2160	429	161	742	907
18	525	125	220	99	218	152	133	1270	259	168	790	643
19	342	125	175	95	250	151	129	916	211	185	611	505
20	230	124	125	90	350	150	130	669	187	192	495	429
21	184	124	122	110	620	150	139	537	177	230	438	429
22	157	126	140	130	980	153	139	447	171	585	403	480
23	145	127	130	140	1320	156	230	369	174	749	370	483
24	136	126	112	160	893	152	199	441	192	404	359	381
25	136	126	100	160	604	149	183	335	241	340	345	325
26	133	128	92	149	479	147	194	273	442	471	338	289
27	132	127	110	159	391	149	349	248	512	343	315	267
28	131	124	150	158	331	144	324	233	1250	217	306	249
29	129	125	250	153	---	139	332	225	757	193	331	282
30	128	126	170	150	---	152	373	348	525	455	322	506
31	129	---	150	145	---	170	---	357	---	788	466	---
TOTAL	5502	3746	4436	3742	9215	5646	5511	26225	12419	8703	66409	20354
MEAN	177	125	143	121	329	182	184	846	414	281	2142	678
MAX	525	128	421	160	1320	292	373	5530	1250	788	14700	3210
MIN	98	121	85	87	143	139	129	192	171	161	306	249
AC-FT	10910	7430	8800	7420	18280	11200	10930	52020	24630	17260	131700	40370
CAL YR 1984	TOTAL	303000		MEAN	828	MAX	31600	MIN	83	AC-FT	601000	
WTR YR 1985	TOTAL	171908		MEAN	471	MAX	14700	MIN	85	AC-FT	341000	

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS

LOCATION.--Lat 39°58'48", long 97°00'16", NE1/4SW1/4 sec.8, T.1 S., R.4 E., Washington County, Hydrologic Unit 10270207, on right bank and 2 ft downstream from bridge on county road, 0.6 mi west of Hollenberg, and 1.75 mi downstream from Nebraska-Kansas State line.

DRAINAGE AREA.--2,752 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1973 to February 1974 (discharge measurements only), March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,216.10 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 5-14 and Dec. 16 to Feb. 22. Records good except for periods of estimated record, which are poor. Discharge measurements made prior to 1974 water year are published in table of miscellaneous sites in WDR NE-73.

AVERAGE DISCHARGE.--11 years, 535 ft³/s, 387,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,600 ft³/s June 13, 1984, gage height, 21.00 ft; minimum daily, 40 ft³/s Dec. 17, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1973, reached a stage of 23.07 ft, present datum, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 15	----	6700	a10.63	Aug. 17	0800	3900	8.28
Aug. 6	----	*17000	a*16.00	Sept. 13	2200	4760	9.12

a From graph based on observer's readings.

Minimum daily discharge, 90 ft³/s Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	177	174	160	150	390	235	511	629	443	894	573
2	127	174	172	170	158	349	235	532	1130	340	820	499
3	128	174	180	185	162	342	234	487	694	293	4970	395
4	131	171	171	188	163	343	222	430	477	249	11900	336
5	144	169	170	190	158	298	219	403	384	221	14100	303
6	168	171	162	200	170	288	212	344	345	209	15800	277
7	252	166	140	180	165	294	203	303	324	203	9040	263
8	280	166	160	167	162	271	196	272	306	203	3170	321
9	235	166	192	155	168	257	193	252	281	200	1910	575
10	226	166	195	140	170	251	182	240	263	188	1250	486
11	197	171	180	130	172	242	180	233	275	188	971	411
12	177	171	155	150	180	232	190	224	439	188	849	397
13	165	166	122	165	190	230	217	252	581	191	752	2680
14	162	169	90	175	199	222	213	2530	475	206	782	3890
15	195	169	213	198	217	214	189	5330	368	204	1130	2310
16	253	166	771	190	240	208	180	5640	516	195	810	1800
17	391	169	600	170	270	203	175	3100	645	178	2030	1220
18	620	171	450	152	350	200	174	1640	413	162	1180	867
19	521	166	310	145	475	199	176	1100	284	187	1220	674
20	412	169	260	133	620	197	181	812	241	199	1190	567
21	304	169	240	151	900	197	185	632	217	224	786	525
22	249	169	258	170	1030	194	199	528	213	382	602	698
23	218	169	220	140	2150	202	219	460	207	994	494	1180
24	206	171	170	205	1350	202	288	457	270	659	441	689
25	200	171	158	204	873	199	232	459	304	434	419	503
26	191	177	200	168	645	193	242	352	464	451	398	409
27	185	174	250	170	496	192	294	319	619	494	372	358
28	180	174	290	175	420	193	362	299	1170	286	348	326
29	174	174	320	175	---	188	312	289	1060	230	351	405
30	177	174	252	172	---	192	647	301	674	390	357	723
31	180	---	200	165	---	229	---	475	---	941	391	---
TOTAL	7172	5109	7425	5238	12403	7411	6986	29206	14268	9932	79727	24660
MEAN	231	170	240	169	443	239	233	942	476	320	2572	822
MAX	620	177	771	205	2150	390	647	5640	1170	994	15800	3890
MIN	124	166	90	130	150	188	174	224	207	162	348	263
AC-FT	14230	10130	14730	10390	24600	14700	13860	57930	28300	19700	158100	48910
CAL YR 1984	TOTAL	363180	MEAN	992	MAX	25500	MIN	90	AC-FT	720400		
WTR YR 1985	TOTAL	209537	MEAN	574	MAX	15800	MIN	90	AC-FT	415600		

KANSAS RIVER BASIN

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
OCT										
17...	1315	395	350	7.3	9.0	10.2	--	21000	71000	120
NOV										
27...	1500	174	570	7.9	3.0	16.2	13	250	K81	210
JAN										
03...	0900	184	659	7.3	.5	13.1	--	3300	2300	230
29...	1540	182	600	7.3	.0	17.6	--	520	92	240
FEB										
27...	1000	500	347	7.7	2.5	12.6	--	K300	8300	120
MAR										
27...	1357	189	582	7.9	15.0	11.3	--	1300	K50	200
APR										
23...	1113	190	--	8.6	15.0	9.5	--	K100	K280	210
MAY										
21...	1830	614	280	6.4	19.5	7.3	57	3100	2300	98
JUN										
20...	0900	253	495	8.1	20.0	10.8	--	1100	1700	180
JUL										
16...	0945	198	--	8.2	22.5	9.3	--	410	420	170
AUG										
15...	0950	1180	425	7.6	20.0	7.5	--	3200	4100	150
SEP										
04...	1115	333	470	8.2	25.5	8.0	--	1000	K680	160

K Results based on colony count outside the acceptable range (non-ideal colony count).

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT									
17...	7	39	6.3	18	.7	8.1	117	24	15
NOV									
27...	--	65	11	41	1	--	--	47	37
JAN									
03...	22	72	11	45	1	9.1	203	57	47
29...	28	76	11	38	1	5.5	207	49	34
FEB									
27...	--	38	6.1	17	.7	--	--	75	16
MAR									
27...	2	65	10	37	1	1.3	202	49	36
APR									
23...	19	67	11	39	1	7.8	194	50	37
MAY									
21...	--	31	5.1	13	.6	--	--	22	11
JUN									
20...	20	55	9.4	31	1	9.6	156	35	28
JUL									
16...	11	53	9.8	33	1	13	162	37	30
AUG									
15...	--	48	7.9	18	.7	--	--	32	14
SEP									
04...	14	52	8.3	29	1	11	150	33	27

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT 17...	.30	17	200	.27	211	366	1.1	1.1	.130
NOV 27...	--	--	--	--	--	7	1.1	--	.030
JAN 03...	.30	24	390	.53	192	24	2.5	2.3	.350
29...	.30	29	370	.50	181	20	1.9	1.8	.160
FEB 27...	--	--	--	--	--	428	2.2	--	.490
MAR 27...	.30	17	340	.46	172	35	.80	.79	.020
APR 23...	.30	17	350	.47	177	59	.60	.53	.060
MAY 21...	--	--	--	--	--	652	1.6	--	.090
JUN 20...	.30	24	290	.39	195	402	1.6	1.5	.140
JUL 16...	.40	21	290	.40	157	184	.70	.71	.050
AUG 15...	--	--	--	--	--	846	1.0	--	.120
SEP 04...	.40	22	270	.37	245	170	1.2	1.2	.050

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 17...	2.2	2.3	3.4	.670	.260	50	69	14	13
NOV 27...	.37	.40	1.5	.220	--	--	--	--	2.3
JAN 03...	1.2	1.5	4.0	.340	.260	50	33	42	5.7
29...	1.1	1.3	3.2	.260	.190	40	380	110	1.7
FEB 27...	2.2	2.7	4.9	.670	--	--	--	--	19
MAR 27...	.68	.70	1.5	.230	.150	50	11	22	2.9
APR 23...	1.3	1.4	2.0	.360	.200	50	14	24	2.2
MAY 21...	1.9	2.0	3.6	.550	--	--	--	--	15
JUN 20...	.76	.90	2.5	.590	.310	40	21	5	4.0
JUL 16...	1.5	1.5	2.2	.510	.280	50	7	3	9.6
AUG 15...	.78	.90	1.9	.810	--	--	--	--	19
SEP 04...	.55	.60	1.8	.360	.300	50	8	10	10

KANSAS RIVER BASIN

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 27...	1500	--	<1	--	4	1	<.1	--	<1	10
FEB 27...	1000	5	<1	18	28	11	--	--	1	70
MAY 21...	1830	3	<1	23	28	2	.2	1	<1	90
AUG 15...	0950	9	<1	18	16	10	.2	2	1	110

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest stage partial record stations during water year 1985

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft³/s)
Tekamah Creek basin							
06608000	Tekamah Creek at Tekamah, NE	Lat 41°46'30", long 96°13'10" in SE1/4 sec.19, T.21 N., R.11 E., Burt County, on left bank upstream from bridge, 1 block east of U.S. Highway 73 in Tekamah.	23	1949-81† 1982-85	03-04-85	5.37	145
Kansas River basin							
06838200	Coon Creek at Indianola, NE	Lat 40°14'03", long 100°25'37", in NW1/4NE1/4 sec.13, T.3 N., R.28 W., Red Willow County, at bridge on U.S. Highways 6 and 34, 0.5 mile west of Indianola.	a69	1961-85	--	--	<5
06838550	Dry Creek at Bartley, NE	Lat 40°15'02", long 100°19'02", in SW1/4SE1/4 sec.1, T.3 N., R.27 W., Red Willow County, at bridge on U.S. Highway 6 and 34, 0.5 mile west of Bartley.	a42	1961-85	--	--	<5
06850000	Turkey Creek at Naponee, NE	Lat 40°04'34", long 99°08'17", in SW1/4SW1/4 sec.4, T.1 N., R.16 W., Franklin County, on downstream side of county bridge at east side of Naponee.	129	1948-53†, 1954-61b 1962-77c 1978-85b	05-14-85	5.62	800
06881450	Indian Creek at Beatrice, NE	Lat 40°17'08", long 96°44'47", in SE1/4NE1/4 sec.28, T.4 N., R.6 E., Gage County, at bridge on U.S. Highway 77 at north edge of Beatrice.	74.7	1960-85	09-13-85	11.95	1,950

† Operated as a continuous-record gaging station.

a Approximate.

b Discharge measurements published in table for miscellaneous sites.

c Discharge measurements published in table for low flow partial record sites.

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

Measurements of streamflow at points other than gaging stations are given in the following table. Some measurements were made during periods of base flow when streamflow is primarily from ground-water storage and may be correlated with the simultaneous discharge of a nearby stream where continuous records are available to give a picture of the low-flow potentiality of the stream.

Discharge measurements made at miscellaneous sites during water year 1985

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Niobrara River basin						
Eagle Creek ¹ (06465050)	Niobrara River	Lat 42°38'01", long 98°46'21", in SW1/4NW1/4 sec.30, T.31 N., R.12 W., Holt County, at county road bridge 4.3 miles south and 6 miles west of Midway.	--	1969-84	11-07-84 04-25-85	27 28
East Branch Eagle Creek ¹ (06465100)	Eagle Creek	Lat 42°37'35", long 98°45'49", in SW1/4SE1/4 sec.30, T.31 N., R.12 W., Holt County, at county road bridge 5 miles south and 5.4 miles west of Midway.	--	1969-84	11-07-84 04-25-85	10 15
Redbird Creek ¹ (06465398)	Niobrara River	Lat 42°39'33", long 98°33'31", in NE1/4SE1/4 sec.14, T.31 N., R.11 W., Holt County, at site 3.2 miles east and 2.7 miles south of Meek.	--	1969-84	11-07-84 04-25-85	23 33
Blackbird Creek ¹ (06465420)	Redbird Creek	Lat 42°39'46", long 98°34'24", in SW1/4NW1/4 sec.14, T.31 N., R.11 W., Holt County, at county road bridge 2.4 miles east and 2.3 miles south of Meek.	--	1969-84	11-07-84 04-25-85	13 24
Verdigre Creek (06465685)	Niobrara River	Lat 42°35'29", long 98°01'49", in SE1/4NE1/4 sec.8, T.30 N., R.6 W., Knox County, at bridge on county road (old State Highway 14) 0.2 mile south of Verdigre.	440	1947-51 1978-81 1983	09-10-84 10-01-84 10-29-84 11-26-84	144 121 149 165
Platte River basin						
Platte River (06770262)	Missouri River	Lat 40°40'38", long 98°50'51", in SW1/4NE1/4 sec.12, T.8 N., R.14 W., Buffalo County, at bridge on county road 4.5 miles south of Gibbon.	--	1984	03-14-85 04-09-85 05-22-85 06-17-85 07-15-85 08-12-85 09-19-85	5490 2390 1650 1500 414 1000 1660
Dane Creek ¹ (06788495)	North Loup River	Lat 98°54'01", long 41°36'31", in NE1/4NE1/4 sec.20, T.19 N., R.14 W., Valley County, at bridge on State Highway 11 at northwest edge of Ord.	--	1962a 1977-84	11-16-84 04-29-85	.78 1.0
Myra Creek ¹ (06788990)	North Loup River	Lat 41°29'54", long 98°46'46", in SE1/4SW1/4 sec.26, T.18 N., R.13 W., Valley County, at bridge on State Highway 11 at west edge of North Loup.	--	1977-84	11-16-84 04-29-85	2.2 2.8
Kansas River basin						
Turkey Creek (06850000) *	Republican River	Lat 40°04'34", long 99°08'17", in SW1/4SW1/4 sec.4, T.1 N., R.16 W., Franklin County, at county road bridge at east side of Naponee, 0.8 mile upstream from mouth.	129	1948-53+, 1954-60a, 1961-81, 1984	05-04-85	283

See footnotes at end of table

Discharge measurements made at miscellaneous sites during water year 1985--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Kansas River basin--Continued						
Republican River (06850500)	Kansas River	Lat 40°03'58", long 99°02'14", in NW1/4SE1/4 sec.8, T.1 N., R.15 W., Franklin County, 2 miles south of Bloomington.	21000	1929-57*, 1960-67, 1970-78, 1980 1983	05-14-85	1820
Republican River (06851090)	Kansas River	Lat 40°05'26", long 98°46'03", in SE1/4SE1/4 sec.34, T.2 N., R.13 W., Franklin County, at bridge on county road 0.5 mile west of Riverton.	21300	1963-67, 1970-78, 1980 1983	05-14-85	3280

* Also a crest-stage gage.

* Operated as a continuous-record gaging station.

1 Also published with additional data elsewhere in this report.

a Gage heights, or gage heights and discharge measurements only.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
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NIOBRARA RIVER BASIN

06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)									
NOV , 1984									
07...	1615	27	291	7.8	7.0	25	130	29	41
APR , 1985									
25...	1410	28	296	7.7	12.0	25	130	23	42
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)									
NOV , 1984									
07...	1525	10	277	8.5	8.0	25	140	0	47
APR , 1985									
25...	1510	15	310	7.8	12.0	35	140	--	48
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)									
NOV , 1984									
07...	1310	23	205	7.7	7.5	25	90	5	30
APR , 1985									
25...	1150	33	223	7.5	10.0	32	98	4	32
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)									
NOV , 1984									
07...	1410	13	289	8.0	7.5	35	140	4	46
APR , 1985									
25...	1300	24	319	7.8	11.5	50	140	0	48

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
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06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)									
NOV , 1984									
07...	5.5	8.8	.4	5.3	96	12	4.9	.20	39
APR , 1985									
25...	5.8	9.9	.4	5.9	106	14	5.2	.20	39
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)									
NOV , 1984									
07...	4.6	6.9	.3	5.1	136	5.8	1.9	.30	50
APR , 1985									
25...	5.5	7.8	.3	9.2	--	13	3.6	.30	47
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)									
NOV , 1984									
07...	3.7	7.3	.3	4.6	85	11	2.7	.20	42
APR , 1985									
25...	4.3	7.7	.4	4.7	94	14	2.8	.20	37
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)									
NOV , 1984									
07...	5.3	8.9	.3	5.4	133	11	3.5	.30	46
APR , 1985									
25...	6.1	11	.4	5.7	153	15	4.6	.40	37

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
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NIOBRARA RIVER BASIN--Continued

06465050	- EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)							
NOV , 1984 07...	170	.24	13	6.9	.110	20	23	4
APR , 1985 25...	190	.25	14	6.3	.150	20	35	9
06465100	- EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)							
NOV , 1984 07...	200	.28	5.5	1.2	.030	40	9	2
APR , 1985 25...	--	--	--	1.1	.260	20	60	11
06465398	- REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)							
NOV , 1984 07...	150	.21	9.5	1.9	.070	20	42	10
APR , 1985 25...	160	.22	14	1.4	.090	20	72	8
06465420	- BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)							
NOV , 1984 07...	210	.28	7.2	1.8	.060	40	26	9
APR , 1985 25...	220	.30	14	1.0	.100	20	43	23

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
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PLATTE RIVER BASIN

06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

NOV , 1984									
16...	1150	.78	924	7.9	3.5	35	420	53	130
APR , 1985									
29...	1700	1.0	880	7.8	16.0	30	400	25	120

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

NOV , 1984									
16...	0930	2.2	657	7.6	.5	45	300	0	82
APR , 1985									
29...	1520	2.8	914	7.6	17.5	100	380	9	100

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
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06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

NOV , 1984									
16...	24	32	.7	21	371	68	20	.30	46
APR , 1985									
29...	25	29	.7	25	378	70	17	.30	34

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

NOV , 1984									
16...	22	23	.6	17	319	13	7.9	.30	36
APR , 1985									
29...	31	31	.7	56	369	51	35	.30	36

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
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06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

NOV , 1984								
16...	560	.77	1.2	5.7	.530	90	43	620
APR , 1985								
29...	550	.74	1.5	4.3	.670	90	24	300

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

NOV , 1984								
16...	390	.53	2.3	1.7	.380	90	45	250
APR , 1985								
29...	560	.76	4.3	3.7	3.80	110	210	2300

403403098244001. Local number 7N-10W-23AB.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 8 in, depth 155 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,927. ft. Measuring point: Top of casing 1.0 ft above land-surface datum.

