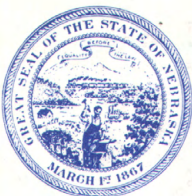
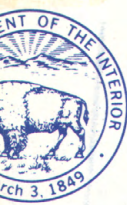
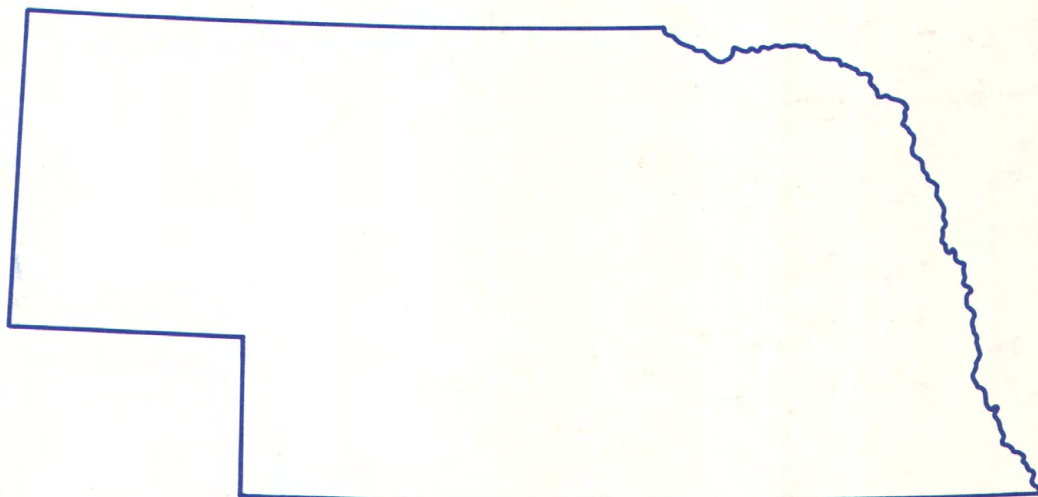
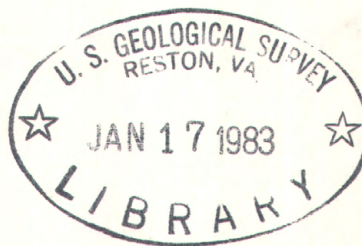


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Water Resources Data Nebraska Water Year 1981



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-81-1
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 1981

1980

OCTOBER

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1981

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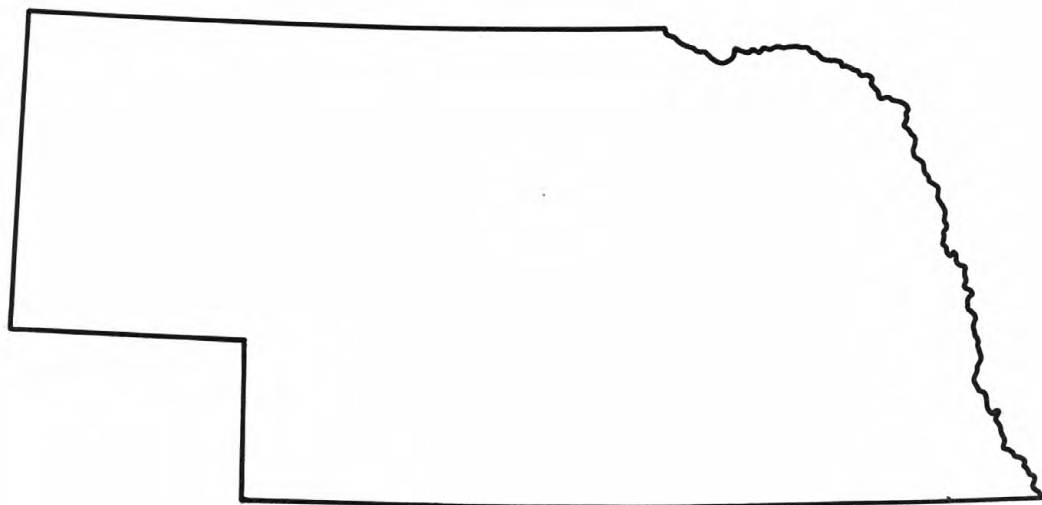
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Water Resources Data Nebraska Water Year 1981



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UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on 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

In the act that established the U.S. Geological Survey more than a century ago, the agency was charged by Congress with the responsibility for "...classification of the public lands, and examination of the geologic structure, mineral resources, and products of the national domain." This charge was simple recognition of the principle that factual information is essential to sound development and management decisions involving natural resources. In keeping with this principle, the Water Resources Division of the Survey publishes annually, by district, basic records for water resources thought to be of particular usefulness to the public and to the scientific community.

General direction for preparation of this report and for similar reports prepared by other districts was given by Philip Cohen, Chief Hydrologist, U.S. Geological Survey, and by R. J. Dingman, Assistant Chief Hydrologist for Scientific Publications and Data Management.

This report on "Water-Resources Data for Nebraska" was prepared by personnel of the Nebraska District of the Water Resources Division under the supervision of W. M. Kastner, District Chief, and Alfred Clebsch, Jr., Regional Hydrologist, Central Region. Most of the records were obtained through cooperation with agencies of the State of Nebraska and with other Federal agencies.

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		13. Type of Report & Period Covered Annual - Oct. 1, 1980, to Sept. 30, 1981	
15. Supplementary Notes Prepared in cooperation with the State of Nebraska and with other agencies.		14.	
16. Abstract (Limit: 200 words) Water resources data for the 1981 water year for Nebraska consist of both surface water and ground water. This report contains water-discharge records for 163 stream-flow gaging stations, 48 partial-record or miscellaneous streamflow stations, and 4 crest-stage, partial-record streamflow stations; stage and content records for 10 lakes and reservoirs; water-quality records for 55 streamflow stations, 36 ungaged stream-sites, and 154 wells; and water-level records for 59 observation wells. Additional water-discharge data were collected at various sites, not part of the systematic data-collection program, to determine surface-water/ground-water relationships and are published under low-flow investigations. 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 *Nebraska, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses b. Identifiers/Open-Ended Terms c. COSATI Field/Group			
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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 for Nebraska."

This report includes records on both surface and ground water in the State. Specifically, it contains: (1) Discharge records for 163 streamflow-gaging stations, for 48 partial-record or miscellaneous streamflow stations, and for 4 crest-stage, partial-record streamflow stations; (2) stage and content records for 10 lakes and reservoirs; (3) water-quality records for 55 streamflow-gaging stations, for 36 ungaged streamsites, and for 154 wells; and (4) water-level records for 59 observation wells. Records included for stream stages and for ground-water levels are only a small fraction of those obtained during the water year.

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 Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

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-81-1." 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 District Chief at the address given on back of 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, Dan T. Drain, Director; Big Blue River Compact Administration; and Little Blue Natural Resources District.

Assistance with funds or services was given by the U.S. Army Corps of Engineers in collecting records for 27 streamflow-gaging stations and 2 daily sediment stations; by the U.S. Environmental Protection Agency in collecting records for 2 water-quality stations; and by the U.S. Bureau of Reclamation in collecting records for 2 streamflow-gaging 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.

Acknowledgments

Collection, review, and assembly of the information in this report involved the efforts of many people, both within and outside the district staff. Data collection and computation of records were performed by USGS personnel in field offices at Cambridge, Lincoln, and Ord. Nebraska Department of Water Resources personnel in Bridgeport, Cambridge, Lincoln, Norfolk, and Ord also participated in the collection and computation of records. Review of the records and assembly of this report was performed by USGS district personnel.

OVERVIEW OF 1981 WATER YEAR

The shortage of precipitation in Nebraska during the latter one-half of the 1980 water year continued into the 1981 water year. Precipitation data from published reports of the National Weather Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, for the eight divisions in Nebraska are shown in table 1.

Precipitation and departures from normal are shown on a cumulative basis for the end of each quarter and for the water year. All divisions had less than normal precipitation through the first 9 months of the water year, except the Southwest Division. Precipitation in all divisions increased during the final quarter; but for the year, precipitation was greater than normal for only three divisions. Percentage of normal precipitation is shown in figure 1 for the eight divisions.

Table 1.--Cumulative precipitation and departures from normal, in inches

National Weather Service Division	October - December		October - March		October - June		1981 water year October - September	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Panhandle	1.01	-0.86	2.38	-1.19	9.57	-2.43	16.14	-1.23
North Central	1.73	-.50	3.73	-.60	10.63	-3.05	20.27	-.69
Northeast	1.86	-1.15	4.78	-1.25	11.87	-5.16	20.92	-4.93
Central	1.61	-.70	3.87	-.72	12.40	-2.46	23.50	+.50
East Central	3.13	-.24	5.62	-.98	13.23	-4.99	25.16	-3.20
Southwest	.45	-1.58	4.14	+.23	14.80	+2.47	22.87	+3.53
South Central	1.43	-1.08	3.82	-1.17	15.21	-.23	27.30	+3.39
Southeast	4.18	+.26	6.83	-.59	15.52	-4.18	28.68	-2.22

Streamflow

The less-than-normal precipitation throughout much of the State during the summer of 1980 and continuing throughout most of the State for the first 9 months of 1981 resulted in very low streamflow. Monthly mean discharges during the 1981 water year at representative stations are plotted against the long-term monthly means in figure 1. The period of record used for the long-term mean at some stations is from the implementation of the last known storage structure or from the latest change in regulation. The streamflow reflects the precipitation patterns--very low flow for the first 9 months, with some increase during the remaining 3 months.

Individual station graphs emphasize particular points of interest. Those for stations 06462000, Niobrara River near Norden, and 06785000, Middle Loup River at St. Paul, show uniform flow characteristics of streams originating in the Sand Hills Region of Nebraska where ground-water inflow is the principal source of streamflow. Although the lack of precipitation during the 1981 water year is reflected in decreased streamflow, the decrease is not as pronounced as for other stations where surface runoff is a greater component of total flow. Graphs for stations 06800500, Elkhorn River at Waterloo, and 06815000, Big Nemaha River at Falls City, which represent streamflow in northeastern and southeastern Nebraska, respectively, illustrate the very low streamflow throughout all of eastern Nebraska during the 1981 water year. The normal pattern of two peak-flow periods, one from snowmelt and ice breakup in March and one from runoff from thunderstorms in June, was practically nonexistent for these two stations.