REMARKS.--Large amounts of ground water are pumped from municipal and industrial wells located east and northeast of the well and from irrigation wells in other directions.

PERIOD OF RECORD.--August 1934 to October 1938; August 1948 to December 1950; and January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 99.95 ft below land-surface datum, Jan. 22, 1935;
lowest, 128.82 ft below land-surface datum, July 10, 1981.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	119.36	116.78	116.27	115.71	115.21	114.71	114.44	114.44	118.60	117.67	116.93
10	117.28	116.70	116.17	115.77	114.87	114.65 ^H	114.39	115.21	120.88	116.77	116.80
15	117.12	116.16	115.55	115.21	114.90	114.74	114.43	114.40	118.74	121.03	116.44
20	117.05	116.45	115.93	115.09	114.89	114.63	114.40	116.42	119.96	117.20	116.45
25	116.94	116.30	115.95	115.15	114.80	114.57	114.51	115.40	117.85	117.11	116.21
EOB	116.80	116.30	115.78	115.21	114.66	114.48	114.64	114.83	118.05	117.22	116.11

WTR YEAR 1985 MAX 114.20 MAY 14, 19, 1984 MIN 121.03 AUG 15, 1985

H TAPE MEASUREMENT

414958100061501. Local number 22N-24W-33CA.

LOCATION.--Lat 41°49'58", long 100°06'15", NE1/4SW1/4 sec.33, T.22 N., R.24 W., Hydrologic Unit 10210001, approximately 500 ft west of junction of State Highways 91 and 2 north of Dunning. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 13 ft, screened 11 to 13 ft.

DATUM.--Altitude of land-surface datum is 2,618 ft. Measuring point: Top of casing 1.40 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.04 ft below land-surface datum, Mar. 8, 1950; lowest, 6.97 ft below land-surface datum, Aug. 8, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

WATER LEVEL, IN FEET, DEER LANE BORING DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992		WATER LEVEL, IN FEET, DEER LANE BORING DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993		WATER LEVEL, IN FEET, DEER LANE BORING DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994		WATER LEVEL, IN FEET, DEER LANE BORING DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995		WATER LEVEL, IN FEET, DEER LANE BORING DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996		WATER LEVEL, IN FEET, DEER LANE BORING DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997	
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.23	JAN 15	3.48	MAR 11	3.12	MAY 9	3.49	JUL 1	4.34	AUG 26	4.32
NOV 19	3.54	FEB 13	3.38	APR 10	3.45	JUN 5	3.44	JUL 30	4.26	SEP 25	4.29
DEC 11	3.45										

BOONE COUNTY

413323098074501. Local number 18N-7W-4CA.

LOCATION.--Lat 41°33'23", long 98°07'45", NE1/4SW1/4 sec.4, T.18 N., R.7 W., Hydrologic Unit 10210010, at junction of State Highways 52 and 56 approximately 1 mi east of Cedar Rapids. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

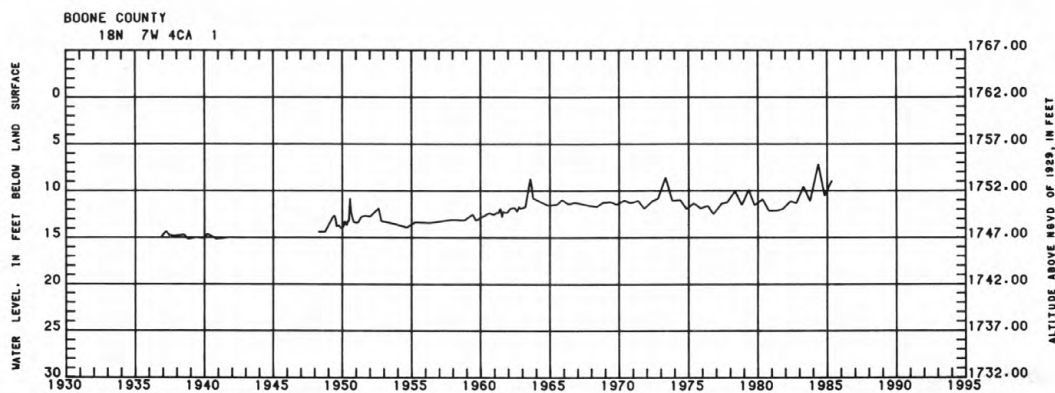
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 22 ft, screened 20 to 22 ft.

DATUM.--Altitude of land-surface datum is 1,762 ft. Measuring point: Top of casing 2.90 ft above land-surface datum.

PERIOD OF RECORD.--November 1936 to October 1942; April 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.15 ft below land-surface datum, May 17, 1984; lowest, 15.17 ft below land-surface datum, Oct. 26, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 30	10.55	MAY 2	8.98								



BOX BUTTE COUNTY

420945102551501. Local number 25N-48W-4DDD.

LOCATION.--Lat 42°09'45", long 102°55'15", SE1/4SE1/4SE1/4 sec.4, T.25 N., R.48 W., Hydrologic Unit 10150003, approximately 3.6 mi south and 2.8 mi east of Berea. Owner: U.S. Geological Survey.

AQUIFER.--Marsland Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 204 ft, screened 190 to 193 ft.

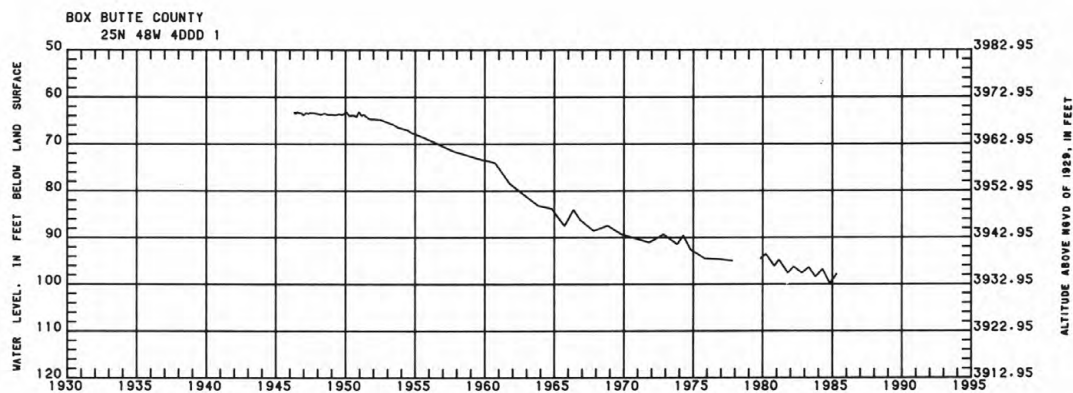
DATUM.--Altitude of land-surface datum is 4,032.95 ft. Measuring point: Top of pipe 2.00 ft above land-surface datum.

REMARKS.--Water levels in vicinity of well are affected by large withdrawals of ground water for irrigation use.

PERIOD OF RECORD.--April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.14 ft below land-surface datum, Jan. 25, 1950; lowest, 99.87 ft below land-surface datum, Oct. 30, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 30	99.87	APR 17	97.89								



BROWN COUNTY

423307099494501. Local number 30N-21W-19CC.

LOCATION.--Lat 42°33'07", long 99°49'45", SW1/4SW1/4 sec.19, T.30 N., R.21 W., Hydrologic Unit 10150004, 1.2 mi east of junction of U.S. Highway 20 and Route 7 in Ainsworth. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 52 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,511.44 ft. Measuring point: Top of casing 0.20 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumpage of ground water for irrigation and seepage losses from nearby irrigation project.

PERIOD OF RECORD.--November 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.70 ft below land-surface datum, Oct. 18, 1984; lowest, 40.96 ft below land-surface datum, Sept. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	31.78	31.81	31.99	32.19	32.33	32.67	32.83	33.08	.....	33.32	33.66	33.74
10	31.77	31.84	31.96	32.28	32.44	32.61	32.83	33.05	33.29	33.44	33.79	33.78
15	31.72	31.87	31.96	32.17	32.47	32.72	32.92	33.14	33.24	33.62	33.85	33.73
20	31.74	31.87	32.01	32.34	32.44	32.74	32.95	33.17	33.21	33.74	33.83	33.68
25	31.75	31.75	32.10	32.37	32.58	32.75	32.98	33.19	33.27	33.80	33.79	33.57
EOM	31.80	31.87	32.17	32.38	32.57	32.81	33.03	33.24	33.27	33.75	33.76	33.54

WTR YEAR 1985 MAX 31.70 OCT 18, 1984 MIN 33.85 AUG 15, 1985

BUFFALO COUNTY

404618098504401. Local number 9N-14W-1DC.

LOCATION.--Lat 40°46'18", long 98°50'44", SW1/4SE1/4 sec.1, T.9 N., R.14 W., Hydrologic Unit 10200102, 1.3 mi north of the intersection of Route 30 and the North-South range-line road on the east side of Gibbon, then 0.5 mi west on section-line road. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 38 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,060.43 ft. Measuring point: Top of casing 0.80 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumpage from nearby irrigation wells.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.36 ft below land-surface datum, June 11, 1952; lowest, 29.22 ft below land-surface datum, Aug. 10, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	22.97	22.43	22.01	21.73	21.50	21.51	21.18	21.01	20.68	20.80	.....	.....
10	22.86	22.38	21.96	21.75	21.51	21.35	21.15	20.95	20.63	21.20	.....	.....
15	22.21	22.32	21.93	.....	21.46	21.33	21.08	20.97	20.57	22.23H	.....	.....
20	22.59	22.25	21.85	21.73	21.40	21.27	21.09	20.86	20.51	.....	.....	.....
25	22.56	22.12	21.89	21.65	21.40	21.24	21.10	20.77	20.53	.....	.....	.....
EOM	22.46	22.05	21.82	21.59	21.39	21.23	21.05	20.75	20.69	.....	.....	22.48

WTR YEAR 1985 MAX 20.49 JUN 23, 24, 1985 MIN 23.10 OCT 1, 1984

H TAPE MEASUREMENT

BUFFALO COUNTY

404345098560001. Local number 9N-14W-19DD.

LOCATION.--Lat 40°43'45", long 98°56'00", SE1/4SE1/4 sec.19, T.9 N., R.14 W., Hydrologic Unit 10200102, 4.7 mi west-southwest of Gibbon on U.S. Highway 30. Owner: Robert D. Lewis.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 54 ft, casing perforated below water table.

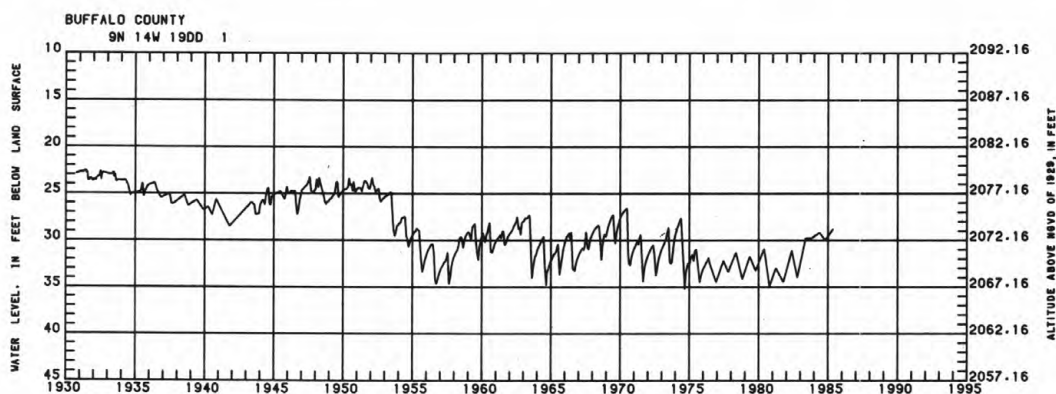
DATUM.--Altitude of land-surface datum is 2,102.16 ft. Measuring point: Hole in pump base 0.70 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumping of well and of nearby wells for irrigation supplies.

PERIOD OF RECORD.--October 1930 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.55 ft below land-surface datum, June 9, 1931; lowest, 35.20 ft below land-surface datum, Aug. 30, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	30.00	MAY 7	28.81								



BUTLER COUNTY

411420097173002. Local number 15N-1E-27DD2.

LOCATION.--Lat 41°14'20", long 97°17'30", SE1/4SE1/4 sec.27, T.15 N., R.1 E., Hydrologic Unit 10270201, 2 mi north of the northeast corner of Rising City. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 210.0 ft, perforated 199 to 210 ft.

DATUM.--Altitude of land-surface datum is 1,618 ft. Measuring point: Top of platform, at land-surface datum.

REMARKS.--Replacement for 411420097173001, local number 15N-1E-27DD, period of record June 1958 to January 1977. Water levels in well affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.--February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 100.02 ft below land-surface datum, May 20, 1985; lowest, 174.50 ft below land-surface datum, Aug. 3, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	110.26	104.68	.....	.....	.....	100.70	100.24H	100.30	100.07	.....	.....	.....
10	.....	.....	.....	.....	.....	100.69	100.26	.....	100.23	.....	.....	.....
15	.....	.....	.....	.....	.....	100.70	100.28	100.15	100.31	.....	.....	.....
20	.....	.....	.....	.....	101.03	100.69	100.24	100.04	100.30	.....	.....	.....
25	105.94	103.09	.....	.....	100.87	100.54	100.27	100.04	100.10	.....	.....	.....
EOM	105.19	.....	.....	.....	100.87	100.29	100.29	100.05	.....	.....	.....	.....

WTR YEAR 1985 MAX 100.02H MAY 20, 1985 MIN 140.90 JUL 9, 1985

H TAPE MEASUREMENT

GROUND-WATER LEVELS

CHASE COUNTY

403220101384001. Local number 7N-38W-28CC.

LOCATION.--Lat 40°32'20", long 101°38'40", SW1/4SW1/4 sec.28, T.7 N., R.38 W., Hydrologic Unit 10250005, about 0.5 mi north of Imperial. Owner: Roy Hust.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled unused observation water-table well, diameter 18 in, depth 143 ft, casing perforated below water table.

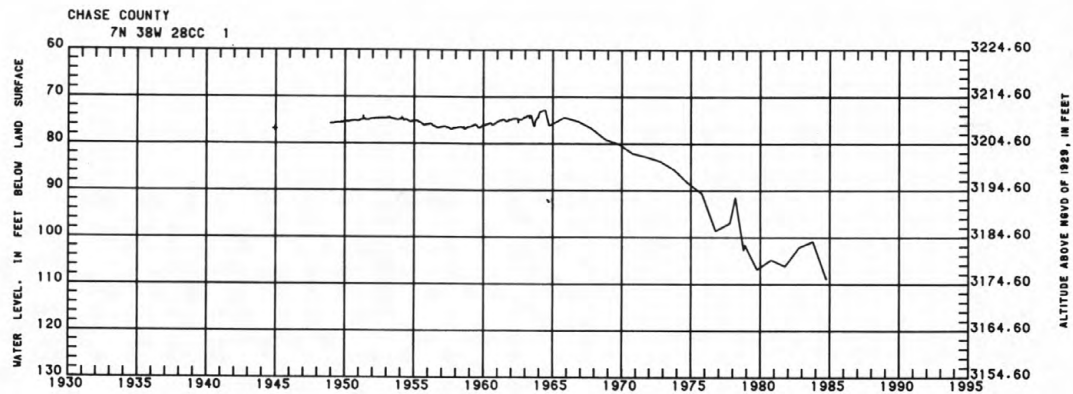
DATUM.--Altitude of land-surface datum is 3,284.6 ft. Measuring point: Top of casing 0.30 ft above land-surface datum.

REMARKS.--Recording gage was installed on this well from December 1948 to December 1963. Water levels in well are affected by irrigation pumpage in area.

PERIOD OF RECORD.--December 1944; December 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.82 ft below land-surface datum, June 29, 1964; lowest measured, 108.91 ft below land-surface datum, Oct. 3, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 3	108.91										



CHASE COUNTY

403235101395501. Local number 7N-38W-29CBB.

LOCATION.--Lat 40°32'35", long 101°39'55", NW1/4NW1/4SW1/4 sec.29, T.7 N., R.38 W., Hydrologic Unit 10250005, 0.5 mi north and 1 mi west of Imperial on U.S. Highway 6, then 0.5 mi north on gravel road. Owner: U.S. Geological Survey.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 230 ft, perforated 190 to 230 ft.

DATUM.--Altitude of land-surface datum is 3,290.30 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well are affected by irrigation pumpage in area.

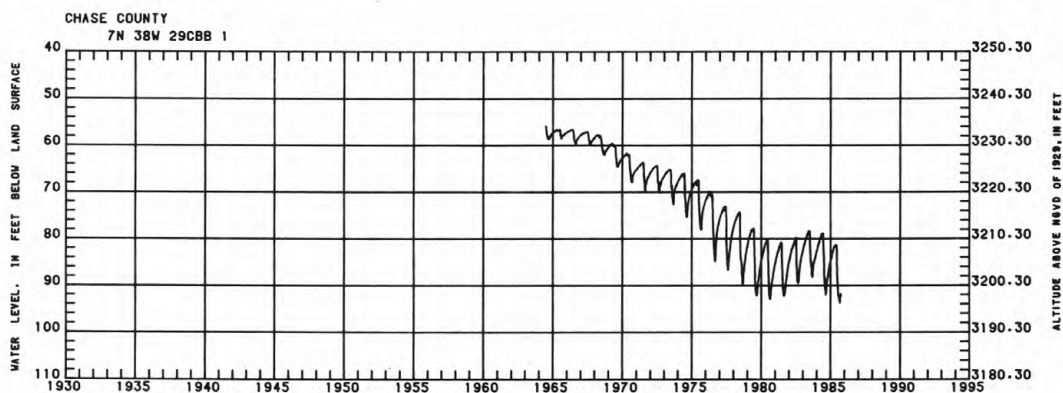
PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.87 ft below land-surface datum, July 4, 1964; lowest, 94.17 ft below land-surface datum, Aug. 30, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	89.12	87.44	85.98	84.65	83.44	82.95	81.78	81.43	81.43	89.26	92.27	93.84
10	88.84	87.27	85.78	84.62	83.50	82.43	81.53	81.22	82.09	90.43	92.47	92.75
15	88.52	86.96	85.38	84.15	83.00	82.37	81.71	81.48	82.07	91.06	93.02	92.35
20	88.26	86.65	85.13	84.39	82.86	82.26	81.83	81.23	84.76	92.10	93.19	92.47
25	88.00	86.17	85.10	84.05	83.00	82.04	81.80	81.86	87.17	92.16	93.18	92.05
EOM	87.67	86.14	84.84	83.81	82.82	81.98	81.67	81.28	88.96	91.90	93.11	91.79

WTR YEAR 1985 MAX 80.96 MAY 30, 1985 MIN 94.17 AUG 30, 1985



DAWES COUNTY

424100103243501. Local number 31N-52W-3DC.

LOCATION.--Lat 42°41'00", long 103°24'35", SW1/4SE1/4 sec.3, T.31 N., R.52 W., Hydrologic Unit 10140201, behind house at 312 Annin Street in Crawford. Owner: T. P. Moody.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 39 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,685 ft. Measuring point: Edge of iron plate 1.07 ft above land-surface datum.

PERIOD OF RECORD.--August 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.87 ft below land-surface datum, May 30, 1948; lowest, 22.28 ft below land-surface datum, Oct. 31, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985									
WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
NOV 1	19.78	APR 22	19.86						

DAWSON COUNTY

405250099445501. Local number 10N-21W-18DDD.

LOCATION.--Lat 40°52'50", long 99°44'55", SE1/4SE1/4SE1/4 sec.18, T.10 N., R.21 W., Hydrologic Unit 10200101, 3.5 mi north of the intersection of Route 21 and U.S. Highway 30 in Lexington. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 120 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,420.58 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumpage from nearby irrigation wells and by seepage from irrigation canals.

PERIOD OF RECORD.--July 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.06 ft below land-surface datum, June 18, 1984; lowest, 21.50 ft below land-surface datum, July 16, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
 LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	11.24	11.48	11.65	11.95	.....	12.22	12.31	12.15	10.32	9.83	9.10	8.87
10	11.33	11.53	11.75	11.99	.....	.....	12.28	11.72	10.26	14.49	8.95	8.89
15	11.36	11.53	11.79	11.96	12.11	.....	12.38	11.27	10.17	14.86	9.28	9.01
20	11.40	11.55	11.79	12.07	12.06	.....	12.37	10.66	10.15	10.68	9.60	9.25
25	11.39	11.47	11.89	12.08	12.11	.....	12.41	10.53	10.53	10.24	9.63	9.36
EOM	11.41	11.57	11.91	12.16	12.11	.....	12.41	10.48	9.91	9.94	9.02	9.48

WTR YEAR 1985 MAX 8.30 SEP 2, 1985 MIN 14.88 JUL 17, 1985

H TAPE MEASUREMENT

DAWSON COUNTY

404850099503501. Local number 10N-22W-29AA.

LOCATION.--Lat 40°48'50", long 99°50'35", NE1/4NE1/4 sec.29, T.10 N., R.22 W., Hydrologic Unit 10200101, 2 mi east of Dorr. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 12 ft, screened 10 to 12 ft.

DATUM.--Altitude of land-surface datum is 2,435.14 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumping from nearby wells during irrigation season. No well reading was made in 1983 water year.

PERIOD OF RECORD.--October 1931 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.52 ft below land-surface datum, July 12, 1947; lowest, 8.88 ft below land-surface datum, Oct. 19, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[illegible]

DUNDY COUNTY

400155101521302. Local number 1N-40W-29BB2.

LOCATION.--Lat 40°01'55", long 101°52'13", NW1/4NW1/4 sec.29, T.1 N., R.40 W., Hydrologic Unit 10250002, 3.5 mi east of Haigler on U.S. Highway 34 and 0.5 mi north. Well is within 0.5 mi of Republican River. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 48.8 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,205 ft. Measuring point: South side of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 400155101521301, local number 1N-40W-29BB1 with period of record from May 1946 to June 1975. Water levels in well are affected by pumping from nearby irrigation wells, evapotranspiration, and changes in stage of Republican River.

PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.41 ft below land-surface datum, June 21, 1984; lowest, 20.97 ft below land-surface datum, Sept. 12, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	17.23	16.82	16.65	16.42	16.20	16.04	15.90	16.07	16.29	16.89	17.47	17.82
10	17.16	16.77	16.60	16.39	16.18	15.99	15.88	16.06	16.21	17.01	17.59	17.68
15	17.07	16.72	16.56	16.35	16.14	15.97	16.07	16.17	16.39	17.10	17.71	17.59
20	17.00	16.75	16.52	16.34	16.09	15.96	16.07	16.10	16.48	17.19	17.65	17.54
25	16.93	16.77	16.50	16.29	16.06	15.94	16.26	16.07	16.73	17.14	17.72	17.47
EOM	16.87	16.69	16.45	16.25	16.05	15.92	16.14	16.05	16.79	17.44	17.93	17.41

WTR YEAR 1985 MAX 15.87 APR 11, 1985 MIN 17.95 SEP 1, 1985

FILLMORE COUNTY

402504097432201. Local number 5N-4W-12BDC.

LOCATION.--Lat 40°25'04", long 97°43'22", SW1/4SE1/4NW1/4 sec.12, T.5 N., R.4 W., Hydrologic Unit 10270206, one-half block south of fire station on principal north-south street in Shickley. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 260.0 ft, perforated 100 to 260 ft.

DATUM.--Altitude of land-surface datum is 1651 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Replacement for 402450097434001, local number 5N-4W-12BC, period of record October 1956 to September 1977. Water levels in well affected by pumping from nearby municipal and irrigation wells.

PERIOD OF RECORD.--June 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 90.85 ft below land-surface datum, June 8,, 1978; lowest, 98.69 ft below land-surface datum, Sept. 14, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	97.01	.....	.....	.....	94.74	94.84	94.33	93.84	93.46	93.92	94.97	95.33
10	96.97	.....	.....	.....	94.80	94.38	94.21	93.58	93.35	94.27	95.17	95.43
15	.....	.....	.....	95.35	94.82	94.52	94.05	93.81	93.34	94.67	95.17	95.37
20	.....	.....	.....	95.43	94.83	94.53	94.13	93.71	93.11	94.80	95.23	95.52
25	.....	.....	.....	95.63	94.96	94.45	93.96	93.50	93.20	94.94	95.24	95.37
EOM	.....	.....	.....	95.22	94.69	94.43	93.93	93.62	93.68	94.97	95.22	95.37

WTR YEAR 1985 MAX 92.88 JUNE 21, 1985 MIN 97.10 OCT 3, 1984

GROUND-WATER LEVELS

FILLMORE COUNTY

403800097300701. Local number 8N-2W-26AD.

LOCATION.--Lat 40°38'00", long 97°30'07", SE1/4NE1/4 sec.26, T.8 N., R.2 W., Hydrologic Unit 10270203, 2.5 mi west on Route 6 from the principal street of Exeter, then 0.4 mi south. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 40 ft, perforated 25 to 40 ft.

DATUM.--Altitude of land-surface datum is 1,610 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Perched aquifer, water levels affected by infiltration and deep percolation of applied irrigation water pumped from deeper aquifer.

PERIOD OF RECORD.--October 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.24 ft below land-surface datum, June 18, 1983; lowest, 24.16 ft below land-surface datum, July 10, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	9.10	8.43	8.55	7.22	7.63	7.75	7.60H	7.15	6.46	7.34	8.10	8.87
10	9.02	8.43	8.49	7.35	7.73	7.72	7.68	7.19	6.56	7.62	8.77	9.12
15	8.89	8.45	8.57	7.37	7.80	.....	7.67	5.74	6.63	7.81	8.40	6.89
20	8.40	8.51	7.80	7.51	7.68	7.75	7.66	5.98	6.76	7.90	8.48	7.42
25	8.40	8.35	7.92	7.55	7.69	7.80	7.76	6.11	7.00	7.97	8.62	7.43
EOM	8.44	8.39	6.95	7.62	7.78	7.78	7.30	6.30	7.17	8.11	8.72	7.45

WTR YEAR 1985 MAX 5.48 MAY 14, 1985 MIN 9.10 OCT 5, 1984

H TAPE MEASUREMENT

FURNAS COUNTY

401718099491001. Local number 4N-22W-29AD.

LOCATION.--Lat 40°17'18", long 99°49'10", SE1/4NE1/4 sec.29, T.4 N., R.22 W., Hydrologic Unit 10250009, 2 mi west and 0.5 mi north of Edison. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 23 ft, screened 21 to 23 ft.

DATUM.--Altitude of land-surface datum is 2,134 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.60 ft below land surface datum, Aug. 22, 1978; lowest, 17.69 ft below land-surface datum, Feb. 8, 1946.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 3	10.00										

GARDEN COUNTY

414124102230101. Local number 20N-44W-22CB.

LOCATION.--Lat 41°41'24", long 102°23'01", NW1/4SW1/4 sec.22, T.20 N., R.44 W., Hydrologic Unit 10180009, 5.8 mi southeast of refuge headquarters. Owner: Crescent Lake Migratory Bird Refuge.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.50 in, depth 22.1 ft below land-surface datum.

DATUM.--Altitude of land-surface datum is 3783.16 ft. Measuring point: Top of casing 1.61 ft above land-surface datum.

PERIOD OF RECORD.--August 1934-39; 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.57 ft below land-surface datum, Oct. 7, 1934; lowest, 20.92 ft below land-surface datum, Mar. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 28	18.70	DEC 11	18.76	APR 4	18.93	JUNE 11	19.06	SEP 18	19.38		

GROUND-WATER LEVELS

HALL COUNTY

405315098304302. Local number 11N-11W-25CC2.

LOCATION.--Lat 40°53'15", long 98°30'43", SW1/4SW1/4 sec.25, T.11 N., R.11 W., Hydrologic Unit 10200103, 1.0 mi north and 2.0 mi west of Alda. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 65 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,924.0 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Replacement for 405315098304301, local number 11N-11W-25CC, period of record October 1946 to November 1977. Water levels in wells affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.-- April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.53 ft below land-surface datum, July 18, 19 and 20, 1984; lowest, 25.98 ft below land-surface datum, Aug. 31, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	16.86	16.83	16.76	16.66	16.56	16.64	16.49	16.35	15.89	15.78	16.65	16.83
10	16.87	16.80	16.70	16.67	16.58	16.54	16.49	16.28	15.82	15.93	16.64	16.91
15	16.82	16.80	16.71	16.61	16.56	16.56	16.45	16.28	15.75	16.15	16.62	16.71
20	16.82	16.78	16.67	16.67	16.53	16.54	.....	16.13	15.68	16.37	16.67	16.54
25	16.81	16.67	16.73	16.64	16.54	16.52	16.47	16.04	15.72	16.55	16.69	16.45
EOM	16.81	16.70	16.69	16.61	16.55	16.52	16.41	15.96	15.79	16.65	16.75	16.42

WTR YEAR 1985 MAX 15.64 JUL 20, 1985 MIN 16.92 SEP 13, 1985

HAMILTON COUNTY

404836097584101 Local number 10N-6W-27ACAA.

LOCATION.--Lat 40°48'36", long 97°58'41", SE1/4NE1/4 sec.27, T.10 N., R.6 W., Hydrologic Unit 10270203, 4.0 mi south of junction of Route 14 and U.S. Highway 34 in Aurora, then 1.0 mi east and 0.3 mi south. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of the Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 170 ft, casing perforated below water-table.

DATUM.--Altitude of land surface datum is 1791.3 ft. Measuring point: Top of casing 1.5 ft above land surface datum.

REMARKS.--Replacement for well 404825097583301. Local number 10N-6W-26BC with period of record March 1956 to March 1982 located across the county road to the east.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 94.30 ft below land-surface datum, Sept. 24, 1980; lowest, 107.40 ft below land-surface datum, Aug. 24, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	100.41	99.62	.....	98.10	.....	.....	.....	96.03	95.57	96.72	98.20	97.87
10	100.29	99.53	.....	98.03	.....	.....	96.29H	95.83	95.46	97.47	98.08	98.02
15	100.16	99.37	98.52	97.82	.....	96.64	96.24	95.85	95.43	98.03	97.88	97.86
20	100.07	99.17	98.41	.....	.....	96.58	96.23	95.79	95.33	98.65	97.80	97.85
25	99.85	98.96	98.36	.....	.....	96.50	96.14	95.69	95.37	98.51	97.66	97.65
EOM	99.69	98.94	98.20	.....	.....	.....	96.07	95.68	95.60	98.30	97.61	97.56

WTR YEAR 1985 MAX 95.20 JUN 21, 1985 MIN 100.55 OCT 1, 1984

H TAPE MEASUREMENT

HAMILTON COUNTY

405514097573901. Local number 11N-6W-13CB.

LOCATION.--Lat 40°55'14", long 97°57'39", NW1/4SW1/4 sec.13, T.11 N., R.6 W., Hydrologic Unit 10270201, 2 mi east and 3.5 mi north of Aurora. Owner: O. S. Swedberg.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 194 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,812.2 ft. Measuring point: Hole in south side turbine base at land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--September 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 90.04 ft below land-surface datum, Sept. 29, 1934; lowest, 117.18 ft below land-surface datum, Nov. 15, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
NOV 8	101.16	APR 22	98.93								

HARLAN COUNTY

400920099215501. Local number 2N-18W-9BCC.

LOCATION.--Lat 40°09'20", long 99°21'55", SW1/4SW1/4NW1/4 sec.9, T.2 N., R.18 W., Hydrologic Unit 10250009, 3.5 mi north of the junction of Route 3 and U.S. Highway 183 in Alma. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 170 ft, perforated from 140 to 170 ft.

DATUM.--Altitude of land-surface datum is 2,120 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby wells during irrigation season.

PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.39 ft below land-surface datum, May 11, 1966; lowest, 109.96 ft below land-surface datum, Sept. 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	92.06	91.69	91.29	90.99	90.75	90.66	90.29	90.08	89.97	97.49	96.41	96.23
10	92.09	91.68	91.25	91.01	90.70	90.39	90.20	90.02	89.93	96.27	104.45	92.60
15	91.91	91.64	91.28	90.95	90.60	90.42	90.16	90.08	89.90	99.02	103.89	92.33
20	91.94	91.49	91.11	91.08	90.49	90.39	90.21	90.04	90.80	103.74	103.92	92.22
25	91.76	91.25	91.19	90.91	90.53	90.50	90.25	90.00	91.46	94.48	102.42	91.95
EOM	91.72	91.32	91.09	90.83	90.56	90.33	90.15	90.07	91.34	99.88	99.58	91.88

WTR YEAR 1985 MAX 89.83 JUN 8, 1985 MIN 104.57 AUG 14, 1985

HARLAN COUNTY

400620099274001. Local number 2N-19W-28DD.

LOCATION.--Lat 40°06'20", long 99°27'40", SE1/4SE1/4 sec.28, T.2 N., R.19 W., Hydrologic Unit 10250009, 1.8 mi south of Orleans. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

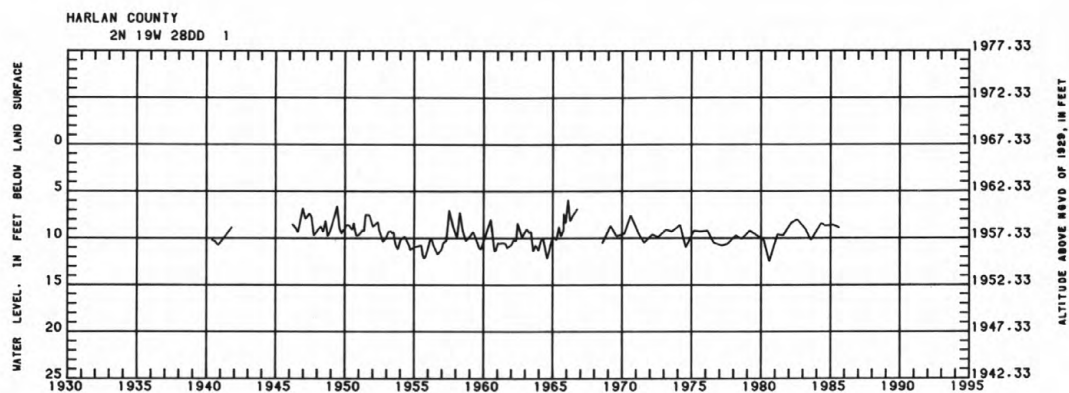
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 22 ft, screened 20 to 22 ft.

DATUM.--Altitude of land-surface datum is 1,967.53 ft. Measuring point: Top of casing 1.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1940 to October 1941; March 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.9 ft below land-surface datum, Feb. 15, 1966; lowest, 12.50 ft below land-surface datum, Aug. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
MAR 5	8.60	AUG 9	8.90								



HOLT COUNTY

421605098203001. Local number 27N-9W-34DA.

LOCATION.--Lat 42°16'05", long 98°20'30", NE1/4SE1/4 sec.34, T.27 N., R.9 W., Hydrologic Unit 10220001, 0.5 mi north of Ewing. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

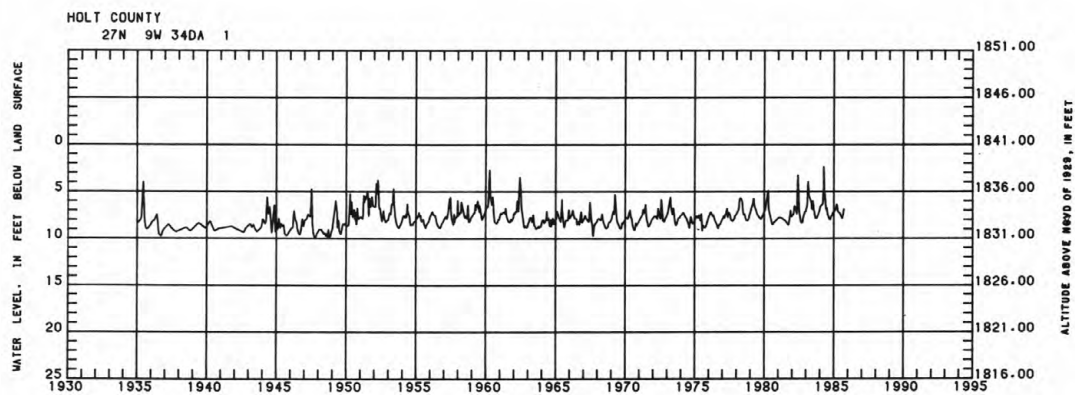
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 17 ft, screened 15 to 17 ft.

DATUM.--Altitude of land-surface datum is 1,841 ft. Measuring point: Top of casing 1.10 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft below land-surface datum, Apr. 9, 1984; lowest, 9.90 ft below land-surface datum, Sept. 1, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	7.69	NOV 21	7.39	JAN 8	7.09	MAR 14	6.31	JUN 6	7.31	AUG 28	7.40
NOV 1	7.58	DEC 11	7.23	FEB 13	6.90	APR 11	7.13	JUL 31	7.89	SEP 24	6.90



GROUND-WATER LEVELS

HOLT COUNTY

422845098370701. Local number 29N-11W-21BBB.

LOCATION.--Lat 42°28'45", long 98°37'07", NW1/4NW1/4NW1/4 sec.21, T.29 N., R.11 W., Hydrologic Unit 10150007, 1 mi east and 1 mi north of O'Neill. Owner: Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 5 in, depth 55 ft, casing perforated below water table.