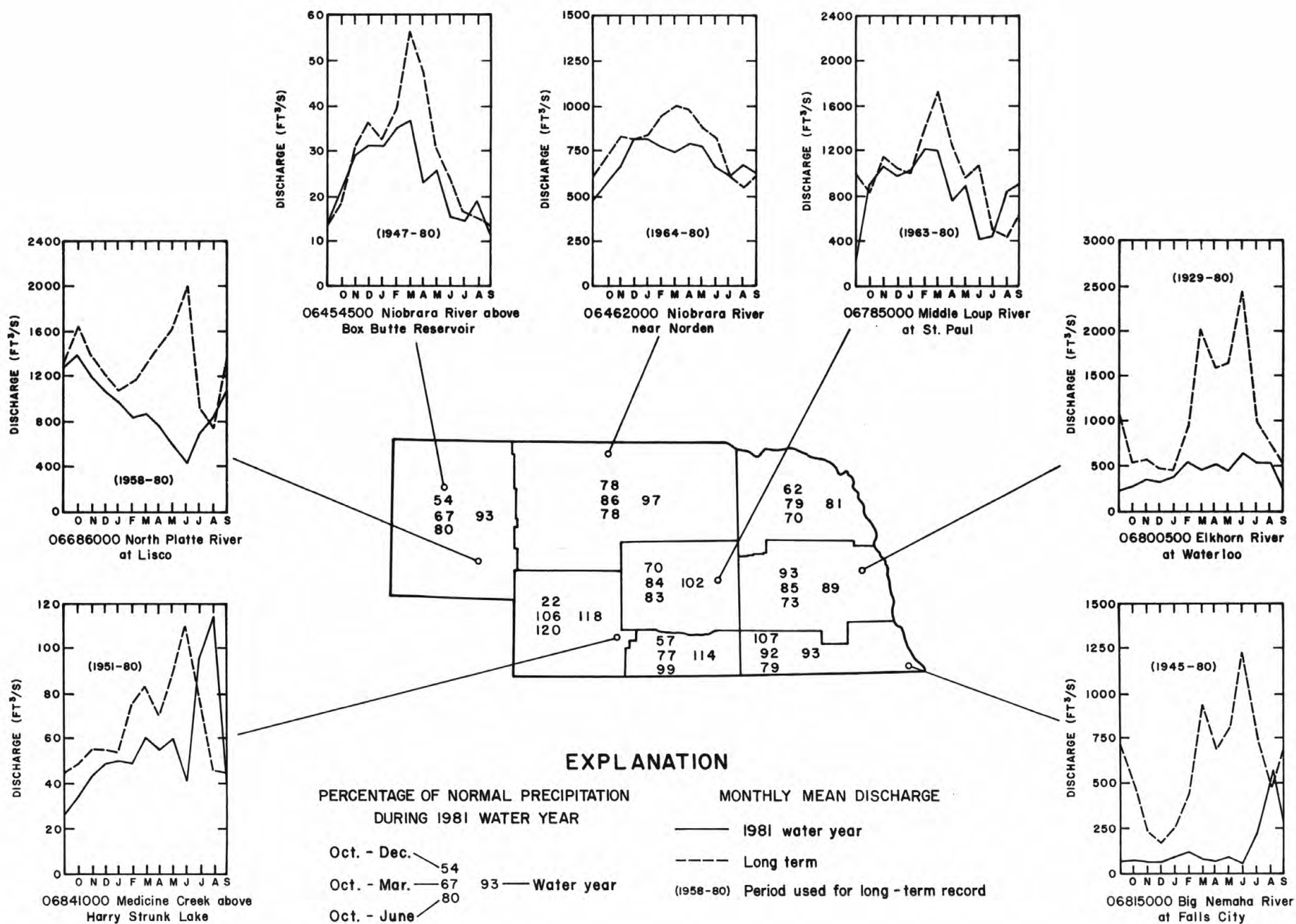


Figure 1.--Comparison of 1981 water-year precipitation and streamflow to long-term means.

The normal pattern of two peak-flow periods is not obvious for the 1981 water year for station 06841000, Medicine Creek above Harry Strunk Lake in southwestern Nebraska. The initial peak, commonly occurring in March, was present but subdued. The second peak, commonly occurring in June, likewise was subdued; the major peak resulting from thunderstorms this year was delayed by about 3 months. Precipitation was not as deficient in southwestern Nebraska as it was in eastern Nebraska; but it was, nonetheless, insufficient to produce much runoff until the thunderstorms of July and August.

Monthly mean discharges for station 06686000, North Platte River at Lisco, do not reflect local precipitation patterns as much as they reflect releases from upstream reservoirs in Wyoming. In 1981 there was a striking decrease in the amount of water released from the reservoirs, because the amount of snowmelt in the mountains was small.

Although streamflow was very low during most of 1981, few annual minimums for the period of record were established. Comparisons of 1981 discharges to those for the period of record for selected stations are shown in table 2. One station, 06462000, Niobrara River near Norden, had the least annual mean daily discharge since storage began in Merritt Reservoir (station 06459300) on the Snake River, a major tributary to the Niobrara River upstream from the Norden station. Annual mean daily discharges were less than the long-term averages at all the representative stations.

Table 2.--Comparisons of 1981 water year annual mean discharges and minimum daily discharges at selected stations, in cubic feet per second, to those for period of record

Station identification and period of record used	Annual mean discharge			Year of occurrence of minimum annual mean discharge	Minimum daily discharge		
	1981	Period of record			1981	Period of record	
		Average	Minimum			Minimum	Year of occurrence
06454500 - Niobrara River above Box Butte Reservoir, 1947-80	24.6	30.0	22.1	1976	6.0	1.6	1953
06462000 - Niobrara River at Norden, 1964-80	708	803	709	1975	340	250	1969
06686000 - North Platte River at Lisco, 1958-80	915	1,350	794	1961	510	43	1960,1961
06785000 - Middle Loup River at St. Paul, 1963-80	890	995	831	1970	58	23	1980
06800500 - Elkhorn River at Waterloo, 1929-80	448	1,095	417	1939	152	50	1940
06815000 - Big Nemaha River at Falls City, 1945-80	147	587	86.7	1956	5.0	3.0	1977
06841000 - Medicine Creek above Harry Strunk Lake, 1951-80	57.9	67.3	50.3	1976	22	9.1	1980

No new minimum daily discharges were established at these representative stations. Although new minimum daily discharges were established at some gaging stations in 1981, they generally were at stations with short-term records of less than 10 years. Annual minimum flows usually occur in Nebraska streams toward the end of the growing season, August and September, when plants are still growing but precipitation diminishes. However, in 1981, contrary to normal patterns, late summer rains occurred from the middle of July through August. Increased runoff resulted from these rains, preventing most streams from reaching extreme lows.

High flows occurred in some areas of the State due to localized thunderstorms. Lodgepole Creek at Bushnell (station 06762500) flooded on July 1-2; the gaging-station recorder and shelter were washed away at this site. The peak flow was computed to be 9,390 ft³/s, a flow that has a recurrence interval of approximately 50 years. Thunderstorms produced high flows in the North Loup and Middle Loup River basins on August 5-6. Significant peak flows occurred at the following stations: North Loup River at Ord (06788500), 8,110 ft³/s, which has a 25-year recurrence interval; North Loup River at St. Paul (06790500), 18,600 ft³/s, which has a 10-year recurrence interval; and Middle Loup River at St. Paul (06785000), 12,400 ft³/s, which has a 5-year recurrence interval. Flooding on Mira Creek, a tributary to the North Loup River, occurred on August 5, and some persons needed to be evacuated from the town of North Loup. The peak discharge at the gaging station on Mira Creek near North Loup (06788988)--in operation for only 2 years--was 3,460 ft³/s.

Chemical Quality of Streamflow

To develop a summary of the chemical quality of streamflow for the 1981 water year, an analysis was made of specific-conductance records from a representative sampling station in 11 of the 13 river basins in Nebraska. Similar analyses were made for the same stations in "Water Resources Data for Nebraska, 1980." No records were obtained for the water year from either the White River - Hat Creek basin or the Missouri Tributaries basin. Locations of the 11 stations selected as representative are shown in figure 2.

Specific conductance can be used to approximate the dissolved-solids concentration in water because it is related to the concentrations and types of ions in water. To determine whether significant differences in specific conductance occurred between the 1981 water year and the period of record, a statistical technique called the t-test was used. Results of the t-tests for the 11 stations, given in table 3, indicate that no statistically significant differences in the mean specific conductance of streamflow occurred at nine of the stations during the 1981 water year. However, such differences did occur at two stations -- Niobrara River at Verdel and Loup River power canal at diversion near Genoa.

Table 3.--Results of t-tests comparing specific-conductance means for the 1981 water year with means for the period of record at representative water-quality sampling stations

Stream basin and station identification		Specific conductance ¹						t-test			
		1981 water year			Period of record			Period used			
		Number of values N ₁	Mean X̄ ₁	Standard devia- tion S ₁	Number of values N ₂	Mean X̄ ₂	Standard devia- tion S ₂		t _{tab}	t _c	Hypothesis
Niobrara											
06465500	Niobrara River at Verdel	12	246	14	91	266	26	1967-80	+2.06	-4.11	² R
North Platte											
06686000	North Platte River at Lisco	12	926	64	300	888	86	1970-80	+2.16	2.00	³ A
South Platte											
06764880	South Platte River at Roscoe	11	1,800	225	62	1,820	290	1975-80	+2.10	-.26	A
Middle Platte											
06774000	Platte River at Duncan	12	863	94	208	828	140	1965-80	+2.14	1.25	A
Loup											
06792499	Loup River power canal at diversion near Genoa	11	250	29	95	275	22	1973-80	+2.18	-2.78	R
Elkhorn											
06800500	Elkhorn River at Waterloo	14	484	122	193	495	108	1966-80	+2.13	-.33	A
Lower Platte											
06805500	Platte River at Louisville	11	652	168	71	731	259	1972-80	+2.09	-1.34	A
Nemaha											
06815000	Big Nemaha River at Falls City	12	676	128	93	627	164	1973-80	+2.11	1.20	A
Republican											
06853000	Republican River at Guide Rock	11	599	123	266	571	104	1962-80	+2.20	.74	A
Big Blue											
06881000	Big Blue River at Crete	12	533	150	118	482	186	1968-80	+2.13	1.09	A
Little Blue											
06884025	Little Blue River at Hollenberg	12	465	168	109	467	182	1972-80	+2.13	-.04	A

¹ Micromhos per centimeter at 25° Celsius

² Rejected

³ Accepted

The t-test technique requires proving or disproving a hypothesis that the mean specific conductance for the 1981 water year is equal to the mean for the period of record. The procedure for doing this requires computing a "t" statistic and comparing it 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 not to be equal. In terms of specific conductance, a rejection of the hypothesis means that there is a difference in water quality at a particular site between the 1981 water year and the period of record. A 95-percent level of significance ($\alpha = 0.05$) was used for each t-test, and it was assumed that the data were normally distributed.