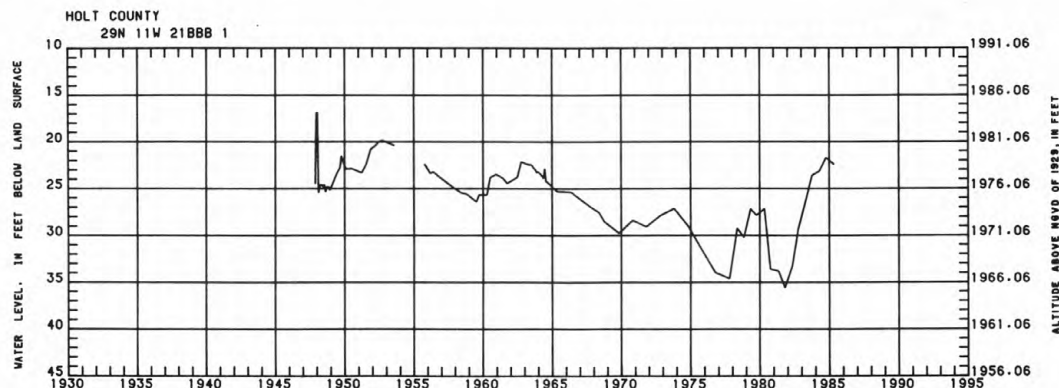
DATUM.--Altitude of land-surface datum is 2,001.06 ft. Measuring point: Top of casing 1.20 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--November 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.87 ft below land-surface datum, Jan. 14, 1948; lowest, 35.59 ft below land-surface datum, Oct. 28, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 11	21.71	MAY 2	22.39								



HOLT COUNTY

423148098300601. Local number 30N-10W-32DAA.

LOCATION.--Lat 42°31'48", long 98°30'06", NE1/4NE1/4SE1/4 sec.32, T.30 N., R.10 W., Hydrologic Unit 10150007, 2 mi east on paved road from O'Neill, then 2 mi north, 4 mi east, 2 mi north, 2 mi east, and 0.5 mi north. Owner: William J. Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 85 ft, perforated 25.5 to 85 ft.

DATUM.--Altitude of land-surface datum is 1,952 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in this well affected by withdrawals by nearby irrigation wells completed in this aquifer and withdrawals from a deeper aquifer which has resulted in water movement from the upper aquifer to the deeper aquifer.

PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.41 ft below land-surface datum, Oct. 21, 1966; lowest, 53.73 ft below land-surface datum, Sept. 17, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	46.01	45.87	45.64	45.38	45.11	45.05	44.70	44.55	44.46	44.67	45.44	45.79
10	45.99	45.82	45.58	45.38	45.13	44.89	44.67	44.47	44.44	44.77	45.56	45.91
15	45.93	45.79	45.53	45.28	45.06	44.88	44.64	44.57	44.43	44.94	45.64	45.96
20	45.93	45.73	45.47	45.34	44.97	44.83	44.63	44.53	44.41	45.05	45.70	46.00
25	45.89	45.61	45.47	45.28	44.99	44.79	44.61	44.46	44.52	45.19	45.72	45.96
EOM	45.86	45.61	45.46	45.20	44.96	44.76	44.57	44.46	44.64	45.36	45.73	45.99

WTR YEAR 1985 MAX 44.37 MAY 29, 30, JUN 20, 21, 1985 MIN 46.05 OCT 1, 1984

HOLT COUNTY

423730098560001. Local number 31N-14W-27DDD.

LOCATION.--Lat 42°37'30", long 98°56'00", SE1/4SE1/4SE1/4 sec.27, T.31 N., R.14 W., Hydrologic Unit 10150007, 6 mi north from Atkinson on Route 11, then 2 mi east. Owner: Elmer Goldfuss.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 72 ft, perforated 32 to 72 ft.

DATUM.--Altitude of land-surface datum is 2,080 ft. Measuring point: Top of casing at land-surface datum.

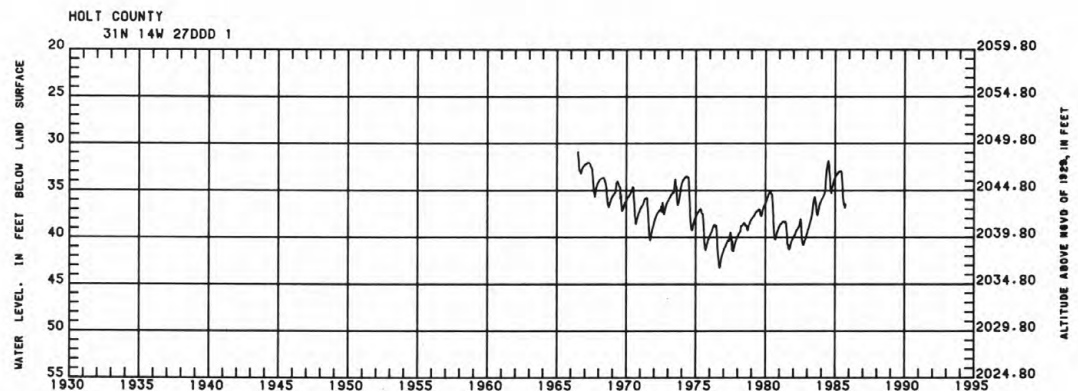
REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--July 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.91 ft below land-surface datum, July 7, 1966; lowest, 43.30 ft below land-surface datum, Sept. 10, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	34.85	34.31	33.92	33.59	33.35	33.26	33.06	32.98	32.93	34.21	36.09	36.70
10	34.76	34.23	33.86	33.55	33.34	33.21	33.08	32.95	32.99	34.67	36.45	36.87
15	34.63	34.17	33.80	33.51	33.29	33.19	33.02	32.99	33.14	35.18	36.56	36.80
20	34.55	34.10	33.73	33.51	33.25	33.14	33.01	32.96	33.38	35.35	36.50	36.66
25	34.48	34.00	33.71	33.45	33.23	33.13	33.03	32.95	33.65	35.62	36.37	36.53
EOM	34.39	33.95	33.67	33.40	33.23	33.13	33.02	32.91	33.86	36.03	36.60	36.44
WTR YEAR 1985	MAX	32.88	MAY 31, 1985	MIN	36.87	SEP 10, 11, 1985						



KEARNEY COUNTY

402625098594501. Local number 6N-15W-34DC.

LOCATION.--Lat 40°26'25", long 98°59'45", SW1/4SE1/4 sec.34, T.6 N., R.15 W., Hydrologic Unit 10270206, 4.5 mi south and 2.5 mi west of the junction of Route 10 and U.S. Highway 34 near Minden. Owner: Conservation and Survey Division, University of Nebraska-Lincoln.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 210 ft, cased with steel, perforated 190 to 210 ft.

DATUM.--Altitude of land-surface datum is 2,210 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Replacement for 402615099000001, local number 5N-15W-3BA1, period of record August 1947 to September 1967. Water levels in well affected by seepage losses from nearby canals and by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--October 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.20 ft below land-surface datum, June 20, 1985; lowest, 119.43 ft below land-surface datum, Aug. 27, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	83.07	81.86	80.85	79.90	79.02	78.73	77.72	77.20	76.90	108.46	80.40	90.03
10	83.00	81.65	80.51	79.81	79.01	78.46	77.74	77.10	76.79	106.64	79.94	81.81
15	82.42	81.54	80.53	79.54	78.91	78.41	77.53	77.22	76.60	110.87	100.64	81.02
20	82.43	81.39	80.21	79.68	78.61	78.15	77.38	77.07	76.51	89.28	105.78	80.43
25	82.27	80.72	80.35	79.40	78.58	78.08	77.55	77.11	80.10	83.78	90.02	79.83
EOM	82.06	80.76	80.10	79.25	78.69	77.91	77.43	76.88	76.89	83.12	97.09	79.70

WTR YEAR 1985 MAX 76.20 JUN 20, 1985 MIN 113.92 JUL 18, 1985

KEARNEY COUNTY

403358098553001. Local number 7N-14W-20BA.

LOCATION.--Lat 40°33'58", long 98°55'30", NE1/4NW1/4 sec.20, T.7 N., R.14 W., Hydrologic Unit 10270206, 1.4 mi east and 4.5 mi north of intersection of U.S. Highway 6 and State Highway 10 in Minden. Owner: George Burchell.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in, depth 183 ft.

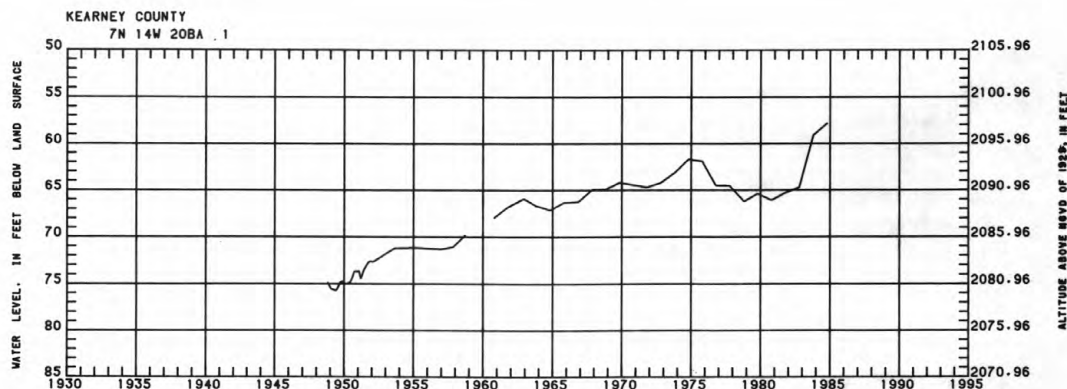
DATUM.--Altitude of land-surface datum is 2,155.96 ft. Measuring point: 0.30 ft above land-surface datum.

PERIOD OF RECORD.--October 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.82 ft below land-surface datum, Oct. 16, 1984; lowest, 75.75 ft below land surface datum, June 10, 1949.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	57.82										



411416103361101. Local number 15N-55W-26CC.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 124 ft, casing perforated below water table.

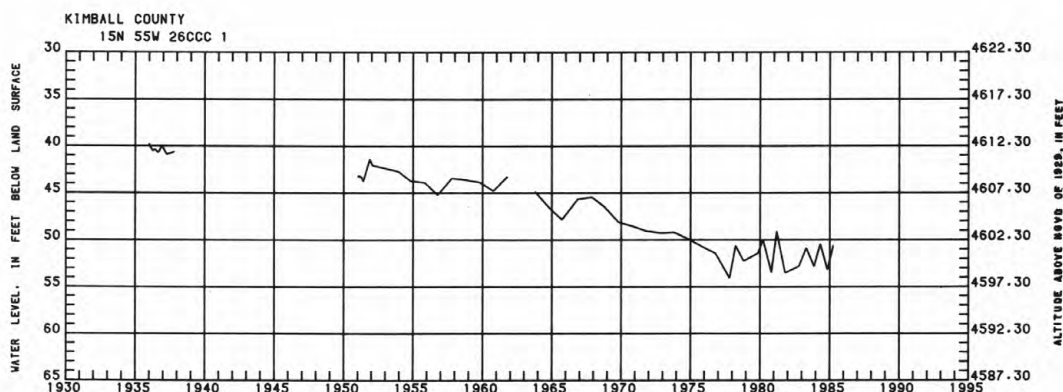
DATUM.--Altitude of land-surface datum is 4,652.3 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Replacement for 411600103393501, local number 15N-55W-17CC1, period of record January 1935 to November 1942; June 1950 to October 1975.

PERIOD OF RECORD.--January 1936 to October 1937; January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.82 ft below land-surface datum, Jan. 2, 1936; lowest, 54.07 ft below land-surface datum, Oct. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
NOV 2	53.18	MAY 3	50.66								



LANCASTER COUNTY

403929096401001. Local number 8N-7E-18DDB.

LOCATION.--Lat 40°39'29", long 96°40'10", NW1/4SE1/4SE1/4 sec.18, T.8 N., R.7 E., Hydrologic Unit 10200203, 0.6 mi west of Roca. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 41 ft, perforated 36 to 41 ft.

DATUM.--Altitude of land-surface datum is 1,215 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Water level not measured during 1984 water year.

PERIOD OF RECORD.--June 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.63 ft below land-surface datum, Aug. 25, 1954; lowest, 13.24 ft below land-surface datum, Nov. 9, 1981.

[illegible]

LANCASTER COUNTY

404706096413001. Local number 10N-6E-36CDD.

LOCATION.--Lat 40°47'06", long 96°41'30", SE1/4SE1/4SW1/4 sec.36, T.10 N., R.6 E., Hydrologic Unit 10200203, in Irvingdale Park on the north side of Van Dorn Street between 19th and 20th Streets in Lincoln. Owner: City of Lincoln.

AQUIFER.--Dakota Formation of Lower Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in, depth 170 ft, casing perforated below water table.

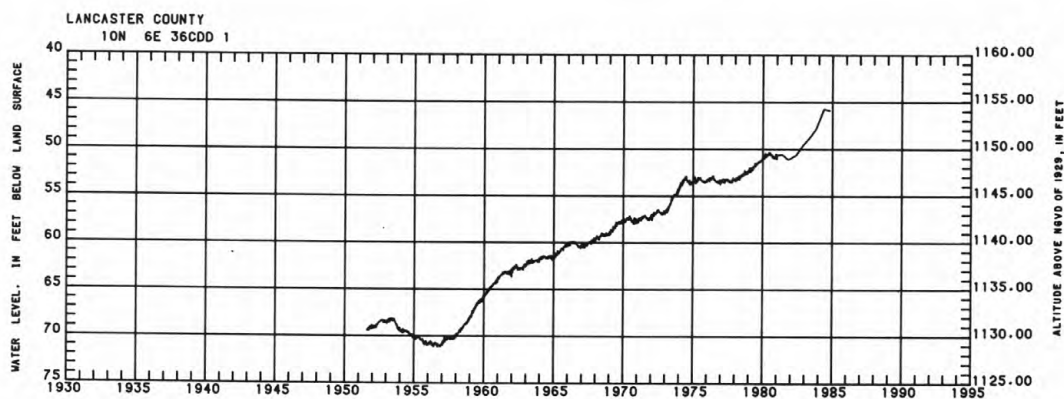
DATUM.--Altitude of land-surface datum is 1,200 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Recorder removed in January 1983. Well measured in spring and fall thereafter.

PERIOD OF RECORD.--August 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.71 ft below land-surface datum, May 10, 1984; lowest 71.19 ft below land-surface datum, Sept. 5, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	45.92								



400240098111301. Local number 1N-8W-23AB.

AQUIFER.--Loess of Pleistocene age.

PERIOD OF RECORD.--April 1950 to current year.

WATER LEVEL, IN FEET		BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985	
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	5.20	MAY 8	4.97

403123099261501. Local number 6N-19W-2AA.

PERIOD OF RECORD.--March 1945 to current year.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985					
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	44.77	NOV 6	44.83	JAN 2	45.31

412955097192001. Local number 18N-1E-28CD.

PERIOD OF RECORD.--November 1935 to August 1940; March 1942 to November 1953; November 1956 to current year.

[illegible]

SALINE COUNTY

403855097072501. Local number 8N-3E-19ADA.

LOCATION.--Lat 40°38'55", long 97°07'25", NE1/4SE1/4NE1/4 sec.19, T.8 N., R.3 E., Hydrologic Unit 10270202, west edge of Dorchester, on west side of Route 15 between U.S. Highway and Route 33. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 151 ft, perforated 142 to 151 ft.

DATUM.--Altitude of land-surface datum is 1,496 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

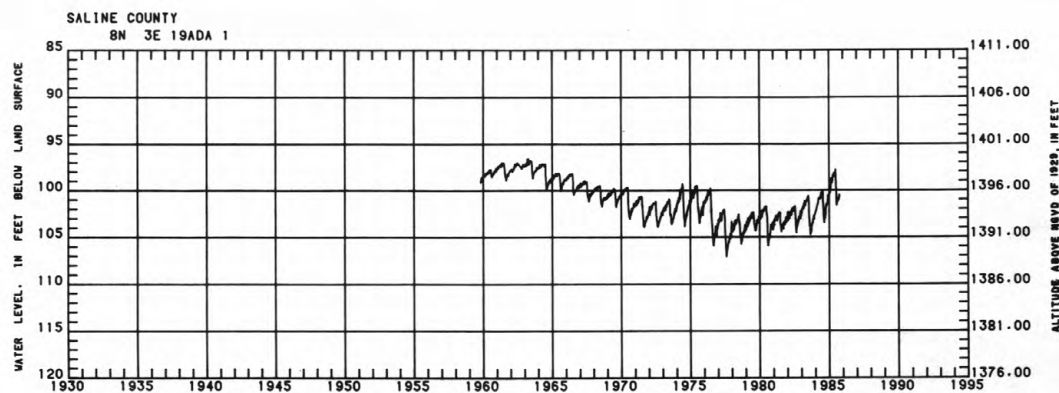
PERIOD OF RECORD.--October 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 96.56 ft below land-surface datum, Mar. 16, 1963; lowest, 107.15 ft below land-surface datum, Aug. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	101.77	.....	101.02	100.24	.....	98.70	98.64	98.14	.....	99.80	.....	100.93
10	101.99	.....	100.57	100.35	.....	99.24	98.60	98.10	.....	100.75	101.07	101.08
15	101.52	.....	100.88	100.05	99.58	99.28	98.36	98.39	.....	101.19	100.87	100.81
20	101.75	101.39	100.47	100.44	99.27	99.01	98.30	98.20	97.74	101.67	101.22	100.90
25	.....	100.53	100.84	.....	98.80	99.06	98.65	.....	98.51	101.31	100.91	100.50
EOM	.....	100.84	100.52	.....	99.03	98.90	98.40	.....	99.64	101.34	100.81	100.56

WTR YEAR 1985 MAX 97.35 JUN 20, 1985 MIN 102.01 OCT 1, 1984



SAUNDERS COUNTY

410426096220401. Local number 13N-9E-24CC.

LOCATION.--Lat 41°04'26", long 96°22'04", SW1/4SW1/4 sec.24, T.13 N., R.9 E., Hydrologic Unit 10200202, 2 mi north of Ashland. Owner: City of Lincoln.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 12 ft, screened 10 to 12 ft.