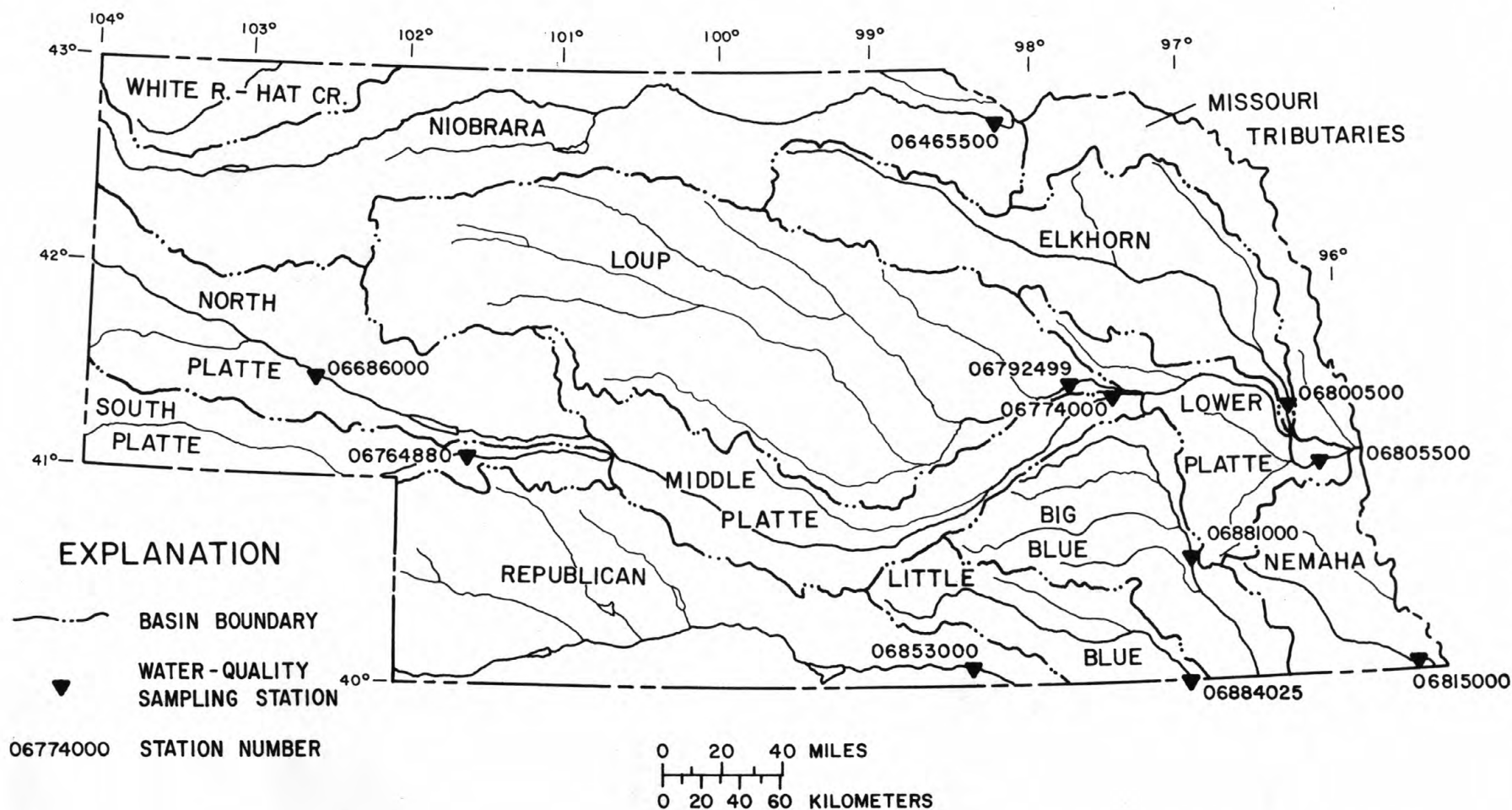


Figure 2.-- River basins of Nebraska and location of representative water-quality sampling stations.

Mean specific conductances for the 1981 water year are significantly less (hypothesis rejected) than means for the period of record for Niobrara River at Verdel and Loup River power canal at diversion near Genoa, probably because streamflow was only 82 and 89 percent of normal, respectively, during the water year. Much of the flow at both stations is ground water discharging from the Sand Hills. Even during prolonged dry periods, such as the one which extended into the 1981 water year, this component of flow remains nearly constant in these streams. On the other hand, during such periods the component of flow derived from overland runoff, mostly from the downstream parts of the basins, is reduced considerably. Because ground water from the Sand Hills typically is less mineralized than the overland runoff from the downstream areas, the mean specific conductances of water passing these two stations tend to be less during dry years, such as 1981, than during years when mean discharges equal or exceed the mean for the period of record.

The differences between the means for the two stations for the 1981 water year and the period of record are small -- 26 micromhos per centimeter in one case and 22 in the other. That these small differences indicate significant differences in water quality is due to the fact that specific conductance of water at these stations ordinarily is uniform, varying only within a very narrow range.

For two other stations, differences between means for the water year and means for the period of record that were statistically significant in 1980 were not significant in 1981. These were South Platte River at Roscoe and Platte River at Duncan. Probably this is accounted for by the considerable differences in mean streamflow from 1980 to 1981. Mean streamflow during the 1980 water year was 3.75 times that for the period of record for South Platte River at Roscoe, because streamflow was augmented greatly by excessive snowmelt from the Colorado mountains. The dilute snowmelt decreased the mineralization of the stream for several months and caused the specific-conductance mean for the 1980 water year to be significantly less than that for the period of record. During the 1981 water year, however, mountain snowmelt was less than normal. Because of this and because of less than normal precipitation, flows in the stream decreased, and the mean annual streamflow was less than the mean for the period of record. Without dilution from excessive snowmelt, the specific conductance mean for the 1981 water year was statistically similar to that for the period of record.

For the Platte River at Duncan, the statistical difference between the specific-conductance mean for the 1980 water year and the mean for the period of record was attributed in last year's report to the greater than average contribution to streamflow of the Platte River by the South Platte River. Streamflow data for 1947-80 indicate that the South Platte River contributes about one-third of the mean annual flow of the Platte River downstream from the confluence of the North and South Platte Rivers. During 1980, however, the South Platte River contributed two-thirds of the annual streamflow. Because specific conductance of water from the South Platte River is more than twice that of water from the North Platte River, the increase in mean specific conductance was significant at the Duncan station, even though this station is about 200 miles downstream from the confluence. During 1981, the South Platte River contributed less than one-third of the annual streamflow at the confluence. Accordingly, for the Duncan station, there is no significant statistical difference between the mean specific conductance for the 1981 water year and that for the period of record.

Ground-Water Levels

Water-level changes that occurred during the 1981 water year were determined from the statewide network of observation wells measured by numerous Federal, State, and local agencies. The network consists of more than 3,200 wells measured annually, semiannually, or monthly, and 68 wells equipped with continuous recorders. The observation wells used as examples in the following discussion are typical of those in the network having similar hydrologic characteristics.

The effects of less than normal precipitation for the year on water levels are shown in figure 3 by the hydrograph of a well in Garden County. The water level in this well, which is distant from irrigated areas and controlled water bodies, shows little effect of man's activities, and deviations from long-term averages reflect the effects of climate. During 1981, the water level was slightly below average through the year, although it was nearer the normal than during most of the 1980 water year.

Ground-water levels in irrigated areas also were affected by climatic conditions. Prior to the irrigation season, levels generally were lower than last year and were mostly below long-term averages. Less than normal precipitation during the winter, spring, and early summer decreased recharge to the aquifer and depleted soil moisture, which increased the need for ground water for irrigation. Rainfall in late July and in August decreased this need and brought an early end to the irrigation season. Because water levels began seasonal recovery sooner than normal, they were mostly higher at the end of the 1981 water year than in recent years.

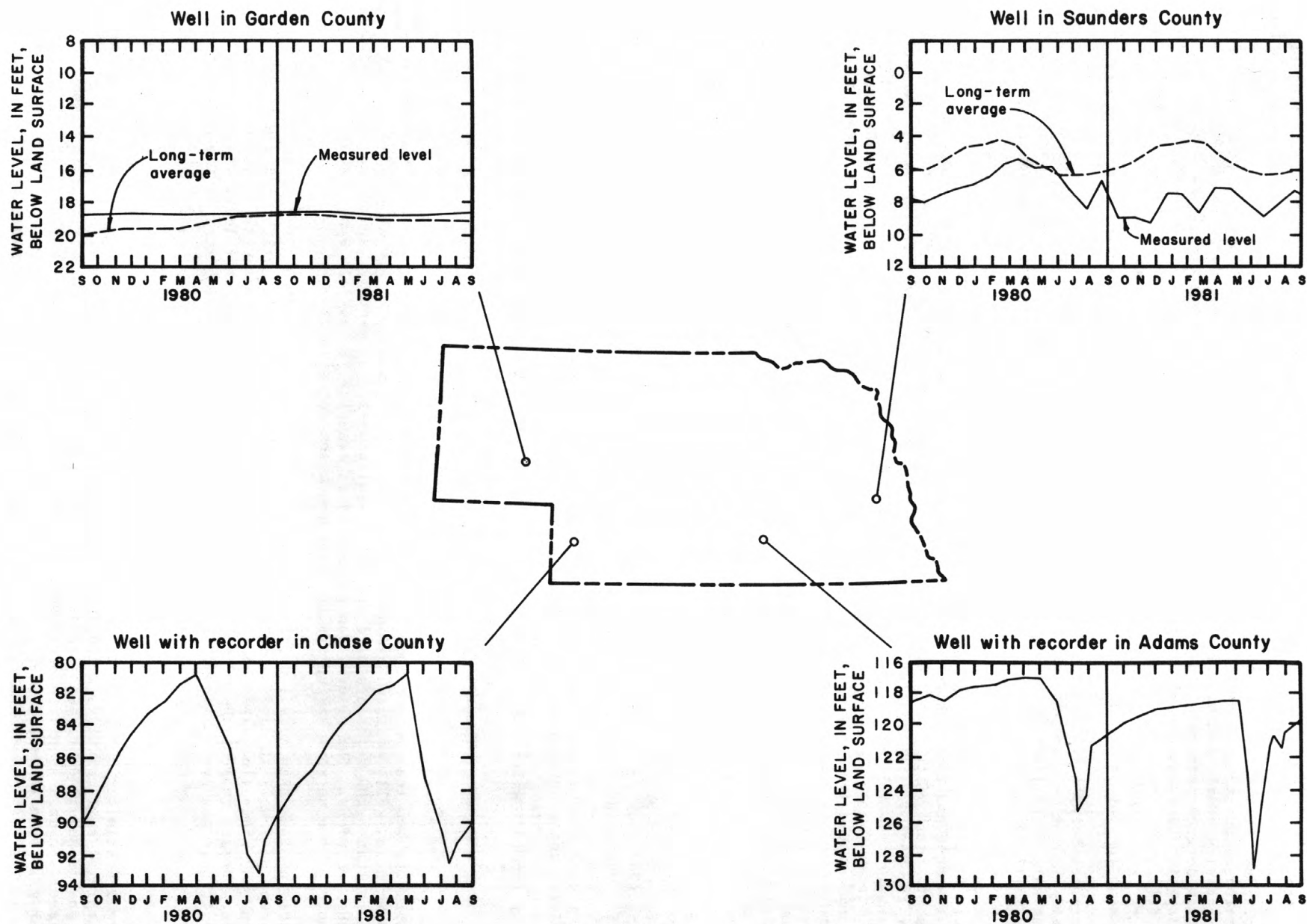


Figure 3.--Hydrographs of representative observation wells, 1980 and 1981.

Hydrographs of observation wells equipped with continuous recorders in Adams and Chase Counties illustrate the trend in water levels in irrigated areas during the year. Both wells are in areas where intensive irrigation development has caused declines of 15 feet or more since predevelopment. The water level in the well in Adams County just prior to the 1981 irrigation season was lower than for that same period in any other year of record. By the end of September, however, the water level had recovered and was slightly higher than in September of the previous year, halting a downward trend that began about 1950. The water level in the well in Chase County, a level which has declined progressively since 1966, declined during the irrigation season nearly to last year's record low, but began to recover at a somewhat more rapid rate than last year.

The key observation well in Saunders County represents a condition common in stream-valley aquifers in Nebraska where water levels reflect a balance maintained between pumpage from the aquifer and induced recharge from a nearby stream. Local precipitation affects the volume of pumpage from the aquifer, and stream stage affects the rate of recharge. During the first 9 months of the 1981 water year, dry conditions and low stream stage in the Platte River contributed to lower than average water levels. Increased rainfall in late July and in August and concomitant increases in streamflow caused water levels to begin rising by the end of the water year.

EXPLANATION OF THE RECORDS

The records in this report are for the 1981 water year, which began October 1, 1980, and ended September 30, 1981. A calendar of the water year is provided on the inside of the front cover. Records for a given station, whether water discharge or water quality, are presented together, so far as practicable, with those for water discharge presented first. Headings providing information on station locations, drainage areas, and other pertinent items are included for all records except those regarded as miscellaneous or partial.

Station Identification Numbers

All data stations, whether streamsite or well, in this report are assigned an 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 regular surface-water stations and the "latitude-longitude" system is used for wells and for surface-water stations where only miscellaneous measurements are made.

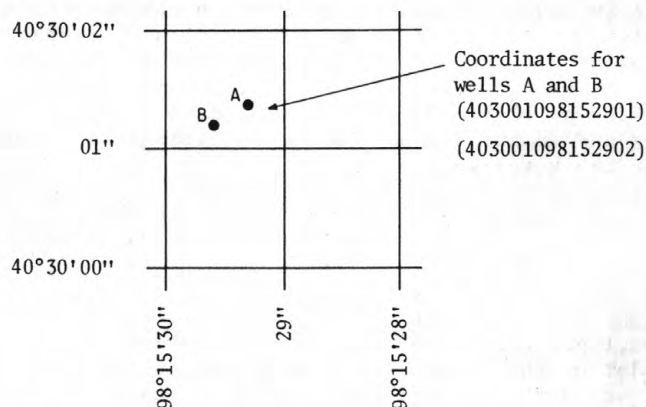
Downstream Order System

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 show 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 and miscellaneous surface-water sites 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. (See figure below.)



System for numbering wells and miscellaneous sites (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 mean daily 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 "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Locations of all complete-record and crest-stage stations for which data are given in this report are shown in figure 4.

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 relationship 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 adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

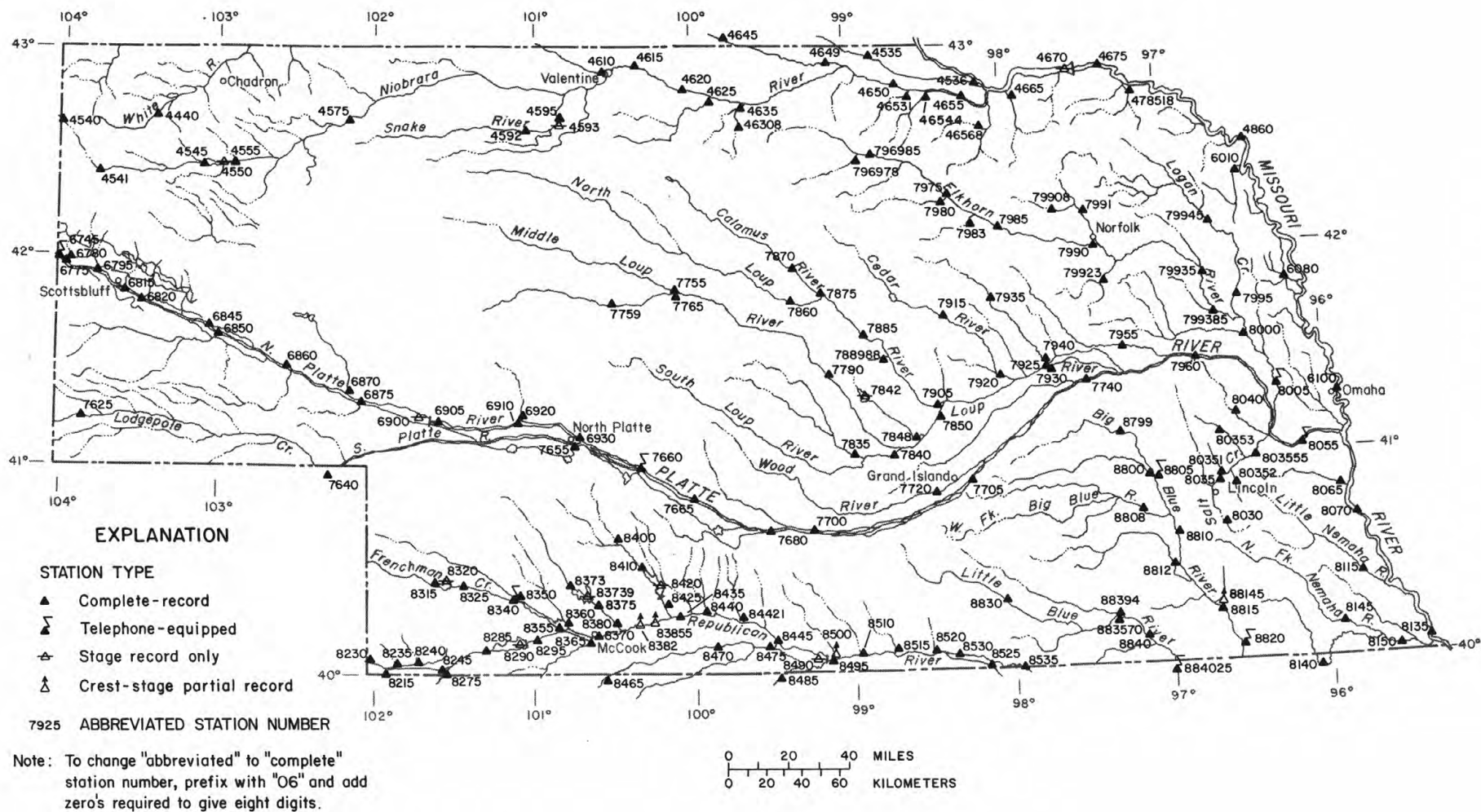


Figure 4.-- Location of active surface-water gaging stations.

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 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.

Data Presentation

Information is provided with each complete record of discharge or lake content. Comments to follow clarify information under the various headings.

LOCATION.--Information on locations is obtained from the most accurate maps available. 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 vary from one drainage basin to another, the accuracy of drainage areas likewise vary. Also, updating of drainage areas is common 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 merged 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 no daily, monthly, or annual figures of discharge were revised, 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.--The remarks contain 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.

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 OUTSIDE PERIOD OF RECORD.--Included here is reliable 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 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 minimum daily discharge and was determined and is reported in the same manner as the maximum.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record. For stations meeting certain criteria, information relative to peak discharges and stages greater than a selected base discharge is presented under this heading. Whereas there can be only one peak discharge for the year, there is a peak discharge for each major rise of the stream. The discharge peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks and are important in many types of detailed hydrologic studies. 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. Minimums for the current water year appear below the table of peak data.

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

The data obtained at partial-record stations follow those for complete-record stations and are presented in three formats. The first presents maximum discharges for crest-stage partial-record stations, of which there are only a few. The second presents discharges measured at miscellaneous sites, that is, at sites other than complete gaging stations or crest-stage partial-record stations. The third presents discharges or indications of zero flow resulting from low-flow investigations. Some of the stations measured in the low-flow investigations are the same as those for which complete records or partial records are published.

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 the true; "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. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated.

Other Records Available

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. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are 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 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. Based on measurement frequencies, the records are considered to be continuing, partial, or miscellaneous. "Continuing records" are based on measurements made quarterly or more frequently, "partial records" are based on measurements made less than quarterly but systematically throughout a period of at least several years, and "miscellaneous records" are based on measurements made less than quarterly but not systematically.

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 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 5.

Onsite 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 insitu 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 on p. 19 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

To obtain representative data for a stream, one measurement or sample near the centroid of flow may be adequate if the solutes are mixed homogeneously throughout the stream cross section. If they are not, it is necessary to sample through several verticals across the stream and composite these samples. 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.