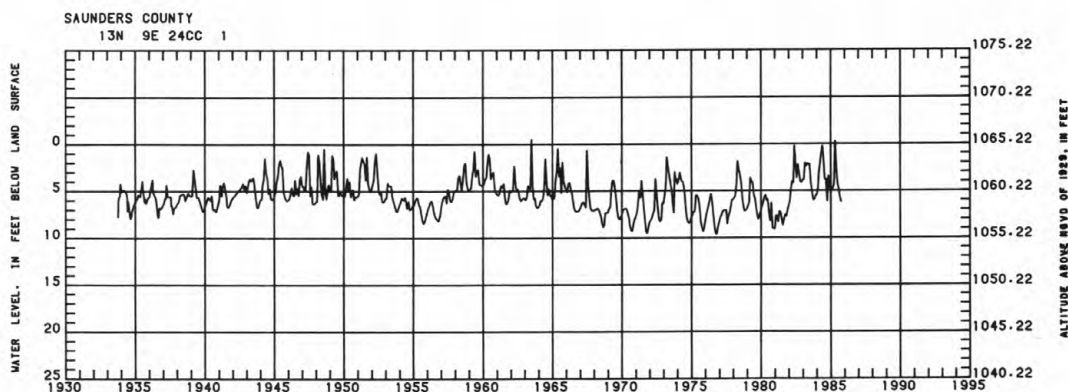
DATUM.--Altitude of land-surface datum is 1,065.22 ft. Measuring point: Top of casing 4.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping of nearby wells in City of Lincoln well field and high water in the Platte River.

PERIOD OF RECORD.--October 1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.30 ft below land-surface datum, Apr. 25, 1985; lowest, 9.65 ft below land-surface datum, Oct. 18, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985			
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	3.40	DEC 25	4.70
NOV 25	4.80	JAN 25	4.91
		FEB 25	4.78
		MAR 25	4.30
		APR 25+	0.30
		MAY 25	2.63
		JUN 25	4.25
		JUL 25	4.80
		AUG 25	5.70
		SEP 25	6.20



SAUNDERS COUNTY

411005096281502. Local number 14N-8E-24ACD2.

LOCATION.--Lat 41°10'05", long 96°28'15", SE1/4SW1/4NE1/4 sec.24, T.14 N., R.8 E., Hydrologic Unit 10200203, 4 mi south from the intersection of Routes 92 and 692 near Mead, then 0.65 mi east and 0.4 mi south to the south end of load line 2 of the Mead Field Station. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 80 ft, screened 60 to 80 ft.

DATUM.--Altitude of land-surface datum is 1,171 ft. Measuring point: Top of casing 0.5 ft above land-surface datum.

REMARKS.--Replacement for well 411005096281501, local number 14N-8E-24ACD1, with period of record July 1964 to November 1970. Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--April 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 41.48 ft below land-surface datum, June 16, 1985; lowest, 46.98 ft below land-surface datum, Sept. 25, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	42.12	42.11	41.88	41.81	41.70	41.62	41.59	41.58	.....	41.53	41.91	.....
10	42.14	42.07	41.84	41.82	41.70	41.69	.....	41.56	41.55	41.55	.....	.....
15	42.15	.....	41.83	41.80	41.70	41.69	41.59	41.60	41.50	41.56	.....	.....
20	42.15	.....	41.84	41.75	41.70	41.60	41.56	41.55	41.50	.....	.....	.....
25	42.09	.....	41.84	41.75	41.70	41.61	41.57	41.53	41.54	.....	.....	.....
EOM	42.08	.....	41.83	41.74	41.70	41.60	41.60	.....	41.56	.....	.....	.....

WTR YEAR 1985 MAX 41.48 JUN 16, 1985 MIN 42.30 SEP 3, 1985

SCOTTSBLUFF COUNTY

415325103392801. Local number 22N-55W-11DDC.

LOCATION.--Lat 41°53'25", long 103°39'28", SW1/4NE1/4NE1/4 sec.11, T.22 N., R.55 W., Hydrologic Unit 10180009, 0.5 mi north of the west intersection of Routes 71 and 26 in Scottsbluff, then 0.8 mi east.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 32 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,953 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Recorder removed in January 1984. Well measured monthly thereafter.

PERIOD OF RECORD.--August 1962 to current year.

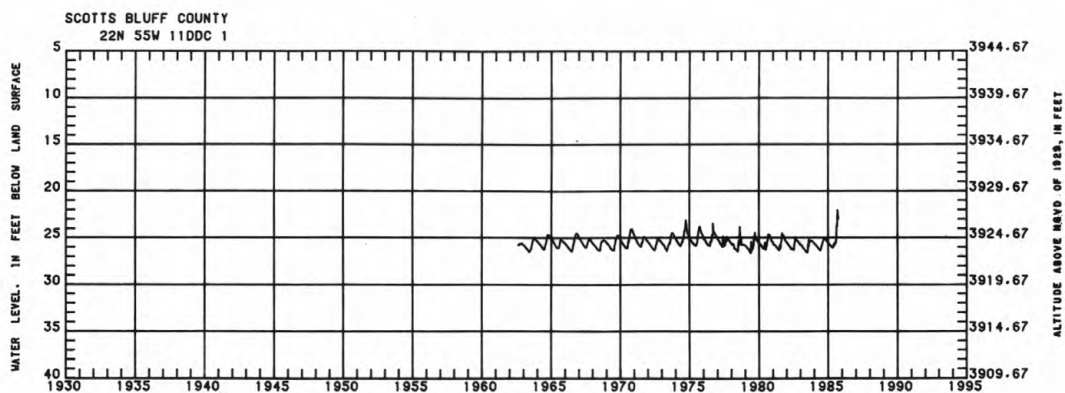
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.97 ft below land-surface datum, Sept. 6, 1985; lowest, 26.72 ft below land-surface datum, May 31, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	25.58	.....	25.85	25.98	26.07	25.62H	25.44	24.68	22.36
10	25.87	25.99	26.05	25.73	25.63	23.86	22.22
15	25.90	26.03	25.97	25.84	25.58	23.60	22.53
20	25.92	26.06	25.93	25.68	25.60	23.67	22.78
25	25.95	.....	25.71	25.65	25.55	23.82	22.91
EOM	25.84H	25.97	.....	25.63	25.65	25.18	22.85	22.99

WTR YEAR 1985 MAX 21.97 SEP 6, 1985 MIN 26.10 MAY 2, 1985

H TAPE MEASUREMENT



SCOTTSBLUFF COUNTY

420000103511501. Local number 23N-56W-6AA.

LOCATION.--Lat 42°00'00", long 103°51'15", NE1/4NE1/4 sec.6, T.23 N., R.56 W., Hydrologic Unit 10180009, 4 mi north and 2 mi west of intersection of U.S. Highway 26 and State Highway 29 in Mitchell. Owner: Carl Gompert.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 6 in, depth 118 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 4,087.7 ft. Measuring point: Hole in pump base 0.7 ft above land-surface datum.

REMARKS.--Water levels affected by withdrawals during irrigation season.

PERIOD OF RECORD.--November 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.24 ft below land-surface datum, Oct. 26, 1949; lowest, 41.72 ft below land-surface datum, Mar. 14, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	39.63	MAR 11	40.35								

SEWARD COUNTY

405406097115001. Local number 11N-2E-21DD.

LOCATION.--Lat 40°54'06", long 97°11'50", SE1/4SE1/4 sec.21, T.11 N., R.2 E., Hydrologic Unit 10270201, 4.5 mi west of Seward. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 123 ft, perforated 112 to 123 ft.

DATUM.--Altitude of land-surface datum is 1,550 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.37 ft below land-surface datum, Dec. 20, 1965; lowest, 90.17 ft below land-surface datum, Aug. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985												
LOWEST WATER LEVEL FOR THE DAY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	83.53	.....	81.87	81.08	80.34	.....	79.18	78.83	78.77	80.87	82.08	80.82
10	83.55	.....	81.51	81.06	80.32	.....	79.41	78.86	78.65	82.22	81.90	80.85
15	83.01	.....	81.61	80.83	80.24	79.85	79.14	78.91	78.42	82.89	81.72	80.86
20	83.05	.....	81.47	80.99	80.20	79.62	78.90	78.81	78.50	82.90	81.53	80.62
25	82.99	.....	81.54	80.75	.....	79.60	79.15	78.80	78.41	82.90	81.21	80.31
EOM	.....	.....	81.31	80.59	.....	79.38	79.12	78.62	79.87	82.55	81.12	80.18
WTR YEAR 1985 MAX 78.03 JUN 21, 1985 MIN 83.67 OCT 2, 1984												

GROUND-WATER LEVELS

SHERIDAN COUNTY

423034102415001. Local number 29N-46W-10AA.

LOCATION.--Lat 42°30'34", long 102°41'50", NE1/4NE1/4 sec.10, T.29 N., R.46 W., Hydrologic Unit 10150003, at Mirage Flats project headquarters, 11.5 mi south of Hay Springs. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 100 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,794.5 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Water levels affected by seepage losses from nearby irrigation canal and laterals and by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--September 1953 to current year.

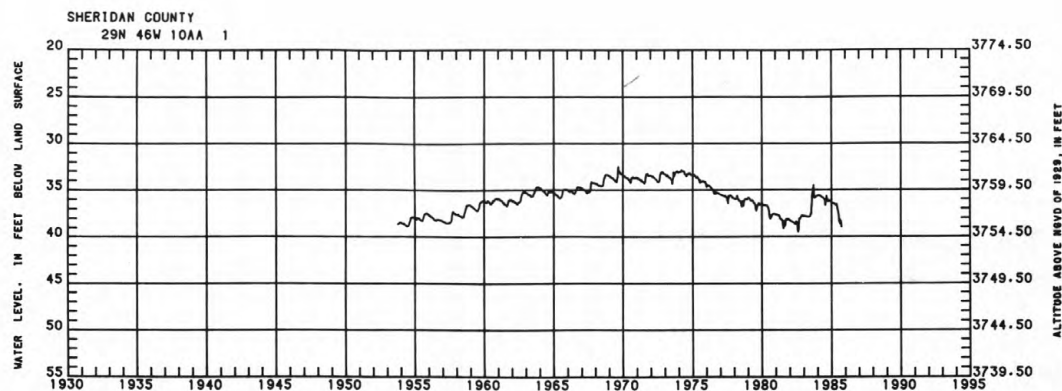
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.47 ft below land-surface datum, Aug. 25, 1969; lowest, 39.57 ft below land-surface datum, Aug. 7, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	36.22	36.22	36.30	36.38	36.37	36.52	36.54	36.68	37.00	37.70	38.16H	38.37
10	36.18	36.20	36.27	36.41	36.43	36.48	36.54	36.50	37.19	37.99	38.68	38.64
15	36.18	36.24	36.27	36.34	36.44	36.53	36.58	.....	37.17	38.18	38.67	38.80
20	36.24	36.23	36.28	36.41	36.43	36.52	36.58	.....	37.30	38.35	38.22	39.00
25	36.24	36.15	36.33	36.39	36.48	36.49	36.63	.....	37.40	38.47	38.43	38.94
EOM	36.22	36.23	36.35	36.38	36.43	36.55	36.70	.....	37.55	38.18	38.66	38.95

WTR YEAR 1985 MAX 36.10 NOV 2, 1984 MIN 39.00 SEP 20, 1985

H TAPE MEASUREMENT



THOMAS COUNTY

415845100334001. Local number 23N-28W-9DA.

LOCATION.--Lat 41°58'45", long 100°33'40", NE1/4SE1/4 sec.9, T.23 N., R.28 W., Hydrologic Unit 10210001, 1 mi east of courthouse in Thedford. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

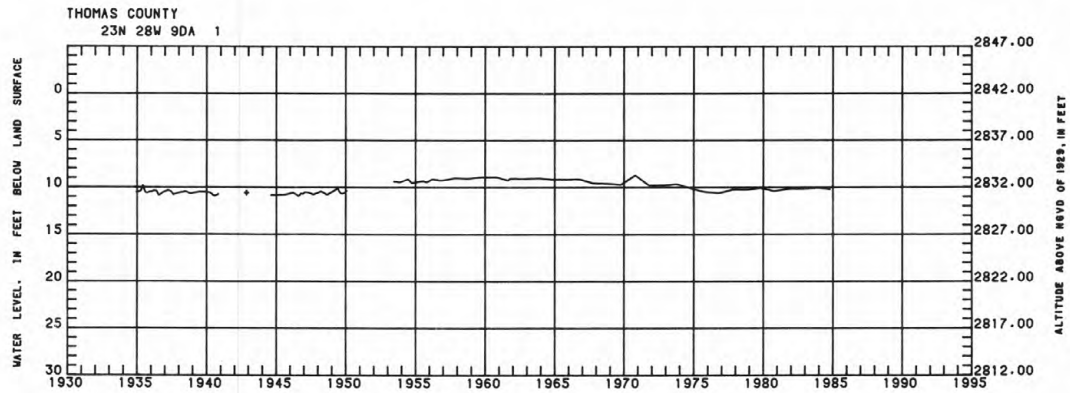
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 15 ft, screened from 13 to 15 ft.

DATUM.--Altitude of land-surface datum is 2,842 ft. Measuring point: Top of pipe 2.3 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to November 1942; August 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.73 ft below land-surface datum, Oct. 16, 1970; lowest, 10.98 ft below land-surface datum, July 23, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	10.21										



GROUND-WATER LEVELS

VALLEY COUNTY

412955099123201. Local number 18N-16W-30CC.

LOCATION.--Lat 41°29'55", long 99°12'32", SW1/4SW1/4 sec.30, T.18 N., R.16 W., Hydrologic Unit 10210003, 4 mi west and 5 mi north of Arcadia. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 0.75 in, depth 15 ft, screened from 13 to 15 ft.

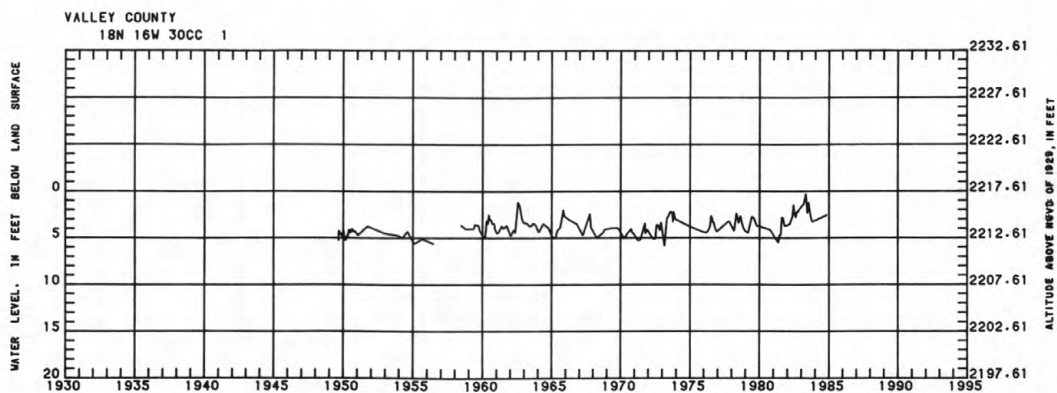
DATUM.--Altitude of land-surface datum is 2,217.61 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by evapotranspiration.

PERIOD OF RECORD.--August 1949 to June 1956; June 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft below land-surface datum, May 3, 1983; lowest, 5.90 ft below land-surface datum, Mar. 1, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	2.56										



WEBSTER COUNTY

400423098314001. Local number 1N-11W-11AB.

LOCATION.--Lat 40°04'23", long 98°31'40", NW1/4NE1/4 sec.11, T.1 N., R.11 W., Hydrologic Unit 10250016, 1 mi south and 0.25 mi west of intersection of U.S. Highways 136 and 281 in Red Cloud. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 16.9 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,686 ft. Measuring point: Top of casing 1.1 ft above land-surface datum.

PERIOD OF RECORD.--May 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.34 ft below land-surface datum, July 11, 1951; lowest, 10.56 ft below land-surface datum, Apr. 5, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 9	8.08	MAY 8	6.62								

YORK COUNTY

404618097482201. Local number 9N-4W-5CCC.

LOCATION.--Lat 40°46'18", long 97°48'22", SW1/4SW1/4SW1/4 sec.5, T.9 N., R.4 W., Hydrologic Unit 10270203, 0.5 mi south of Henderson. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 170 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,708 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

REMARKS.--Replacement for well 404620097482501, local number 9N-4W-6DD with period of record May 1959 to September 1981 located on east side of highway across from old well.

PERIOD OF RECORD.--April 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 78.40 ft below land-surface datum, June 20, 1985; lowest, 87.52 ft below land-surface datum, Aug. 20, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985												
LOWEST WATER LEVEL FOR THE DAY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	82.08	81.60	.....	.....	.....	.....	79.28	79.12	78.74	79.13	80.20	80.01
10	82.03	81.60	80.90	.....	.....	.....	79.15	78.93	78.77	79.57	80.31	80.16
15	81.91	81.94	80.70	.....	.....	79.46	79.11	78.96	78.68	80.19	80.19	79.99
20	81.82	81.22	.....	.....	.....	79.42	79.16	78.96	78.55	80.39	80.14	80.17
25	81.63	80.89	.....	.....	.....	79.37	79.07	78.82	78.65	80.41	80.17	79.80
EOM	81.52	80.98	.....	.....	.....	79.33	79.04	78.87	78.69	80.32	80.11	79.68

WTR YEAR 1985 MAX 78.40 JUN 20, 1985 MIN 82.44 OCT 3, 1984

H TAPE MEASUREMENT

GROUND-WATER LEVELS

YORK COUNTY

405305097351503. Local number 11N-2W-31BA3.

LOCATION.--Lat 40°53'05", long 97°35'15", NE1/4NW1/4 sec.31, T.11 N., R.2 W., Hydrologic Unit 10270203, south edge of York County Fairgrounds on the north side of York. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 165 ft, perforated below water table.

DATUM.--Altitude of land-surface datum is 1,659 ft. Measuring point: Top of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 405305097351501, local number 11N-2W-31BA1, with period of record October 1957 to January 1969. Water levels in well affected by withdrawals from nearby municipal well and by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--May 1969 to current year.

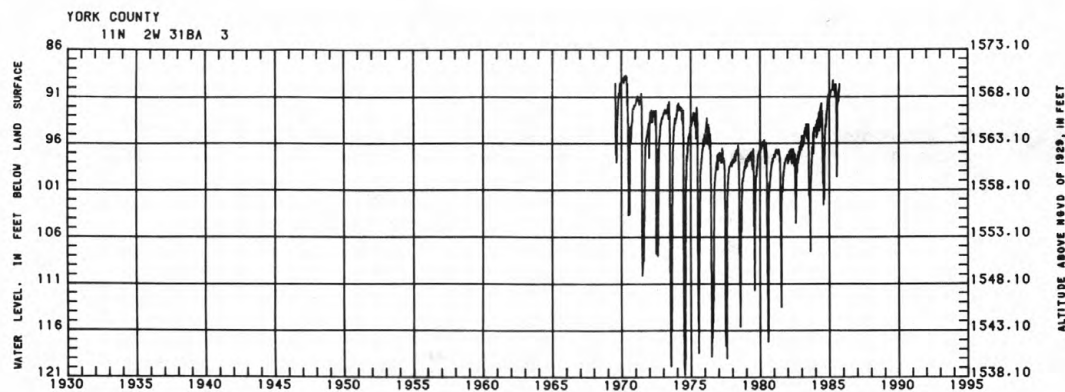
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 88.65 ft below land-surface datum, Apr. 20, 1970; lowest, 120.81 ft below land-surface datum, July 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	93.89	.....	.....	.....	.....	.....	89.20H	.....	.....	95.22	91.75	90.14
10	93.62	.....	90.74	.....	.....	.....	.....	89.66	90.27	99.62	91.64	90.53
15	93.05	.....	91.46	.....	.....	.....	90.35	.....	90.08	98.52	90.71	.....
20	.....	.....	.....	.....	.....	90.25	.....	.....	90.03	96.50	90.85	90.13
25	.....	.....	.....	.....	.....	.....	.....	90.96	90.91	92.60	.....	89.63
EOM	.....	.....	.....	.....	.....	.....	.....	.....	90.36	91.40	91.53	.....