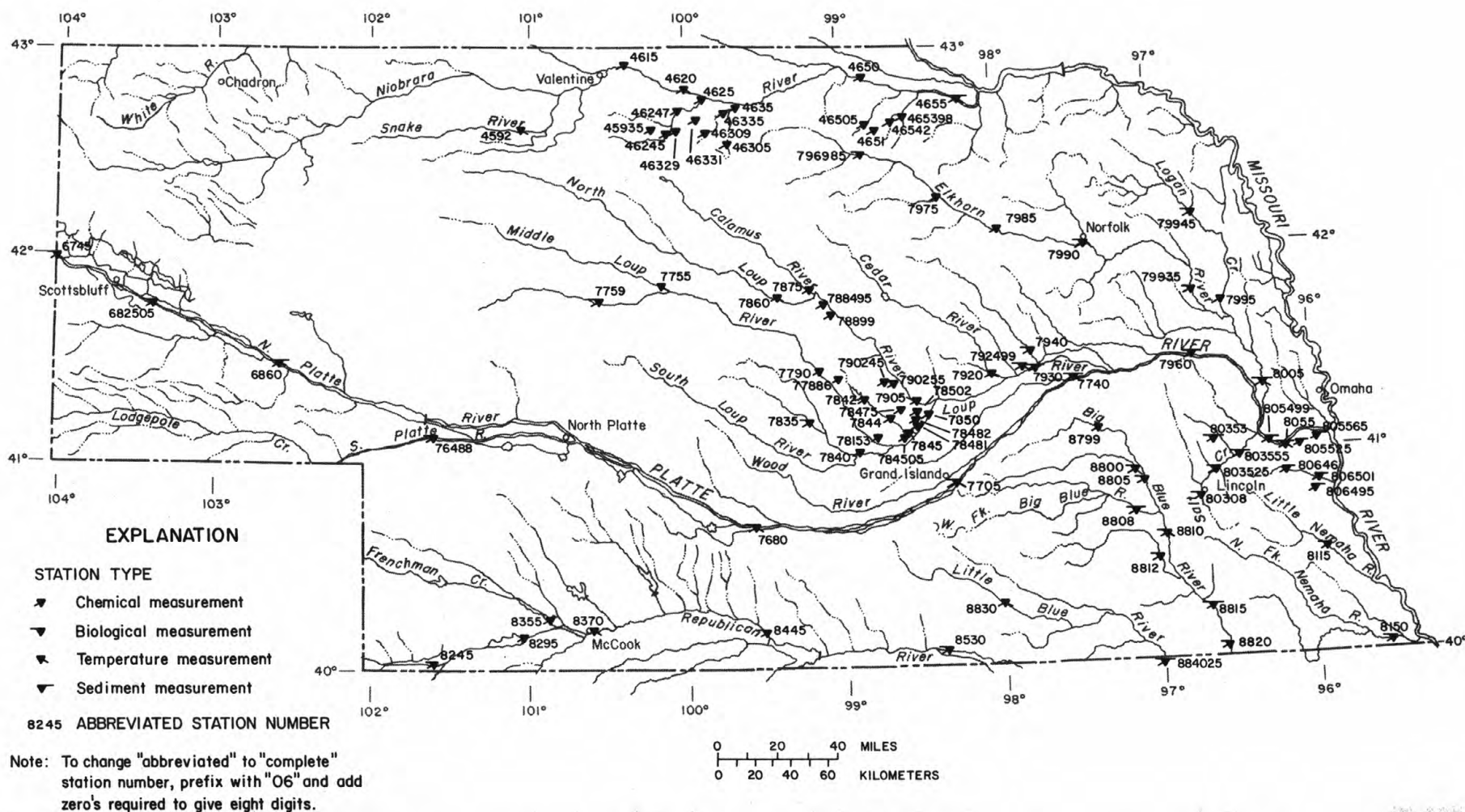


Figure 5.-- Location of active surface-water-quality stations.

Suspended sediment in a stream commonly is not distributed uniformly throughout the stream cross section. To obtain suspended-sediment samples that are representative of the entire stream cross section, it is common practice to use depth-integrating samplers and to obtain the samples from a number of verticals across the stream. In Nebraska, the samples ordinarily are obtained using a method called the "equal transit rate method (ETR)," one in which the proportion of sediment obtained from each vertical is proportioned to the discharge in that vertical. (See Techniques of Water Resources Investigations, Book 3, Chap. C2, p. 54.)

Suspended-sediment samples obtained daily by local observers are taken from one or two verticals. Concentrations of sediment from observers' verticals are compared periodically with those from several verticals so that measurements from the daily samples may be adjusted to reflect more accurately the average concentrations for the entire stream cross section.

During periods in which water discharge and sediment concentrations may be changing rapidly, samples may be collected more frequently than daily. Published mean daily sediment concentrations for these periods may be computed by the subdivided-day method (see Techniques of Water Resources Investigations, Book 3, Chap. C3, p. 47).

At some stations, suspended-sediment samples are collected only periodically. Although data from periodic collections 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.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo., or Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

Where water-quality records for a given station are presented in this report depends partly on the nature of the records and partly on the presence of associated records. If, for a given station, complete discharge records are published, the water-quality records are presented immediately following the discharge records for that station. If, however, complete discharge records are not published and the water-quality records are "continuing" in nature, the water-quality records appear in the proper downstream order for that station. Water-quality records that are "partial" only--obtained systematically but less than quarterly--are presented by basins in a single table for the entire State.

For all stations with continuing records, information is provided in descriptive headings preceding tabular data. 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 as listed.

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.

LOCATION.--See p. 12; same comments apply.

DRAINAGE AREA.--See p. 12; same comments apply.

PERIOD OF RECORD.--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 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 for both the period of record and for the current water year.

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

Records of Ground-Water Levels

Only water-level data from a national network of 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 6.

Although, in this report, records of water levels are presented for fewer than 100 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.)

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 measurements in this report are given in feet with reference to land-surface datum (1sd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude 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.

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. The quality of ground water ordinarily changes slowly, if at all, so that frequent measuring of the same parameters is not necessary unless one is concerned with a particular problem such as monitoring for trends in nitrate concentration.

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.

All samples were obtained by trained personnel. 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 metals comprising the casings.

Tables of water-quality data are presented by counties arranged in alphabetical order. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations.

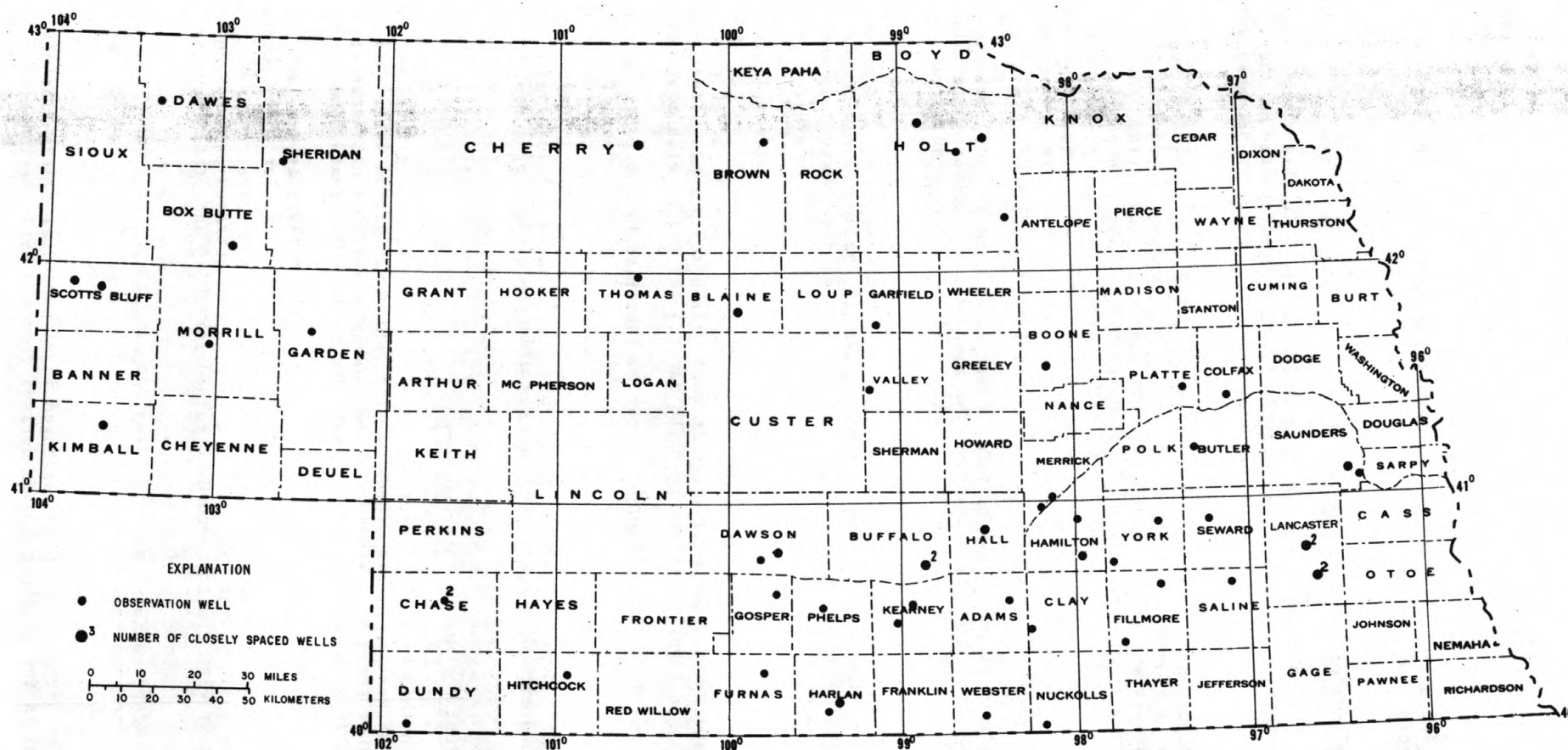


Figure 6.-- Location of observation wells in the national network.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing 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) is on 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, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering 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 measurements, 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.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3, 1968, 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4, 1967, 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5, 1967, 29 pages.
- 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.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8, 1969, 65 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-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1, 1971, 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2, 1976, 172 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.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3, 1972, 66 pages.
- 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.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1, 1972, 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2, 1973, 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3, 1973, 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1, 1970, 17 pages.
- 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.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greenson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4, 1977, 332 pages.

- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5, 1977, 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1, 1969, 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1, 1976, 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2, 1978, 90 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1, 1968, 23 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.

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 equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled 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.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, 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 + 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 + 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 warmblooded 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 + 1.0°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for 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 the ash mass, and represents the actual weight of the living matter. The organic mass weight is expressed in the same units as for ash and dry mass.

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

Cfs-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.

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 (cfs, 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.

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.

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 noted.

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 gage height or discharge 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 attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO₃).

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

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.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per kilogram (μ g/kg) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (kilogram) of sediment.

Micrograms per liter (UG/L, μ g/L) is a unit for expressing the concentration of chemical constituents in solution. It represents one one-thousandth of a milligram of constituent in a liter of solution.

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. Milligrams or micrograms per liter may be converted to milliequivalents per liter by using appropriate factors. Concentrations of suspended sediment also is expressed in mg/L and is based on the mass of sediment per liter of water-sediment mixture. Sediment concentration in milligrams per liter also may be converted to parts per million by using appropriate factors.

National Geodetic Vertical Datum of 1929 (NGVD) 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 data-collection network designed by the Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by eight-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis, and (2) to detect and assess long-term changes in streamflow and stream quality.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

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 meters (m^2), acres, or hectares. 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 milliliters (mL) or liters (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 five-digit number assigned to identify, uniquely, a specific constituent or property. The parameter codes used by the Geological Survey are assigned by the U.S. Environmental Protection Agency and are identical to those used in the STORET data system. They are used widely by Federal and State agencies; data listed under a given code by one agency should be comparable to data listed under the same code by other agencies.

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 suspended sediment or bed material 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 growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants, respectively, are the two categories reported.

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.

Polychlorinated biphenyls (PCB's) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

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 only 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.

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.

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 weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that is discharged in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

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 weight or volume, that passes a section during a given time.

7-day 10-year low flow ($7 Q_{10}$) 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 reaction with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating land.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it 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 micromhos). This relation is not constant from stream to stream or from well to well, 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 the 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.

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 μ m 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 would be 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 μ m 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.....	Hexagenia
Species.....	Hexagenia limbata

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.

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 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, 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 would be 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, 1980, is called the "1980 water year."

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

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

STATION RECORDS, SURFACE WATER

27

WHITE RIVER BASIN

06444000 WHITE RIVER AT CRAWFORD, NE

LOCATION.--Lat 42°41'33", long 103°25'03", in §1/2 sec.3, T.31 N., R.52 W., Daves County, Hydrologic Unit 10140201, on right bank 15 ft (5 m) downstream from bridge in city park at Crawford.

DRAINAGE AREA.--313 mi² (811 km²).

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 (1,115.522 m) National Geodetic Vertical Datum of 1929. Feb. 25, 1931, to Oct. 2, 1933, nonrecording gage at old highway bridge 0.5 mi (0.8 km) upstream at different datum and Oct. 3, 1933, to Sept. 30, 1943, 1 mi (2 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Some regulation at low flows by pumps for irrigation and diversion for water supply for town of Crawford.

AVERAGE DISCHARGE.--46 years, 20.1 ft³/s (0.569 m³/s), 14,560 acre-ft/yr (18.0 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft³/s (44.7 m³/s) Mar. 15, 1948, gage height, 6.88 ft (2.097 m); maximum gage height, 7.7 ft (2.35 m) July 10, 1958, from floodmarks; minimum daily discharge, 2.7 ft³/s (0.076 m³/s) Aug. 13, 31, Sept. 1, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 335 ft³/s (9.49 m³/s) Aug. 6 at 1530, gage height, 4.17 ft (1.271 m), from highwater mark, no other peak above base of 100 ft³/s (2.83 m³/s); minimum daily, 7.6 ft³/s (0.22 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	19	19	23	18	26	20	18	18	12	12	13
2	14	19	18	22	20	26	20	18	17	12	12	13
3	14	19	19	22	20	26	21	19	16	12	12	13
4	14	19	20	22	20	26	22	21	18	11	12	13
5	14	19	20	22	21	25	21	20	17	10	12	14
6	14	19	19	23	19	25	21	19	16	9.7	86	15
7	14	19	19	22	20	25	20	20	16	8.8	26	17
8	15	19	18	20	20	25	21	19	16	7.7	19	16
9	13	19	18	19	20	25	21	19	16	7.7	18	16
10	14	19	20	20	18	25	20	19	17	7.7	18	15
11	15	19	21	21	18	24	20	19	18	7.7	16	14
12	16	19	21	21	20	25	21	18	18	7.6	14	14
13	16	20	21	22	22	24	21	18	16	15	14	13
14	16	21	21	22	29	24	21	18	16	14	15	13
15	18	21	20	20	30	23	20	17	16	12	19	13
16	19	20	21	18	30	23	21	17	15	11	17	14
17	18	18	21	16	29	23	21	20	14	12	16	14
18	18	18	20	17	26	23	21	21	14	25	16	13
19	18	18	20	18	26	23	22	19	14	14	15	13
20	18	17	18	19	26	23	21	18	14	13	14	13
21	18	17	18	18	27	23	20	17	14	13	14	13
22	18	18	16	18	26	23	19	17	14	13	14	13
23	18	18	16	18	26	23	19	17	13	16	15	14
24	18	17	16	18	27	22	19	16	13	14	14	16
25	19	17	18	18	26	22	19	16	12	16	14	20
26	19	18	20	18	26	21	19	16	12	18	14	14
27	19	18	20	18	25	21	19	29	12	16	14	14
28	19	18	20	17	25	21	19	21	13	15	14	14
29	19	19	20	17	---	20	18	18	14	14	13	14
30	19	19	22	16	---	20	18	18	13	13	13	15
31	19	---	23	16	---	20	---	17	---	12	13	---
TOTAL	516	560	603	601	660	725	605	579	452	389.9	535	426
MEAN	16.6	18.7	19.5	19.4	23.6	23.4	20.2	18.7	15.1	12.6	17.3	14.2
MAX	19	21	23	23	30	26	22	29	18	25	86	20
MIN	13	17	16	16	18	20	18	16	12	7.6	12	13
AC-FT	1020	1110	1200	1190	1310	1440	1200	1150	897	773	1060	845

CAL YR 1980 TOTAL 7190.0 MEAN 19.6 MAX 53 MIN 10 AC-FT 14260
 WTR YR 1981 TOTAL 6651.9 MEAN 18.2 MAX 86 MIN 7.6 AC-FT 13190

PONCA CREEK BASIN

06453500 PONCA CREEK AT ANOKA, NE

LOCATION (REVISED).--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 downstream side of left pier of bridge on State Highway 11, 0.5 mi (0.8 km) southwest of Anoka and 0.5 mi (0.8 km) upstream from Dry Creek.

DRAINAGE AREA.--505 mi² (1,308 km²).

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

REVISED RECORDS.--WSP 2117: Drainage area.

GAGE.--Water-stage recorder for stages above 0.4 ft (0.12 m) and nonrecording gage read once daily. Altitude of gage is 1,630 ft (497 m), from topographic map. Prior to Sept. 13, 1950, nonrecording gage at same site and datum.

REMARKS.--Records good except those for Nov. 9 to Mar. 14, which are poor.

AVERAGE DISCHARGE.--32 years, 43.6 ft³/s (1.235 m³/s), 31,590 acre-ft/yr (39.0 hm³/yr); median of yearly mean discharges, 29 ft³/s (0.821 m³/s), 21,000 acre-ft/yr (25.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,810 ft³/s (278 m³/s) Mar. 27, 1960, gage height, 16.86 ft (5.139 m); no flow at times in 1949-50, 1955-62, 1965-71, 1974-76, 1978-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 190 ft³/s (5.38 m³/s) July 20, gage height, 3.50 ft (1.067 m), no peak above base of 500 ft³/s (14.2 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.02	.20	.40	.00	2.9	3.1	.31	.56	.00	5.1	.00
2	.00	.04	.10	.30	.00	2.5	2.2	.26	34	.51	4.4	.00
3	.00	.02	.01	.20	.00	2.5	2.1	.31	4.0	2.9	3.1	.00
4	.00	.02	.00	.30	.00	2.8	1.8	.52	.87	33	4.2	.00
5	.00	.04	.00	.60	.00	2.5	1.5	.31	.35	75	5.9	.00
6	.00	.06	.00	.50	.00	2.1	1.4	.26	.16	83	2.5	.00
7	.00	.08	.00	.60	.00	1.6	1.2	.35	.11	35	1.4	.20
8	.00	.08	.00	.50	.00	1.9	1.3	.35	.07	16	1.0	.80
9	.00	.08	.00	.40	.00	2.1	1.2	.18	.14	6.2	.78	.40
10	.00	.08	.00	.40	.00	2.2	1.1	.14	.14	3.1	1.2	.00
11	.00	.14	.00	.30	.00	2.1	1.1	.13	.09	1.8	1.2	.00
12	.00	.18	.00	.30	.20	2.2	1.1	.87	.05	1.3	1.5	.00
13	.00	.16	.00	.30	.70	1.9	1.2	.78	.02	.87	1.8	.00
14	.00	.18	.00	.20	2.0	1.9	1.2	.52	.11	4.1	44	.00
15	.00	.18	.00	.10	4.0	2.1	1.1	.35	.02	5.6	4.6	.00
16	.08	.20	.10	.00	6.4	1.6	.96	1.8	.00	1.9	1.4	.00
17	4.4	.18	.30	.00	8.0	1.8	.87	2.1	.00	.78	.87	.00
18	.30	.24	.30	.00	16	1.3	.56	2.5	.00	.52	.45	.00
19	.14	.24	.20	.00	20	1.8	.78	2.1	.00	7.7	.25	.00
20	.06	.27	.20	.00	16	1.8	.96	2.6	.00	91	.00	.00
21	.01	.22	.30	.00	9.8	1.8	.69	2.1	.14	26	.00	.00
22	.00	.20	.20	.00	7.0	1.8	.60	1.8	.31	17	.00	.00
23	.00	.22	.10	.10	7.3	1.5	.60	.96	.07	11	.20	.00
24	.00	.18	.00	.30	6.3	1.3	.56	.87	.05	8.3	.40	.00
25	.00	.18	.00	.30	4.4	1.2	.47	.78	.05	8.0	.70	.00
26	.00	.20	.30	.20	3.8	1.3	.52	.69	.02	8.0	.30	.40
27	.06	.20	.50	.20	3.3	1.3	.39	.87	.02	8.0	.00	.00
28	.02	.20	.40	.10	2.9	2.5	.43	1.2	.02	8.3	.00	.00
29	.04	.20	.40	.10	---	5.6	.26	1.2	.00	7.3	.00	.00
30	.06	.20	.40	.10	---	4.4	.39	.96	.00	7.3	.00	.00
31	.04	---	.40	.10	---	5.1	---	.69	---	7.3	.00	---
TOTAL	5.21	4.49	4.41	6.90	118.10	69.4	31.64	28.86	41.37	486.78	87.25	1.80
MEAN	.17	.15	.14	.22	4.22	2.24	1.05	.93	1.38	15.7	2.81	.060
MAX	4.4	.27	.50	.60	20	5.6	3.1	2.6	34	91	44	.80
MIN	.00	.02	.00	.00	.00	1.2	.26	.13	.00	.00	.00	.00
AC-FT	10	8.9	8.7	14	234	138	63	57	82	966	173	3.6

CAL YR 1980 TOTAL 1540.90 MEAN 4.21 MAX 45 MIN .00 AC-FT 3060
WTR YR 1981 TOTAL 886.21 MEAN 2.43 MAX 91 MIN .00 AC-FT 1760

PONCA CREEK BASIN

29

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 (1.0 km) east of Verdel and 3.1 mi (5.0 km) upstream from mouth.

DRAINAGE AREA.--812 mi² (2,103 km²).