WTR YEAR 1985 MAX 88.90 MAY 2, 3, 4, 1985 MIN 100.35 JUL 17, 1985

H TAPE MEASUREMENT



CHEMICAL ANALYSES OF GROUND WATER

319

(Local identifier: indicates location by township, range, and section. Geologic unit: 112 SDGV, sand and gravel deposits; 121 OGLL, Ogallala Formation)

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	LOCAL IDENT- I- FIER	LAT- I- TUDE	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)
ADAMS										
403503098181301	7N 9W11DC 1		40 35 03	098 18 13	01	112SDGV	07-09-85	1330	200	847
BUFFALO										
404534098454801	9N 13W10DCAA1		40 45 34	098 45 48	01	112SDGV	07-30-85	--	62.00	1370
404446098503601	9N 14W13DB 1		40 44 46	098 50 36	01	112SDGV	08-13-85	1140	55.00	1040
404504098570101	9N 15W13ADDA1		40 45 04	098 57 01	01	112SDGV	07-30-85	--	72.00	2290
404241099002501	9N 15W34BBCC1		40 42 41	099 00 25	01	112SDGV	07-30-85	--	59.00	1590
404308099114101	9N 16W30CBDC1		40 43 08	099 11 41	01	112SDGV	08-01-85	--	325	489
404344099211701	9N 18W27AABB1		40 43 44	099 21 17	01	121OGLL	08-01-85	--	320	1000
405137098443501	10N 13W 2DD 1		40 51 37	098 44 35	01	112SDGV	08-13-85	1400	75.00	573
404949098434801	10N 13W13DCCC1		40 49 49	098 43 48	01	121OGLL	07-30-85	--	--	1710
404832098474601	10N 13W28BCCC1		40 48 32	098 47 46	01	121OGLL	07-30-85	--	221	1090
404714098511901	10N 14W35DDDA1		40 47 14	098 51 19	01	112SDGV	07-30-85	--	93.00	792
404939099083701	10N 16W20AABD1		40 49 39	099 08 37	01	121OGLL	08-01-85	--	311	532
405506098465201	11N 13W16DD 1		40 55 06	098 46 52	01	112SDGV	08-13-85	1430	120	435
405408098564201	11N 14W19CCDD1		40 54 08	098 56 42	01	121OGLL	07-31-85	--	298	491
405513099070101	11N 16W15CO		40 55 13	099 07 01	01	121OGLL	07-31-85	--	313	601
405909099095001	12N 16W30AO 1		40 59 09	099 09 50	01	121OGLL	07-31-85	--	440	--
405747099231601	12N 18W32DDAA1		40 57 47	099 23 16	01	121OGLL	07-31-85	--	331	612
CLAY										
403634097504301	7N 5W 2AA 1		40 36 34	097 50 43	01	112SDGV	07-09-85	1525	215	525
403739098054801	8N 7W27DC 1		40 37 39	098 05 48	01	112SDGV	07-09-85	1215	204	720
FILLMORE										
403145097360901	7N 3W36DB 1		40 31 45	097 36 09	01	112SDGV	07-10-85	1315	196	479
403843097270602	8N 1W20DB 2		40 38 43	097 27 06	02	112SDGV	07-10-85	1430	306	640
GOSPER										
402500099451501	5N 21W 7BCCC1		40 25 00	099 45 15	01	121OGLL	09-04-85	--	260	655
402242099491101	5N 22W28ABCB1		40 22 42	099 49 11	01	121OGLL	09-04-85	--	218	529
402404099584201	5N 23W18CBBA1		40 24 04	099 58 42	01	121OGLL	09-04-85	--	175	548
402338099522101	5N 23W24ABAA1		40 23 38	099 52 21	01	121OGLL	09-04-85	--	239	609
402838099411601	6N 21W22ACAA1		40 28 38	099 41 16	01	112SDGV	09-05-85	--	299	608
402957099452601	6N 22W12DDAB1		40 29 57	099 45 26	01	112SDGV	09-05-85	--	200	557
402847099532501	6N 23W23AAB1		40 28 47	099 53 25	01	121OGLL	09-04-85	--	--	658
403504099391101	7N 21W12CDDA1		40 35 04	099 39 11	01	121OGLL	09-05-85	--	265	752
403324099444701	7N 21W19DCBB1		40 33 24	099 44 47	01	112SDGV	09-04-85	--	300	774
403331099582101	7N 23W19CDA1		40 33 31	099 58 21	01	121OGLL	09-05-85	--	290	542
404001099463601	8N 22W14AADD1		40 40 01	099 46 36	01	121OGLL	09-05-85	--	362	842
403952099583201	8N 23W18CABB1		40 39 52	099 58 32	01	121OGLL	09-05-85	--	285	729
403902099530801	8N 23W24BCBC1		40 39 02	099 53 08	01	112SDGV	09-05-85	--	344	908
HALL										
404443098191301	9N 9W14CCBB1		40 44 43	098 19 13	01	112SDGV	07-19-85	--	182	812
404414098292201	9N 10W19BCD 1		40 44 14	098 29 22	01	112SDGV	07-19-85	--	154	949
404631098354901	9N 11W 6DBCC1		40 46 31	098 35 49	01	112SDGV	07-19-85	--	78.00	1240
404557098352501	9N 11W 7AD 1		40 45 57	098 35 25	01	112SDGV	08-13-85	1020	--	933
404643098435201	9N 13W 1X 1		40 46 43	098 43 52	01	112SDGV	08-13-85	1330	61.00	1380
404321098441801	9N 13W25BC 1		40 43 21	098 44 18	01	112SDGV	08-13-85	1100	--	987

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	DATE OF SAMPLE	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CaCO3) (00900)	HARDNESS-NONCARBONATE (MG/L AS CaCO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CaCO3) (90410)
ADAMS											
403503098181301	07-09-85	7.1	16.0	300	109	98	14	43	1	9.5	194
BUFFALO											
404534098454801	07-30-85	7.2	12.0	--	--	--	--	--	--	--	--
404446098503601	08-13-85	7.5	14.0	420	183	130	23	51	1	12	237
404504098570101	07-30-85	7.0	12.0	--	--	--	--	--	--	--	--
404241099002501	07-30-85	7.2	13.0	--	--	--	--	--	--	--	--
404308099114101	08-01-85	7.4	13.0	--	--	--	--	--	--	--	--
404344099211701	08-01-85	7.0	13.0	--	--	--	--	--	--	--	--
405137098443501	08-13-85	7.3	14.0	290	47	99	11	9.1	.2	4.8	246
404949098434801	07-30-85	7.1	12.0	--	--	--	--	--	--	--	--
404832098474601	07-30-85	7.0	12.0	--	--	--	--	--	--	--	--
404714098511901	07-30-85	7.1	13.0	--	--	--	--	--	--	--	--
404939099083701	08-01-85	7.2	12.0	--	--	--	--	--	--	--	--
405506098465201	08-13-85	7.8	14.0	220	10	76	8.3	6.9	.2	3.4	214
405408098564201	07-31-85	7.2	12.0	--	--	--	--	--	--	--	--
405513099070101	07-31-85	7.5	12.0	--	--	--	--	--	--	--	--
405909099095001	07-31-85	--	--	--	--	--	--	--	--	--	--
405747099231601	07-31-85	7.8	13.0	--	--	--	--	--	--	--	--
CLAY											
403634097504301	07-09-85	7.1	16.0	240	0	78	11	27	.8	6.3	240
403739098054801	07-09-85	7.0	14.0	290	103	91	15	26	.7	7.2	186
FILLMORE											
403145097360901	07-10-85	--	13.5	190	18	61	10	24	.8	4.5	176
403843097270602	07-10-85	--	13.0	270	50	83	15	24	.7	5.1	219
GOSPER											
402500099451501	09-04-85	6.6	15.0	--	--	--	--	--	--	--	--
402242099491101	09-04-85	6.9	15.0	--	--	--	--	--	--	--	--
402404099584201	09-04-85	6.7	15.0	--	--	--	--	--	--	--	--
402338099522101	09-04-85	6.8	14.5	--	--	--	--	--	--	--	--
402838099411601	09-05-85	7.7	15.0	--	--	--	--	--	--	--	--
402957099452601	09-05-85	6.7	14.0	--	--	--	--	--	--	--	--
402847099532501	09-04-85	6.8	13.0	--	--	--	--	--	--	--	--
403504099391101	09-05-85	6.5	14.0	--	--	--	--	--	--	--	--
403324099444701	09-04-85	6.8	15.0	--	--	--	--	--	--	--	--
403331099582101	09-05-85	6.8	15.0	--	--	--	--	--	--	--	--
404001099463601	09-05-85	6.7	15.0	--	--	--	--	--	--	--	--
403952099583201	09-05-85	6.8	15.0	--	--	--	--	--	--	--	--
403902099530801	09-05-85	6.5	15.0	--	--	--	--	--	--	--	--
HALL											
404443098191301	07-19-85	7.0	12.0	--	--	--	--	--	--	--	--
404414098292201	07-19-85	7.2	12.0	--	--	--	--	--	--	--	--
404631098354901	07-19-85	6.8	12.0	--	--	--	--	--	--	--	--
404557098352501	08-13-85	7.6	20.0	310	97	85	24	78	2	6.7	215
404643098435201	08-13-85	7.2	12.0	650	322	200	36	64	1	2.4	327
404321098441801	08-13-85	7.5	13.0	390	172	120	23	71	2	6.4	223

CHEMICAL ANALYSES OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
ADAMS												
403503098181301	07-09-85		70	77	.30	29	460	.62	--	9.0	--	--
BUFFALO												
404534098454801	07-30-85		--	--	--	--	--	--	27	--	--	--
404446098503601	08-13-85		200	42	.30	56	660	.89	--	14	--	--
404504098570101	07-30-85		--	--	--	--	--	--	57	--	--	--
404241099002501	07-30-85		--	--	--	--	--	--	43	--	--	--
404308099114101	08-01-85		--	--	--	--	--	--	1.1	--	--	--
404344099211701	08-01-85		--	--	--	--	--	--	9.8	--	--	--
405137098443501	08-13-85		34	12	.20	53	370	.50	--	.65	--	--
404949098434801	07-30-85		--	--	--	--	--	--	7.4	--	--	--
404832098474601	07-30-85		--	--	--	--	--	--	1.1	--	--	--
404714098511901	07-30-85		--	--	--	--	--	--	8.6	--	--	--
404939099083701	08-01-85		--	--	--	--	--	--	1.3	--	--	--
405506098465201	08-13-85		8.2	3.9	.20	56	290	.40	--	.64	--	--
405408098564201	07-31-85		--	--	--	--	--	--	1.1	--	--	--
405513099070101	07-31-85		--	--	--	--	--	--	2.4	--	--	--
405909099095001	07-31-85		--	--	--	--	--	--	.60	--	--	--
405747099231601	07-31-85		--	--	--	--	--	--	6.3	--	--	--
CLAY												
403634097504301	07-09-85		27	12	.30	33	340	.46	--	3.2	--	--
403739098054801	07-09-85		150	12	.30	33	450	.61	--	1.1	--	--
FILLMORE												
403145097360901	07-10-85		48	11	.30	30	290	.40	--	.70	--	--
403843097270602	07-10-85		90	9.5	.30	31	390	.53	--	.78	--	--
GOSPER												
402500099451501	09-04-85		--	--	--	--	--	--	10	--	--	--
402242099491101	09-04-85		--	--	--	--	--	--	2.0	--	--	--
402404099584201	09-04-85		--	--	--	--	--	--	3.3	--	--	--
402338099522101	09-04-85		--	--	--	--	--	--	6.0	--	--	--
402838099411601	09-05-85		--	--	--	--	--	--	4.1	--	--	--
402957099452601	09-05-85		--	--	--	--	--	--	4.4	--	--	--
402847099532501	09-04-85		--	--	--	--	--	--	5.4	--	--	--
403504099391101	09-05-85		--	--	--	--	--	--	17	--	--	--
403324099444701	09-04-85		--	--	--	--	--	--	3.6	--	--	--
403331099582101	09-05-85		--	--	--	--	--	--	2.9	--	--	--
404001099463601	09-05-85		--	--	--	--	--	--	9.0	--	--	--
403952099583201	09-05-85		--	--	--	--	--	--	3.8	--	--	--
403902099530801	09-05-85		--	--	--	--	--	--	.80	--	--	--
HALL												
404443098191301	07-19-85		--	--	--	--	--	--	.30	--	--	--
404414098292201	07-19-85		--	--	--	--	--	--	16	--	--	--
404631098354901	07-19-85		--	--	--	--	--	--	6.7	--	--	--
404557098352501	08-13-85		240	34	.50	21	620	.84	--	.75	--	--
404643098435201	08-13-85		330	61	.30	34	920	1.3	--	7.1	--	--
404321098441801	08-13-85		250	28	.30	27	660	.90	--	2.0	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
ADAMS												
403503098181301	07-09-85	--	--	--	40	--	--	--	--	<3	--	<1
BUFFALO												
404534098454801	07-30-85	--	--	--	--	--	--	--	--	--	--	--
404446098503601	08-13-85	--	--	--	100	--	--	--	--	5	--	77
404504098570101	07-30-85	--	--	--	--	--	--	--	--	--	--	--
404241099002501	07-30-85	--	--	--	--	--	--	--	--	--	--	--
404308099114101	08-01-85	--	--	--	--	--	--	--	--	--	--	--
404344099211701	08-01-85	--	--	--	--	--	--	--	--	--	--	--
405137098443501	08-13-85	--	--	--	40	--	--	--	--	3	--	<1
404949098434801	07-30-85	--	--	--	--	--	--	--	--	--	--	--
404832098474601	07-30-85	--	--	--	--	--	--	--	--	--	--	--
404714098511901	07-30-85	--	--	--	--	--	--	--	--	--	--	--
404939099083701	08-01-85	--	--	--	--	--	--	--	--	--	--	--
405506098465201	08-13-85	--	--	--	40	--	--	--	--	4	--	<1
405408098564201	07-31-85	--	--	--	--	--	--	--	--	--	--	--
405513099070101	07-31-85	--	--	--	--	--	--	--	--	--	--	--
405909099095001	07-31-85	--	--	--	--	--	--	--	--	--	--	--
405747099231601	07-31-85	--	--	--	--	--	--	--	--	--	--	--
CLAY												
403634097504301	07-09-85	--	--	--	--	--	--	--	--	<3	--	<1
403739098054801	07-09-85	--	--	--	--	--	--	--	--	5	--	3
FILLMORE												
403145097360901	07-10-85	--	--	--	--	--	--	--	--	<3	--	98
403843097270602	07-10-85	--	--	--	50	--	--	--	--	9	--	430
GOSPER												
402500099451501	09-04-85	--	--	--	--	--	--	--	--	--	--	--
402242099491101	09-04-85	--	--	--	--	--	--	--	--	--	--	--
402404099584201	09-04-85	--	--	--	--	--	--	--	--	--	--	--
402338099522101	09-04-85	--	--	--	--	--	--	--	--	--	--	--
402838099411601	09-05-85	--	--	--	--	--	--	--	--	--	--	--
402957099452601	09-05-85	--	--	--	--	--	--	--	--	--	--	--
402847099532501	09-04-85	--	--	--	--	--	--	--	--	--	--	--
403504099391101	09-05-85	--	--	--	--	--	--	--	--	--	--	--
403324099444701	09-04-85	--	--	--	--	--	--	--	--	--	--	--
403331099582101	09-05-85	--	--	--	--	--	--	--	--	--	--	--
404001099463601	09-05-85	--	--	--	--	--	--	--	--	--	--	--
403952099583201	09-05-85	--	--	--	--	--	--	--	--	--	--	--
403902099530801	09-05-85	--	--	--	--	--	--	--	--	--	--	--
HALL												
404443098191301	07-19-85	--	--	--	--	--	--	--	--	--	--	--
404414098292201	07-19-85	--	--	--	--	--	--	--	--	--	--	--
404631098354901	07-19-85	--	--	--	--	--	--	--	--	--	--	--
404557098352501	08-13-85	--	--	--	100	--	--	--	--	74	--	1400
404643098435201	08-13-85	--	--	--	280	--	--	--	--	16	--	77
404321098441801	08-13-85	--	--	--	100	--	--	--	--	5	--	9