WATER-DISCHARGE RECORDS

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 is 1,232.9 ft (375.79 m) National Geodetic Vertical Datum of 1929 (Nebraska Department of Highways reference marks). See WSP 1917 for history of changes prior to Nov. 15, 1962.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--24 years, 67.8 ft³/s (1.920 m³/s), 49,120 acre-ft/yr (60.6 km³/yr); median of yearly mean discharges, 48 ft³/s (1.359 m³/s), 34,800 acre-ft/yr (42.9 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s (445 m³/s) Mar. 27, 1960, gage height, 15.10 ft (4.602 m), site and datum then in use; no flow for many days in 1957-60, 1965-72, 1974-77, 1979-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73 ft³/s (2.07 m³/s) June 21, gage height, 1.88 ft (0.573 m), no peak above base of 800 ft³/s (22.7 m³/s); maximum gage height, 2.21 ft (0.674 m) Feb. 20, backwater from ice; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.80	2.5	.90	9.9	10	2.0	2.1	2.4	6.1	.50
2	.00	.00	.40	2.3	.80	9.9	8.4	1.9	3.6	3.8	5.6	.56
3	.00	.00	.30	1.9	.70	9.9	7.7	2.0	3.8	9.3	3.6	.40
4	.00	.00	.00	1.7	.60	9.4	7.0	2.6	3.2	9.7	2.7	.00
5	.00	.00	.00	2.1	.50	8.7	6.3	2.4	6.8	7.1	4.7	.32
6	.00	.00	.00	1.9	.70	8.4	5.5	2.0	10	5.5	4.1	1.2
7	.00	.00	.00	2.2	.60	7.4	5.3	1.7	6.0	3.5	2.9	1.3
8	.00	.00	.00	2.0	.50	8.0	5.1	2.3	3.2	31	2.0	1.0
9	.00	.00	.00	1.7	.40	8.0	4.8	2.1	2.0	40	1.4	.85
10	.00	.00	.00	1.5	.30	7.7	4.8	1.8	1.9	26	1.3	.51
11	.00	.00	.00	1.2	.20	7.4	4.4	1.4	1.8	16	.53	.46
12	.00	.00	.00	1.4	.30	7.0	4.4	2.8	1.4	9.4	.14	.10
13	.00	.00	.00	1.8	.50	6.3	4.6	4.5	2.3	5.2	.33	.44
14	.00	.00	.00	2.1	1.0	6.0	4.4	4.9	8.5	2.3	.48	.53
15	.00	.00	.00	2.3	1.5	5.8	4.4	4.7	7.6	1.7	.83	1.2
16	.00	.00	.60	1.9	2.5	5.5	4.4	5.9	4.4	1.3	.90	1.0
17	.00	.00	1.2	2.1	4.0	5.5	4.4	7.3	4.3	1.0	1.2	.80
18	.00	.00	1.1	2.2	6.0	5.3	4.2	9.3	3.8	1.8	4.7	.89
19	.00	.00	.90	2.4	9.0	5.8	4.2	7.8	3.9	5.0	2.3	1.1
20	.00	.00	.70	2.2	15	5.3	3.9	6.7	4.1	2.9	.95	.51
21	.00	.00	.80	2.0	22	5.1	4.2	6.7	42	3.1	.29	.00
22	.00	.68	1.0	2.2	20	5.1	4.2	7.0	25	1.8	.00	.09
23	.00	1.6	.80	2.4	18	5.1	4.2	5.9	15	31	.00	.09
24	.00	1.5	.60	2.6	16	5.3	4.2	4.8	10	26	.54	.60
25	.00	1.4	.30	2.2	16	5.3	3.9	4.2	5.3	18	.94	.82
26	.00	1.3	.50	1.8	13	5.1	3.7	3.9	4.2	14	.53	1.1
27	.00	1.2	.90	1.6	13	5.1	3.2	3.7	3.3	12	.09	.41
28	.00	1.1	1.5	1.3	11	6.7	3.0	3.4	2.9	13	.14	.52
29	.00	1.2	2.5	1.1	---	13	2.4	3.3	2.7	12	.05	.70
30	.00	1.4	3.5	1.2	---	18	2.0	3.0	2.5	9.9	.77	.64
31	.00	---	3.0	1.0	---	14	---	2.5	---	8.0	.86	---
TOTAL	.00	11.38	21.40	58.8	175.00	235.0	143.2	124.5	197.6	333.7	50.97	18.64
MEAN	.000	.38	.69	1.90	6.25	7.58	4.77	4.02	6.59	10.8	1.64	.62
MAX	.00	1.6	3.5	2.6	22	18	10	9.3	42	40	6.1	1.3
MIN	.00	.00	.00	1.0	.20	5.1	2.0	1.4	1.4	1.0	.00	.00
AC-FT	.00	23	42	117	347	466	284	247	392	662	101	37

CAL YR 1980 TOTAL 4059.96 MEAN 11.1 MAX 133 MIN .00 AC-FT 8050
WTR YR 1981 TOTAL 1370.19 MEAN 3.75 MAX 42 MIN .00 AC-FT 2720

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 (0.3 km) downstream from Van Tassel Creek, 0.3 mi (0.5 km) upstream from Wyoming-Nebraska State line, and 3 mi (5 km) east of Van Tassel, WY.

DRAINAGE AREA.--450 mi² (1,170 km²), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 4,687.70 ft (1,428.811 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions for irrigation of about 4,700 acres (19.0 km²) above station.

AVERAGE DISCHARGE.--26 years, 3.99 ft³/s (0.113 m³/s), 2,890 acre-ft/yr (3.56 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s (60.0 m³/s) Aug. 16, 1977, gage height, 8.28 ft (2.524 m) in gage well, from rating curve extended above 800 ft³/s (22.7 m³/s) on basis of computation of peak flow from slope-area measurement; minimum daily, 0.54 ft³/s (0.015 m³/s) Aug. 9, 10, 12, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
July 21	1830	57	1.6	a3.20	0.975
Aug. 6	0600	*155	4.4	a3.83	1.167

a High-water mark.

Minimum daily discharge, 1.1 ft³/s (0.031 m³/s) July 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	2.4	2.8	2.5	3.3	3.0	2.4	2.3	1.2	1.7	1.6
2	1.9	2.3	2.4	2.8	2.4	3.2	2.9	2.3	2.1	1.4	1.7	1.6
3	2.0	2.3	2.5	2.8	2.1	3.1	2.9	2.3	2.1	1.9	1.7	1.5
4	2.0	2.4	2.6	2.8	2.0	3.2	3.1	2.9	2.4	1.8	1.6	1.6
5	1.9	2.4	2.6	2.8	2.0	3.2	3.0	2.7	2.2	1.4	2.0	1.6
6	2.0	2.4	2.4	2.8	2.1	3.2	3.0	2.8	2.0	1.2	20	1.8
7	2.1	2.4	2.4	2.8	2.1	3.1	3.0	3.2	2.1	1.1	5.3	1.8
8	2.0	2.4	2.4	2.7	1.9	3.1	3.1	3.0	2.1	1.2	2.4	1.8
9	2.0	2.5	2.5	2.6	1.7	2.9	2.9	2.9	2.2	1.2	2.5	1.8
10	2.2	2.3	2.4	2.6	1.8	2.9	2.7	2.9	2.3	1.2	2.7	1.7
11	2.2	2.2	2.5	2.6	2.2	2.9	2.7	3.1	2.5	1.2	2.2	1.7
12	2.2	2.1	2.5	2.6	2.5	3.1	2.8	3.1	2.5	1.4	2.0	1.7
13	2.0	2.2	2.5	2.6	2.5	3.0	2.7	3.1	2.6	2.7	1.9	1.8
14	1.9	2.3	2.5	2.6	2.4	3.2	2.7	3.0	2.8	1.6	1.9	1.8
15	2.0	2.2	2.6	2.6	2.5	3.1	2.7	2.9	2.7	1.2	1.9	1.9
16	2.1	2.2	2.7	2.6	2.7	3.1	2.6	2.9	2.5	1.4	1.9	2.0
17	2.1	2.2	2.7	2.5	3.0	3.2	2.5	3.3	2.4	2.0	1.8	2.0
18	2.0	2.2	2.5	2.6	2.9	3.3	2.5	3.3	2.4	2.3	1.9	2.0
19	1.9	2.2	2.6	2.5	3.1	3.4	2.4	3.2	2.4	2.0	1.7	2.1
20	1.9	2.4	2.6	2.5	3.3	3.5	2.8	2.9	2.4	1.4	1.7	2.0
21	1.9	2.4	2.6	2.5	3.1	3.5	2.8	2.8	2.4	6.8	2.0	2.0
22	1.9	2.4	2.6	2.5	3.1	3.3	2.9	3.0	2.4	7.6	1.8	2.1
23	1.9	2.4	2.6	2.6	3.1	3.3	2.7	3.0	2.4	2.5	1.9	2.1
24	2.0	2.4	2.6	2.7	3.3	3.3	2.6	2.9	2.4	2.4	1.8	2.0
25	2.0	2.4	2.7	2.7	3.3	3.3	2.6	2.8	2.2	2.8	1.7	2.0
26	2.0	2.4	2.7	2.6	3.1	3.1	2.6	2.8	2.2	3.5	1.6	2.0
27	2.0	2.4	2.7	2.6	3.3	3.1	2.6	2.7	2.2	2.1	1.6	2.0
28	2.0	2.5	2.7	2.6	3.3	3.1	2.6	2.8	2.2	1.9	1.6	1.9
29	2.0	2.4	2.7	2.6	---	3.0	2.4	2.6	2.1	1.7	1.6	2.0
30	2.0	2.4	2.8	2.5	---	2.9	2.5	2.5	1.6	1.7	1.5	2.1
31	2.1	---	2.7	2.5	---	3.0	---	2.3	---	1.7	1.5	---
TOTAL	62.0	69.9	79.7	81.6	73.3	97.9	82.3	88.4	69.1	65.5	79.1	56.0
MEAN	2.00	2.33	2.57	2.63	2.62	3.16	2.74	2.85	2.30	2.11	2.55	1.87
MAX	2.2	2.5	2.8	2.8	3.3	3.5	3.1	3.3	2.8	7.6	20	2.1
MIN	1.8	2.1	2.4	2.5	1.7	2.9	2.4	2.3	1.6	1.1	1.5	1.5
AC-FT	123	139	158	162	145	194	163	175	137	130	157	111

CAL YR 1980 TOTAL 1213.61 MEAN 3.32 MAX 20 MIN .92 AC-FT 2410
WTR YR 1981 TOTAL 904.80 MEAN 2.48 MAX 20 MIN 1.1 AC-FT 1790

NIOBRARA RIVER BASIN

31

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 (3 m) upstream from timber farm-vehicle bridge, 300 ft (91 m) upstream from bridge on State Highway 29, 0.2 mi (0.3 km) northwest of Agate, and 14.5 mi (23.3 km) upstream from Whistle Creek.