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENT- I- FIER	LAT- I- TUDE	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)
HALL									
405159098175301	10N 9W 1BCDB1	40 51 59	098 17 53	01	112SDGV	11-20-84	1550	137	856
405156098173601	10N 9W 1BDDC1	40 51 56	098 17 36	01	112SDGV	11-21-84	0925	133	895
405142098174001	10N 9W 1CACD1	40 51 42	098 17 40	01	112SDGV	11-20-84	1430	135	878
405136098174901	10N 9W 1CCAD1	40 51 36	098 17 49	01	112SDGV	11-20-84	1340	131	995
405129098180201	10N 9W 1CCCC1	40 51 29	098 18 02	01	112SDGV	11-20-84	1500	125	765
405129098184001	10N 9W 2CDDD1	40 51 29	098 18 40	01	112SDGV	11-20-84	1140	134	785
405142098182301	10N 9W 2DBDD1	40 51 42	098 18 23	01	112SDGV	11-20-84	1530	129	863
405129098181901	10N 9W 2DDCC1	40 51 29	098 18 19	01	112SDGV	11-20-84	1110	131	603
405110098182701	10N 9W11ACAC1	40 51 10	098 18 27	01	112SDGV	11-20-84	1140	129	763
405103098184001	10N 9W11BDD1	40 51 03	098 18 40	01	112SDGV	11-20-84	1310	133	663
405201098281501	10N 10W 5BC 1	40 52 01	098 28 15	01	112SDGV	08-14-85	1445	--	576
405001098293301	10N 10W18CCBB1	40 50 01	098 29 33	01	112SDGV	07-18-85	--	102	608
404832098283301	10N 10W30AD 1	40 48 32	098 28 33	01	112SDGV	08-14-85	1520	65.00	1120
404925098355901	10N 11W19BD 1	40 49 25	098 35 59	01	112SDGV	08-14-85	1325	212	555
405147098375401	10N 12W 2DBDD1	40 51 47	098 37 54	01	112SDGV	0/-29-85	--	65.00	935
404842098373301	10N 12W25BCBB1	40 48 42	098 37 33	01	112SDGV	07-29-85	--	65.00	1060
404717098430201	10N 12W31CAC1	40 47 17	098 43 02	01	112SDGV	07-19-85	--	60.00	1320
						07-30-85	--	60.00	1230
405635098203701	11N 9W 9AAC 1	40 56 35	098 20 37	01	112SDGV	11-19-84	1450	101	523
405539098203401	11N 9W16AAC 1	40 55 39	098 20 34	01	112SDGV	11-20-84	0930	87.00	489
405526098205101	11N 9W16ACC 1	40 55 26	098 20 51	01	112SDGV	11-20-84	0955	88.00	518
405513098210801	11N 9W16CAC 1	40 55 13	098 21 08	01	112SDGV	11-19-84	1600	89.00	458
405447098192501	11N 9W22AAC 1	40 54 47	098 19 25	01	112SDGV	11-19-84	1040	87.00	618
						04-22-85	1125	87.00	682
405314098175901	11N 9W25CCCD1	40 53 14	098 17 59	01	112SDGV	07-18-85	--	117	612
405403098201901	11N 9W27BBBB1	40 54 03	098 20 19	01	112SDGV	11-19-84	1420	113	619
405400098211501	11N 9W28BBAD1	40 54 00	098 21 15	01	112SDGV	11-19-84	1335	79.00	645
405400098214501	11N 9W29AABC1	40 54 00	098 21 45	01	112SDGV	11-19-84	1355	80.00	417
405342098215101	11N 9W29ACD 1	40 53 42	098 21 51	01	112SDGV	11-19-84	1140	84.00	654
						04-22-85	1105	84.00	645
405340098213201	11N 9W29ADDD1	40 53 40	098 21 32	01	112SDGV	11-19-84	1255	80.00	682
405311098220601	11N 9W32BAAA1	40 53 11	098 22 06	01	112SDGV	11-19-84	1120	83.00	718
						04-22-85	1040	83.00	771
405503098234001	11N 10W13CC 1	40 55 03	098 23 40	01	112SDGV	11-19-84	1530	106	826
405553098255001	11N 10W15BABB1	40 55 53	098 25 50	01	112SDGV	07-18-85	--	65.00	355
405530098255702	11N 10W15BC 2	40 55 30	098 25 57	02	112SDGV	08-14-85	1620	100	417
405436098253401	11N 10W22BDD1	40 54 36	098 25 34	01	112SDGV	07-29-85	--	58.00	285
405254098314202	11N 11W35BC 2	40 52 54	098 31 42	02	112SDGV	08-14-85	1150	61.00	826
405226098300701	11N 11W36DCCC1	40 52 26	098 30 07	01	112SDGV	07-29-85	--	80.00	933
405502098375401	11N 12W14DCDD1	40 55 02	098 37 54	01	112SDGV	07-29-85	--	55.00	1370

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)
HALL												
405159098175301		11-20-84	7.6	13.0	290	101	83	21	82	2	10	194
405156098173601		11-21-84	7.1	11.0	300	114	91	18	76	2	6.9	188
405142098174001		11-20-84	7.2	12.0	300	113	90	19	78	2	8.0	191
405136098174901		11-20-84	7.4	12.0	290	101	83	19	79	2	8.9	186
405129098180201		11-20-84	7.3	11.5	260	92	78	16	62	2	6.6	170
405129098184001		11-20-84	7.5	11.5	250	70	71	17	69	2	7.9	178
405142098182301		11-20-84	7.7	13.5	280	100	80	20	83	2	10	183
405129098181901		11-20-84	7.3	10.5	220	67	67	13	38	1	5.4	155
405110098182701		11-20-84	7.6	12.0	240	56	66	18	75	2	9.8	184
405103098184001		11-20-84	7.4	11.0	250	87	74	15	50	1	5.6	160
405201098281501		08-14-85	7.5	13.0	250	48	79	12	16	.5	14	199
405001098293301		07-18-85	7.0	13.0	--	--	--	--	--	--	--	--
404832098283301		08-14-85	7.5	13.5	370	152	110	23	97	2	18	218
404925098355901		08-14-85	7.6	14.0	220	0	65	15	21	.6	8.1	239
405147098375401		07-29-85	7.1	12.0	--	--	--	--	--	--	--	--
404842098373301		07-29-85	6.7	12.0	--	--	--	--	--	--	--	--
404717098430201		07-19-85	6.8	13.0	--	--	--	--	--	--	--	--
		07-30-85	7.0	12.0	--	--	--	--	--	--	--	--
405635098203701		11-19-84	--	13.0	200	58	62	11	20	.6	9.2	143
405539098203401		11-20-84	--	13.5	180	79	56	9.7	19	.6	8.9	101
405526098205101		11-20-84	--	13.5	180	74	54	9.8	18	.6	8.6	102
405513098210801		11-19-84	--	12.0	180	76	56	9.7	18	.6	8.7	104
405447098192501		11-19-84	7.2	14.0	290	71	86	17	21	.6	6.5	215
		04-22-85	7.0	11.0	--	--	--	--	--	--	--	--
405314098175901		07-18-85	7.1	13.0	--	--	--	--	--	--	--	--
405403098201901		11-19-84	7.1	13.5	260	53	76	18	22	.6	10	212
405400098211501		11-19-84	7.1	12.5	270	57	78	18	26	.7	12	213
405400098214501		11-19-84	7.0	13.0	170	20	52	8.9	15	.5	10	147
405342098215101		11-19-84	7.1	14.0	270	59	78	17	28	.8	11	207
		04-22-85	6.9	13.0	--	--	--	--	--	--	--	--
405340098213201		11-19-84	7.4	13.5	290	70	83	19	28	.7	12	217
405311098220601		11-19-84	7.2	12.5	310	91	95	18	23	.6	12	221
		04-22-85	7.1	13.5	--	--	--	--	--	--	--	--
405503098234001		11-19-84	--	12.0	350	93	110	17	32	.8	16	253
405553098255001		07-18-85	7.2	13.0	--	--	--	--	--	--	--	--
405530098255702		08-14-85	7.0	16.0	160	36	50	8.7	14	.5	9.5	125
405436098253401		07-29-85	7.7	13.0	--	--	--	--	--	--	--	--
405254098314202		08-14-85	7.2	15.0	350	124	110	18	24	.6	13	225
405226098300701		07-29-85	6.5	12.0	--	--	--	--	--	--	--	--
405502098375401		07-29-85	7.3	12.0	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
HALL												
405159098175301		11-20-84	240	30	.60	22	610	.82	--	.33	<.010	.20
405156098173601		11-21-84	240	27	.50	20	590	.81	--	.40	.020	.20
405142098174001		11-20-84	250	29	.50	20	610	.83	--	.35	.010	.30
405136098174901		11-20-84	250	30	.50	20	600	.82	--	.34	.010	.30
405129098180201		11-20-84	200	23	.50	20	510	.69	--	.28	.010	<.20
405129098184001		11-20-84	200	22	.60	21	520	.70	--	.15	<.010	.30
405142098182301		11-20-84	240	31	.60	22	600	.81	--	.32	<.010	.20
405129098181901		11-20-84	130	14	.50	20	380	.52	--	<.10	<.010	<.20
405110098182701		11-20-84	200	24	.50	22	530	.71	--	.16	<.010	<.20
405103098184001		11-20-84	170	20	.50	18	450	.61	--	.24	<.010	<.20
405201098281501		08-14-85	52	12	.30	20	320	.44	--	4.6	--	--
405001098293301		07-18-85	--	--	--	--	--	--	12	--	--	--
404832098283301		08-14-85	290	44	.30	20	730	1.0	--	2.6	--	--
404925098355901		08-14-85	21	6.7	.30	57	340	.46	--	<.10	--	--
405147098375401		07-29-85	--	--	--	--	--	--	7.8	--	--	--
404842098373301		07-29-85	--	--	--	--	--	--	28	--	--	--
404717098430201		07-19-85	--	--	--	--	--	--	10	--	--	--
		07-30-85	--	--	--	--	--	--	8.0	--	--	--
405635098203701		11-19-84	72	13	.20	36	310	.42	--	7.4	<.010	.60
405539098203401		11-20-84	75	15	.20	32	280	.38	--	9.9	<.010	.80
405526098205101		11-20-84	71	19	.20	32	270	.37	--	8.1	<.010	1.4
405513098210801		11-19-84	65	19	.20	29	270	.36	--	7.3	<.010	.60
405447098192501		11-19-84	74	13	.30	27	370	.51	--	6.1	<.010	.80
		04-22-85	--	--	--	--	--	--	--	--	--	--
405314098175901		07-18-85	--	--	--	--	--	--	11	--	--	--
405403098201901		11-19-84	84	15	.50	26	380	.51	--	3.4	<.010	.80
405400098211501		11-19-84	82	15	.50	28	390	.53	--	6.2	<.010	1.3
405400098214501		11-19-84	38	9.5	.40	26	250	.34	--	4.6	<.010	<.20
405342098215101		11-19-84	92	9.7	.50	28	390	.53	--	7.0	<.010	.90
		04-22-85	--	--	--	--	--	--	--	--	--	--
405340098213201		11-19-84	110	14	.50	25	420	.57	--	3.2	<.010	.60
405311098220601		11-19-84	120	11	.40	27	440	.60	--	6.9	.050	.90
		04-22-85	--	--	--	--	--	--	--	--	--	--
405503098234001		11-19-84	29	75	.20	29	460	.63	--	9.2	.030	1.4
405553098255001		07-18-85	--	--	--	--	--	--	12	--	--	--
405530098255702		08-14-85	36	11	.20	29	230	.32	--	3.8	--	--
405436098253401		07-29-85	--	--	--	--	--	--	13	--	--	--
405254098314202		08-14-85	170	12	.30	23	510	.69	--	3.5	--	--
405226098300701		07-29-85	--	--	--	--	--	--	22	--	--	--
405502098375401		07-29-85	--	--	--	--	--	--	17	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	PHOS-	ARSENIC	BERYL-	BORON,	CADMIUM	CHRO-	COPPER,	IRON,	LEAD,	MANGA-
			PHORUS, DIS- SOLVED (MG/L AS P) (00666)	SOLVED (UG/L AS AS) (01000)	LIIUM, DIS- SOLVED (UG/L AS BE) (01010)	DIS- SOLVED (UG/L AS B) (01020)	DIS- SOLVED (UG/L AS CD) (01025)	MIUM, DIS- SOLVED (UG/L AS CR) (01030)	DIS- SOLVED (UG/L AS CU) (01040)	DIS- SOLVED (UG/L AS PE) (01046)	DIS- SOLVED (UG/L AS PB) (01049)	NESE, DIS- SOLVED (UG/L AS MN) (01056)
HALL												
405159098175301	11-20-84	.070	1	<.0	140	<1	<10		5	--	6	--
405156098173601	11-21-84	.060	<1	<.0	110	<1	<10		3	--	3	--
405142098174001	11-20-84	.080	1	<.0	110	<1	<10		4	--	<1	--
405136098174901	11-20-84	.090	1	<.0	110	<1	<10		3	--	<1	--
405129098180201	11-20-84	.060	1	<.0	90	<1	<10		3	--	<1	--
405129098184001	11-20-84	.070	1	<.0	100	<1	<10		4	--	2	--
405142098182301	11-20-84	.080	2	<.0	140	<1	<10		3	--	<1	--
405129098181901	11-20-84	.050	1	<.0	40	<1	<10		3	--	<1	--
405110098182701	11-20-84	.100	2	<.0	120	<1	<10		4	--	3	--
405103098184001	11-20-84	.060	1	<.0	70	<1	<10		1	--	<1	--
405201098281501	08-14-85	--	--	--	150	--	--	--	--	7	--	130
405001098293301	07-18-85	--	--	--	--	--	--	--	--	--	--	--
404832098283301	08-14-85	--	--	--	90	--	--	--	--	10	--	1
404925098355901	08-14-85	--	--	--	60	--	--	--	--	14	--	170
405147098375401	07-29-85	--	--	--	--	--	--	--	--	--	--	--
404842098373301	07-29-85	--	--	--	--	--	--	--	--	--	--	--
404717098430201	07-19-85	--	--	--	--	--	--	--	--	--	--	--
	07-30-85	--	--	--	--	--	--	--	--	--	--	--
405635098203701	11-19-84	.150	2	<.0	70	<1	<10		3	--	<1	--
405539098203401	11-20-84	.150	1	<.5	120	<1	<10		2	--	2	--
405526098205101	11-20-84	.140	<1	<.5	120	<1	<10		2	--	2	--
405513098210801	11-19-84	.090	<1	1.0	110	<1	<10		3	--	1	--
405447098192501	11-19-84	.030	<1	<.5	70	<1	<10		4	--	2	--
	04-22-85	--	--	--	--	--	--	--	--	--	--	--
405314098175901	07-18-85	--	--	--	--	--	--	--	--	--	--	--
405403098201901	11-19-84	.100	2	<.0	80	<1	<10		5	--	3	--
405400098211501	11-19-84	.130	2	<.0	110	<1	<10		10	--	5	--
405400098214501	11-19-84	.180	2	<.0	180	<1	<10		8	--	<1	--
405342098215101	11-19-84	.040	1	<.0	60	<1	<10		30	--	3	--
	04-22-85	--	--	--	--	--	--	--	--	--	--	--
405340098213201	11-19-84	.050	1	<.0	70	<1	<10		350	--	2	--
405311098220601	11-19-84	.030	1	<.0	60	<1	<10		7	--	<1	--
	04-22-85	--	--	--	--	--	--	--	--	--	--	--
405503098234001	11-19-84	.120	<1	<.0	40	<1	<10		11	--	<1	--
405553098255001	07-18-85	--	--	--	--	--	--	--	--	--	--	--
405530098255702	08-14-85	--	--	--	160	--	--	--	--	4	--	4
405436098253401	07-29-85	--	--	--	--	--	--	--	--	--	--	--
405254098314202	08-14-85	--	--	--	40	--	--	--	--	4	--	4
405226098300701	07-29-85	--	--	--	--	--	--	--	--	--	--	--
405502098375401	07-29-85	--	--	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
HALL								
405159098175301		11-20-84	<.1	3	1	670	6	4
405156098173601		11-21-84	<.1	<1	2	630	2	12
405142098174001		11-20-84	<.1	1	2	650	2	7
405136098174901		11-20-84	<.1	7	1	640	5	8
405129098180201		11-20-84	<.1	1	2	540	2	5
405129098184001		11-20-84	<.1	2	1	530	4	<3
405142098182301		11-20-84	<.1	1	1	630	6	4
405129098181901		11-20-84	<.1	<1	2	410	6	<3
405110098182701		11-20-84	<.1	2	<1	570	4	8
405103098184001		11-20-84	<.1	1	1	530	1	8
405201098281501		08-14-85	--	--	--	--	--	--
405001098293301		07-18-85	--	--	--	--	--	--
404832098283301		08-14-85	--	--	--	--	--	--
404925098355901		08-14-85	--	--	--	--	--	--
405147098375401		07-29-85	--	--	--	--	--	--
404842098373301		07-29-85	--	--	--	--	--	--
404717098430201		07-19-85	--	--	--	--	--	--
		07-30-85	--	--	--	--	--	--
405635098203701		11-19-84	<.1	<1	4	350	3	11
405539098203401		11-20-84	<.1	2	3	310	2	8
405526098205101		11-20-84	<.1	3	5	300	2	8
405513098210801		11-19-84	<.1	2	5	310	1	29
405447098192501		11-19-84	<.1	2	10	570	7	12
		04-22-85	--	--	9	--	--	--
405314098175901		07-18-85	--	--	--	--	--	--
405403098201901		11-19-84	<.1	2	4	540	10	6
405400098211501		11-19-84	<.1	3	6	500	4	13
405400098214501		11-19-84	<.1	3	4	280	5	19
405342098215101		11-19-84	<.1	2	9	490	4	5
		04-22-85	--	--	11	--	--	--
405340098213201		11-19-84	<.1	3	3	580	4	6
405311098220601		11-19-84	<.1	3	9	600	9	5
		04-22-85	--	--	9	--	--	--
405503098234001		11-19-84	<.1	8	1	550	4	6
405553098255001		07-18-85	--	--	--	--	--	--
405530098255702		08-14-85	--	--	--	--	--	--
405436098253401		07-29-85	--	--	--	--	--	--
405254098314202		08-14-85	--	--	--	--	--	--
405226098300701		07-29-85	--	--	--	--	--	--
405502098375401		07-29-85	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	GEO-LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUC-TANCE (US/CM) (00095)
HALL									
405452098363401	11N 12W24AA 1	40 54 52	098 36 34	01	112SDGV	08-14-85	1105	150	528
405255098394301	11N 12W34BC 1	40 52 55	098 39 43	01	112SDGV	08-13-85	1540	140	642
405820098325001	12N 11W34BB 1	40 58 20	098 32 50	01	112SDGV	08-14-85	1030	50.00	1470
405751098295401	12N 11W36DCAAL	40 57 51	098 29 54	01	112SDGV	07-29-85	--	92.00	1060
410005098365102	12N 12W24AB 2	41 00 05	098 36 51	02	112SDGV	08-14-85	0915	125	693
405821098390801	12N 12W34AB 1	40 58 21	098 39 08	01	112SDGV	08-14-85	0950	204	578
HAMILTON									
404633098091202	9N 7W 6DAD 2	40 46 33	098 09 12	02	112SDGV	07-09-85	1125	190	886
405147098004501	10N 6W 4CB 1	40 51 47	098 00 45	01	112SDGV	07-09-85	1030	248	597
KEARNEY									
402326098564601	5N 14W19BO 1	40 23 26	098 56 46	01	121OGLL	08-22-85	--	225	608
402334098504701	5N 14W24ABBC1	40 23 34	098 50 47	01	112SDGV	08-22-85	--	226	554
402341099041401	5N 16W13DC 1	40 23 41	099 04 14	01	112SDGV	08-22-85	--	180	741
402332099095601	5N 16W19ABAD1	40 23 32	099 09 56	01	121OGLL	08-22-85	--	241	1170
403049098503101	6N 14W 1DO 1	40 30 49	098 50 31	01	112SDGV	08-22-85	--	200	408
402808098571401	6N 15W24DDAC1	40 28 08	098 57 14	01	121OGLL	08-20-85	--	240	672
402936099040701	6N 16W13AACAL	40 29 36	099 04 07	01	112SDGV	08-20-85	--	188	1110
403352098440101	7N 13W24BADD1	40 33 52	098 44 01	01	112SDGV	08-25-85	--	190	537
403434098581101	7N 15W13BCCCL	40 34 34	098 58 11	01	112SDGV	08-22-85	--	153	449
						09-03-85	--	153	--
403418099033801	7N 15W18CO 1	40 34 18	099 03 38	01	112SDGV	08-20-85	--	130	652
403905098485101	8N 13W20BO 1	40 39 05	098 48 51	01	112SDGV	08-22-85	--	114	338
403747098521401	8N 14W26CO	40 37 47	098 52 14	01	112SDGV	08-22-85	--	110	178
						09-03-85	--	110	--
403657099052001	8N 16W35DD 1	40 36 57	099 05 20	01	112SDGV	08-20-85	--	85.00	408
PHELPS									
402247099171701	5N 17W30ABBB1	40 22 47	099 17 17	01	112SDGV	08-21-85	--	351	570
402351099210201	5N 18W15DBCC1	40 23 51	099 21 02	01	112SDGV	08-21-85	--	--	552
402345099310201	5N 19W18DCAC1	40 23 45	099 31 02	01	112SDGV	09-04-85	--	304	552
402928099114401	6N 17W13BCAC1	40 29 28	099 11 44	01	112SDGV	09-03-85	--	180	1020
403052099212801	6N 18W 3CCAB1	40 30 52	099 21 28	01	112SDGV	09-03-85	--	--	1180
402902099213401	6N 18W15CCCB1	40 29 02	099 21 34	01	112SDGV	09-03-85	--	178	902
402854099285901	6N 19W16DCCC1	40 28 54	099 28 59	01	121OGLL	09-03-85	--	400	708
403051099323601	6N 20W 1CO	40 30 51	099 32 36	01	121OGLL	08-21-85	--	396	619
						09-03-85	--	396	--
403407099113501	7N 17W24ABBB1	40 34 07	099 11 35	01	112SDGV	09-04-85	--	143	952
403552099213901	7N 18W 9AAAA1	40 35 52	099 21 39	01	112SDGV	08-21-85	--	135	1040
403644099304201	7N 19W 5BBBB1	40 36 44	099 30 42	01	121OGLL	08-21-85	--	396	1120
403339099353401	7N 20W21DBAB1	40 33 39	099 35 34	01	121OGLL	08-21-85	--	262	868
403933099312801	8N 19W18CDBB1	40 39 33	099 31 28	01	112SDGV	08-21-85	--	50.00	1020
POLK									
410434097471102	13N 4W21CCD 2	41 04 34	097 47 11	02	112SDGV	07-10-85	1110	150	--
411145097254601	14N 1W 9DAC 1	41 11 45	097 25 46	01	112SDGV	07-11-85	1120	270	596
SALINE									
403902097064901	8N 3E20BAD 1	40 39 02	097 06 49	01	112SDGV	07-10-85	1535	190	550

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
HALL												
405452098363401		08-14-85	7.4	14.5	260	8	79	16	11	.3	6.0	256
405255098394301		08-13-85	7.9	14.0	320	63	100	16	12	.3	8.3	253
405820098325001		08-14-85	7.5	15.0	710	297	230	32	60	1	6.1	410
405751098295401		07-29-85	7.4	12.0	--	--	--	--	--	--	--	--
410005098365102		08-14-85	7.0	13.0	310	27	100	15	27	.7	13	285
405821098390801		08-14-85	7.3	14.0	290	32	96	11	11	.3	4.6	253
HAMILTON												
404633098091202		07-09-85	7.0	13.0	350	123	110	18	40	1	7.8	226
405147098004501		07-09-85	7.4	14.0	220	28	70	12	25	.8	5.5	197
KEARNEY												
402326098564601		08-22-85	7.6	14.0	--	--	--	--	--	--	--	--
402334098504701		08-22-85	7.6	15.0	--	--	--	--	--	--	--	--
402341099041401		08-22-85	7.4	14.0	--	--	--	--	--	--	--	--
402332099095601		08-22-85	7.5	14.0	--	--	--	--	--	--	--	--
403049098503101		08-22-85	7.7	14.0	--	--	--	--	--	--	--	--
402808098571401		08-20-85	6.9	13.5	--	--	--	--	--	--	--	--
402936099040701		08-20-85	6.9	14.0	--	--	--	--	--	--	--	--
403352098440101		08-25-85	7.5	12.5	--	--	--	--	--	--	--	--
403434098581101		08-22-85	7.4	14.0	--	--	--	--	--	--	--	--
		09-03-85	--	--	--	--	--	--	--	--	--	--
403418099033801		08-20-85	7.6	13.5	--	--	--	--	--	--	--	--
403905098485101		08-22-85	7.3	14.0	--	--	--	--	--	--	--	--
403747098521401		08-22-85	7.5	13.0	--	--	--	--	--	--	--	--
		09-03-85	--	--	--	--	--	--	--	--	--	--
403657099052001		08-20-85	7.7	12.0	--	--	--	--	--	--	--	--
PHELPS												
402247099171701		08-21-85	7.1	15.0	--	--	--	--	--	--	--	--
402351099210201		08-21-85	7.1	15.0	--	--	--	--	--	--	--	--
402345099310201		09-04-85	6.7	14.0	--	--	--	--	--	--	--	--
402928099114401		09-03-85	7.5	14.0	--	--	--	--	--	--	--	--
403052099212801		09-03-85	7.4	14.0	--	--	--	--	--	--	--	--
402902099213401		09-03-85	6.6	13.5	--	--	--	--	--	--	--	--
402854099285901		09-03-85	7.7	17.0	--	--	--	--	--	--	--	--
403051099323601		08-21-85	7.5	15.0	--	--	--	--	--	--	--	--
		09-03-85	--	--	--	--	--	--	--	--	--	--
403407099113501		09-04-85	7.8	14.0	--	--	--	--	--	--	--	--
403552099213901		08-21-85	7.2	15.0	--	--	--	--	--	--	--	--
403644099304201		08-21-85	7.0	15.0	--	--	--	--	--	--	--	--
403339099353401		08-21-85	7.4	15.0	--	--	--	--	--	--	--	--
403933099312801		08-21-85	7.3	13.5	--	--	--	--	--	--	--	--
POLK												
410434097471102		07-10-85	7.2	14.0	230	3	73	11	18	.5	6.7	225
411145097254601		07-11-85	7.1	15.0	260	1	81	13	15	.4	8.0	255
SALINE												
403902097064901		07-10-85	--	14.0	220	0	71	11	24	.7	4.6	222

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
HALL												
405452098363401	08-14-85	23	4.1	.30	51	340	.47	--	.32	--	--	--
405255098394301	08-13-85	63	8.5	.30	57	420	.57	--	2.5	--	--	--
405820098325001	08-14-85	390	39	.20	20	1000	1.4	--	<.10	--	--	--
405751098295401	07-29-85	--	--	--	--	--	--	--	.10	--	--	--
410005098365102	08-14-85	54	12	.30	47	440	.60	--	.29	--	--	--
405821098390801	08-14-85	13	14	.20	53	350	.48	--	4.3	--	--	--
HAMILTON												
404633098091202	07-09-85	120	33	.30	30	490	.67	--	14	--	--	--
405147098004501	07-09-85	50	12	.20	28	320	.44	--	4.4	--	--	--
KEARNEY												
402326098564601	08-22-85	--	--	--	--	--	--	--	.90	--	--	--
402334098504701	08-22-85	--	--	--	--	--	--	--	.10	--	--	--
402341099041401	08-22-85	--	--	--	--	--	--	--	2.8	--	--	--
402332099095601	08-22-85	--	--	--	--	--	--	--	12	--	--	--
403049098503101	08-22-85	--	--	--	--	--	--	--	.60	--	--	--
402808098571401	08-20-85	--	--	--	--	--	--	--	1.5	--	--	--
402936099040701	08-20-85	--	--	--	--	--	--	--	7.9	--	--	--
403352098440101	08-25-85	--	--	--	--	--	--	--	1.1	--	--	--
403434098581101	08-22-85	--	--	--	--	--	--	--	1.2	--	--	--
	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403418099033801	08-20-85	--	--	--	--	--	--	--	1.9	--	--	--
403905098485101	08-22-85	--	--	--	--	--	--	--	10	--	--	--
403747098521401	08-22-85	--	--	--	--	--	--	--	7.9	--	--	--
	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403657099052001	08-20-85	--	--	--	--	--	--	--	9.9	--	--	--
PHELPS												
402247099171701	08-21-85	--	--	--	--	--	--	--	3.2	--	--	--
402351099210201	08-21-85	--	--	--	--	--	--	--	3.1	--	--	--
402345099310201	09-04-85	--	--	--	--	--	--	--	4.6	--	--	--
402928099114401	09-03-85	--	--	--	--	--	--	--	9.0	--	--	--
403052099212801	09-03-85	--	--	--	--	--	--	--	3.8	--	--	--
402902099213401	09-03-85	--	--	--	--	--	--	--	6.5	--	--	--
402854099285901	09-03-85	--	--	--	--	--	--	--	4.5	--	--	--
403051099323601	08-21-85	--	--	--	--	--	--	--	6.9	--	--	--
	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403407099113501	09-04-85	--	--	--	--	--	--	--	5.6	--	--	--
403552099213901	08-21-85	--	--	--	--	--	--	--	3.6	--	--	--
403644099304201	08-21-85	--	--	--	--	--	--	--	7.5	--	--	--
403339099353401	08-21-85	--	--	--	--	--	--	--	8.2	--	--	--
403933099312801	08-21-85	--	--	--	--	--	--	--	5.7	--	--	--
POLK												
410434097471102	07-10-85	38	8.7	.30	53	340	.47	--	.31	--	--	--
411145097254601	07-11-85	25	6.6	.20	47	350	.47	--	1.9	--	--	--
SALINE												
403902097064901	07-10-85	42	10	.30	31	330	.44	--	<.10	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

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WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
HALL												
405452098363401	08-14-85	--	--	--	--	50	--	--	--	83	--	560
405255098394301	08-13-85	--	--	--	--	50	--	--	--	4	--	<1
405820098325001	08-14-85	--	--	--	--	110	--	--	--	32	--	29
405751098295401	07-29-85	--	--	--	--	--	--	--	--	--	--	--
410005098365102	08-14-85	--	--	--	--	70	--	--	--	430	--	450
405821098390801	08-14-85	--	--	--	--	50	--	--	--	6	--	8
HAMILTON												
404633098091202	07-09-85	--	--	--	--	30	--	--	--	6	--	170
405147098004501	07-09-85	--	--	--	--	--	--	--	--	6	--	2
KEARNEY												
402326098564601	08-22-85	--	--	--	--	--	--	--	--	--	--	--
402334098504701	08-22-85	--	--	--	--	--	--	--	--	--	--	--
402341099041401	08-22-85	--	--	--	--	--	--	--	--	--	--	--
402332099095601	08-22-85	--	--	--	--	--	--	--	--	--	--	--
403049098503101	08-22-85	--	--	--	--	--	--	--	--	--	--	--
402808098571401	08-20-85	--	--	--	--	--	--	--	--	--	--	--
402936099040701	08-20-85	--	--	--	--	--	--	--	--	--	--	--
403352098440101	08-25-85	--	--	--	--	--	--	--	--	--	--	--
403434098581101	08-22-85	--	--	--	--	--	--	--	--	--	--	--
	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403418099033801	08-20-85	--	--	--	--	--	--	--	--	--	--	--
403905098485101	08-22-85	--	--	--	--	--	--	--	--	--	--	--
403747098521401	08-22-85	--	--	--	--	--	--	--	--	--	--	--
	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403657099052001	08-20-85	--	--	--	--	--	--	--	--	--	--	--
PHELPS												
402247099171701	08-21-85	--	--	--	--	--	--	--	--	--	--	--
402351099210201	08-21-85	--	--	--	--	--	--	--	--	--	--	--
402345099310201	09-04-85	--	--	--	--	--	--	--	--	--	--	--
402928099114401	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403052099212801	09-03-85	--	--	--	--	--	--	--	--	--	--	--
402902099213401	09-03-85	--	--	--	--	--	--	--	--	--	--	--
402854099285901	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403051099323601	08-21-85	--	--	--	--	--	--	--	--	--	--	--
	09-03-85	--	--	--	--	--	--	--	--	--	--	--
403407099113501	09-04-85	--	--	--	--	--	--	--	--	--	--	--
403552099213901	08-21-85	--	--	--	--	--	--	--	--	--	--	--
403644099304201	08-21-85	--	--	--	--	--	--	--	--	--	--	--
403339099353401	08-21-85	--	--	--	--	--	--	--	--	--	--	--
403933099312801	08-21-85	--	--	--	--	--	--	--	--	--	--	--
POLK												
410434097471102	07-10-85	--	--	--	--	--	--	--	--	10	--	45
411145097254601	07-11-85	--	--	--	--	40	--	--	--	4	--	250
SALINE												
403902097064901	07-10-85	--	--	--	--	--	--	--	--	390	--	480

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	PROME- TRYNE TOTAL (UG/L) (39057)	ATRA- ZINE, TOTAL (UG/L) (39630)	CYAN- AZINE TOTAL (UG/L) (81757)	AME- TRYNE TOTAL (82184)
HALL						
405452098363401		08-14-85	--	--	--	--
405255098394301		08-13-85	--	--	--	--
405820098325001		08-14-85	--	--	--	--
405751098295401		07-29-85	--	--	--	--
410005098365102		08-14-85	--	--	--	--
405821098390801		08-14-85	--	--	--	--
HAMILTON						
404633098091202		07-09-85	--	--	--	--
405147098004501		07-09-85	--	--	--	--
KEARNEY						
402326098564601		08-22-85	--	--	--	--
402334098504701		08-22-85	--	--	--	--
402341099041401		08-22-85	--	--	--	--
402332099095601		08-22-85	--	--	--	--
403049098503101		08-22-85	--	--	--	--
402808098571401		08-20-85	--	--	--	--
402936099040701		08-20-85	--	--	--	--
403352098440101		08-25-85	--	--	--	--
403434098581101		08-22-85	<.1	<.10	<.10	<.10
		09-03-85	<.1	<.10	<.10	<.10
403418099033801		08-20-85	--	--	--	--
403905098485101		08-22-85	--	--	--	--
403747098521401		08-22-85	<.1	.10	<.10	<.10
		09-03-85	<.1	<.10	<.10	<.10
403657099052001		08-20-85	--	--	--	--
PHELPS						
402247099171701		08-21-85	--	--	--	--
402351099210201		08-21-85	--	--	--	--
402345099310201		09-04-85	--	--	--	--
402928099114401		09-03-85	--	--	--	--
403052099212801		09-03-85	--	--	--	--
402902099213401		09-03-85	--	--	--	--
402854099285901		09-03-85	--	--	--	--
403051099323601		08-21-85	<.1	<.10	<.10	<.10
		09-03-85	<.1	<.10	<.10	<.10
403407099113501		09-04-85	--	--	--	--
403552099213901		08-21-85	--	--	--	--
403644099304201		08-21-85	--	--	--	--
403339099353401		08-21-85	--	--	--	--
403933099312801		08-21-85	--	--	--	--
POLK						
410434097471102		07-10-85	--	--	--	--
411145097254601		07-11-85	--	--	--	--
SALINE						
403902097064901		07-10-85	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	LOCAL IDENT- I- FIER	LAT- I- TUDE	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUC- TANCE (US/CM) (00095)
SEWARD										
405330097204801	11N	1E29BC 1	40 53 30	097 20 48	01	112SDGV	07-11-85	1330	254	670
405343097093906	11N	2E26AD 6	40 53 43	097 09 39	06	112SDGV	07-11-85	0915	117	723
YORK										
404353097252801	9N	1W22CC 1	40 43 53	097 25 28	01	112SDGV	07-16-85	--	275	607
404235097363601	9N	3W36BACC1	40 42 35	097 36 36	01	112SDGV	07-18-85	--	218	630
404646097485101	9N	4W 6AC 1	40 46 46	097 48 51	01	112SDGV	07-10-85	0920	171	623
404603097430301	9N	4W12ABDC1	40 46 03	097 43 03	01	112SDGV	07-12-85	--	175	592
404322097492001	9N	4W30BCA 1	40 43 22	097 49 20	01	112SDGV	07-16-85	--	122	692
405205097251201	10N	1W 3BDB 1	40 52 05	097 25 12	01	112SDGV	07-12-85	--	305	625
404904097354301	10N	2W19CC 1	40 49 04	097 35 43	01	112SDGV	07-12-85	--	195	560
404846097494901	10N	4W19CCCD1	40 48 46	097 49 49	01	112SDGV	07-12-85	--	191	579
405414097300301	11N	2W24CB 1	40 54 14	097 30 03	01	112SDGV	07-16-85	--	334	572
405242097352402	11N	2W31CA 2	40 52 42	097 35 24	02	112SDGV	07-10-85	1215	348	630
405418097412801	11N	3W20CBC 1	40 54 18	097 41 28	01	112SDGV	07-16-85	--	115	610
405656097455001	11N	4W10BO 1	40 56 56	097 45 50	01	112SDGV	07-12-85	--	260	586
410137097241302	12N	1W11BC 2	41 01 37	097 24 13	02	112SDGV	07-11-85	1200	156	694
405813097360801	12N	3W36AO 1	40 58 13	097 36 08	01	112SDGV	07-12-85	--	160	605
405900097493201	12N	4W30BC 1	40 59 00	097 49 32	01	112SDGV	07-16-85	0900	205	759

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CHEMICAL ANALYSES OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

STATION	NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
SEWARD												
405330097204801	07-11-85		32	10	.30	37	350	.48	--	12	--	--
405343097093906	07-11-85		130	5.3	.20	34	450	.61	--	6.4	--	--
YORK												
404353097252801	07-16-85		--	--	--	--	--	--	7.5	--	--	--
404235097363601	07-18-85		--	--	--	--	--	--	6.9	--	--	--
404646097485101	07-10-85		31	22	.30	33	350	.48	--	7.0	--	--
404603097430301	07-12-85		--	--	--	--	--	--	4.7	--	--	--
404322097492001	07-16-85		--	--	--	--	--	--	5.3	--	--	--
405205097251201	07-12-85		--	--	--	--	--	--	3.8	--	--	--
404904097354301	07-12-85		--	--	--	--	--	--	5.8	--	--	--
404846097494901	07-12-85		--	--	--	--	--	--	4.4	--	--	--
405414097300301	07-16-85		--	--	--	--	--	--	.40	--	--	--
405242097352402	07-10-85		32	12	.30	40	370	.51	--	4.6	--	--
405418097412801	07-16-85		--	--	--	--	--	--	4.8	--	--	--
405656097455001	07-12-85		--	--	--	--	--	--	4.1	--	--	--
410137097241302	07-11-85		20	13	.30	40	390	.52	--	5.6	--	--
405813097360801	07-12-85		--	--	--	--	--	--	3.6	--	--	--
405900097493201	07-16-85		--	--	--	--	--	--	4.0	--	--	--

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons



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