DRAINAGE AREA.--840 mi² (2,180 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,440 ft (1,353 m), from topographic map. Prior to Nov. 3, 1960, nonrecording gage at present site and datum.

REMARKS.--Records good. Diversions for irrigation of about 6,700 acres (27.1 km²) above station.

AVERAGE DISCHARGE.--24 years, 14.0 ft³/s (0.396 m³/s), 10,140 acre-ft/yr (12.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft³/s (5.13 m³/s) June 23, 1959, gage height, 5.00 ft (1.524 m), from floodmark; minimum daily, 1.0 ft³/s (0.028 m³/s) Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29 ft³/s (0.82 m³/s) Feb. 16, gage height, 3.06 ft (0.933 m), no peak above base of 35 ft³/s (0.99 m³/s); minimum daily, 6.1 ft³/s (0.17 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	12	13	17	8.9	19	11	9.7	10	9.3	8.2	7.2
2	7.3	12	14	17	7.9	19	12	8.9	10	9.0	8.0	7.1
3	7.6	11	17	16	9.1	19	12	9.3	10	9.2	7.7	7.1
4	7.8	11	20	16	11	19	13	12	11	8.5	7.3	7.3
5	7.7	11	16	16	13	19	12	12	11	8.1	7.5	7.3
6	7.7	12	17	16	13	19	12	12	10	7.3	8.2	8.3
7	8.0	12	16	14	15	19	10	12	9.9	7.0	8.7	9.5
8	8.5	12	14	15	14	19	11	12	9.4	6.6	7.9	8.7
9	9.0	12	15	16	13	15	11	11	9.7	6.5	8.8	8.5
10	9.5	12	15	15	11	14	11	12	10	6.4	9.9	8.4
11	10	12	15	15	6.9	12	11	11	10	6.3	9.3	7.9
12	11	12	17	14	8.0	12	9.9	11	9.4	6.1	9.0	7.8
13	12	12	16	16	14	12	9.3	11	8.6	7.9	9.3	7.9
14	12	12	15	16	14	12	9.3	11	9.7	9.3	9.4	7.9
15	13	12	15	16	19	11	9.4	10	9.5	7.8	9.1	7.9
16	13	13	16	14	21	12	9.9	11	9.0	7.6	8.9	8.0
17	14	11	16	13	19	12	9.9	12	8.6	7.6	8.7	7.9
18	13	13	16	13	18	12	10	13	8.2	8.6	8.7	8.3
19	12	14	14	16	20	12	13	12	7.8	8.8	8.6	8.5
20	12	14	13	15	23	12	13	11	8.2	7.7	8.4	8.6
21	12	14	13	15	21	12	13	11	8.1	7.0	8.1	8.1
22	11	14	15	16	20	12	12	11	7.9	6.9	8.1	8.1
23	11	15	16	16	20	12	11	11	7.6	6.9	8.3	8.6
24	11	14	13	16	19	11	10	11	7.4	7.0	8.2	8.0
25	11	14	13	16	19	11	11	11	6.9	7.8	8.0	8.9
26	11	14	17	15	19	12	10	10	8.4	9.3	7.9	8.8
27	12	13	16	14	19	11	10	10	7.7	9.6	7.9	8.7
28	12	14	16	15	20	12	10	10	12	9.4	7.9	8.6
29	12	13	15	15	---	12	9.7	10	12	10	7.9	8.6
30	12	13	15	15	---	11	9.7	10	10	9.4	7.6	8.9
31	12	---	15	13	---	11	---	10	---	8.6	7.5	---
TOTAL	329.2	380	474	472	435.8	427	326.1	338.9	278.0	247.5	259.0	245.4
MEAN	10.6	12.7	15.3	15.2	15.6	13.8	10.9	10.9	9.27	7.98	8.35	8.18
MAX	14	15	20	17	23	19	13	13	12	10	9.9	9.5
MIN	7.1	11	13	13	6.9	11	9.3	8.9	6.9	6.1	7.3	7.1
AC-FT	653	754	940	936	864	847	647	672	551	491	514	487

CAL YR 1980 TOTAL 5148.9 MEAN 14.1 MAX 43 MIN 5.0 AC-FT 10210
WTR YR 1981 TOTAL 4212.9 MEAN 11.5 MAX 23 MIN 6.1 AC-FT 8360

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., Daves County, Hydrologic Unit 10150002, on right bank 1 mi (2 km) upstream from high-water line of Box Butte Reservoir and 6 mi (10 km) east of Marsland.

DRAINAGE AREA.--1,400 mi² (3,630 km²), 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 (1,223.001 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 27, 1949, nonrecording gage at present site and datum.

REMARKS.--Records good. Diversions for irrigation of about 12,800 acres (51.8 km²) above station.

AVERAGE DISCHARGE.--35 years, 29.9 ft³/s (0.847 m³/s), 21,660 acre-ft/yr (26.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,950 ft³/s (140 m³/s) July 28, 1951, gage height, 10.30 ft (3.139 m), from rating curve extended above 230 ft³/s (6.51 m³/s) on basis of step-backwater analysis and slope-area measurement at gage height 9.22 ft (2.810 m); minimum daily, 1.6 ft³/s (0.045 m³/s) Sept. 26, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 180 ft³/s (5.10 m³/s) Aug. 22, gage height, 5.48 ft (1.670 m), from highwater mark; no other peak above base of 100 ft³/s (2.83 m³/s); minimum daily, 6.0 ft³/s (0.17 m³/s) July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	27	28	37	26	41	29	18	29	6.0	20	18
2	15	27	24	36	30	41	26	18	27	14	18	15
3	15	28	26	36	34	40	25	18	26	12	18	15
4	15	28	25	36	30	40	24	19	26	11	18	15
5	14	28	31	36	33	40	23	20	25	12	18	15
6	14	28	29	36	34	40	23	20	26	10	18	15
7	15	28	30	33	33	40	23	25	25	9.5	16	15
8	15	28	28	30	32	40	26	26	20	9.5	15	15
9	15	28	26	31	28	40	26	26	19	9.0	15	15
10	15	28	30	30	28	40	25	24	18	9.0	15	14
11	16	28	30	29	32	39	23	21	17	8.5	15	14
12	18	28	30	30	36	39	13	23	15	9.0	16	14
13	18	29	31	30	25	39	21	25	14	10	16	14
14	18	29	31	30	26	38	16	25	14	12	15	14
15	20	29	32	29	27	37	20	26	14	14	21	13
16	24	30	36	28	33	36	18	26	13	14	22	8.5
17	25	29	37	28	37	36	24	29	12	14	22	10
18	26	26	36	27	37	36	24	36	12	17	20	10
19	26	27	30	29	40	36	24	37	12	18	20	10
20	26	28	28	30	44	36	28	34	11	19	18	10
21	26	28	30	30	44	36	30	34	10	21	18	10
22	26	30	32	31	40	36	30	32	9.5	20	44	10
23	26	32	34	31	58	36	20	27	9.5	20	30	10
24	26	30	30	32	44	30	29	31	9.0	19	18	10
25	26	29	34	31	42	30	30	28	9.0	20	18	10
26	26	29	31	28	42	31	25	26	9.0	20	17	9.5
27	26	28	34	28	42	31	16	17	9.0	20	17	14
28	26	29	36	30	42	31	14	26	9.5	20	17	12
29	27	30	36	31	---	31	24	32	10	21	17	12
30	27	32	37	32	---	31	20	28	9.1	20	18	12
31	27	---	37	31	---	31	---	27	---	20	18	---
TOTAL	654	858	969	966	999	1128	699	804	468.6	458.5	588	379.0
MEAN	21.1	28.6	31.3	31.2	35.7	36.4	23.3	25.9	15.6	14.8	19.0	12.6
MAX	27	32	37	37	58	41	30	37	29	21	44	18
MIN	14	26	24	27	25	30	13	17	9.0	6.0	15	8.5
AC-FT	1300	1700	1920	1920	1980	2240	1390	1590	929	909	1170	752

CAL YR 1980 TOTAL 11069.5 MEAN 30.2 MAX 90 MIN 6.0 AC-FT 21960
WTR YR 1981 TOTAL 8971.1 MEAN 24.6 MAX 58 MIN 6.0 AC-FT 17790

NIOBRARA RIVER BASIN

33

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 (14 km) north of Hemingford.

DRAINAGE AREA.--1,460 mi² (3,780 km²), 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 (37.5 hm³) between elevations 3,969.00 ft (1,209.751 m), sill of outlet gate, and 4,007.00 ft (1,221.334 m), crest of spillway. Dead storage, 640 acre-ft (0.789 hm³). 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 (39.7 hm³) Mar. 26, 1948, elevation, 4,007.70 ft (1,221.547 m); minimum observed since operation of reservoir began, 764 acre-ft (0.942 hm³) Aug. 23 to Sept. 14, 1976, elevation, 3,969.82 ft (1,210.001 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 16,020 acre-ft (19.8 hm³) June 10, elevation, 3,995.3 ft (1,217.77 m); minimum observed, 2,050 acre-ft (2.53 hm³) Sept. 10, elevation, 3,975.70 ft (1,211.793 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date		Elevation (feet) ^a /	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	3,981.40	4,430	-
Oct.	31	3,983.79	5,750	+1,320
Nov.	30	3,986.50	7,500	+1,750
Dec.	31	3,988.90	9,330	+1,830
CAL YR 1980				+520
Jan.	31	3,990.82	11,000	+1,670
Feb.	28	3,992.47	12,550	+1,550
Mar.	31	3,993.85	13,920	+1,370
Apr.	30	3,994.66	14,760	+840
May	31	3,995.68	15,850	+1,090
June	30	3,993.70	13,770	-2,080
July	31	3,987.30	8,080	-5,690
Aug.	31	3,977.79	2,750	-5,330
Sept.	30	3,978.31	2,950	+200
WTR YR 1981				-1,480

^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 (0.3 km) downstream from Box Butte Reservoir and 9 mi (14 km) north of Hemingford.

DRAINAGE AREA.--1,460 mi² (3,780 km²), 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 (1,203.984 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow completely regulated by Box Butte Reservoir (station 06455000).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 616 ft³/s (17.4 m³/s) July 2, 1968, gage height, 5.04 ft (1.536 m); minimum daily, 0.10 ft³/s (0.003 m³/s) for many days in 1947, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 223 ft³/s (6.32 m³/s) Aug. 4, gage height, 4.42 ft (1.347 m); minimum daily, 0.58 ft³/s (0.016 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.83	.83	.89	.80	.95	1.0	.98	1.2	186	82	95
2	.74	.83	.83	.89	.80	.95	1.0	.98	1.2	189	114	88
3	.77	.77	.83	.95	.80	.95	1.0	1.0	1.1	180	172	84
4	.77	.83	.83	.95	.82	.95	1.0	1.1	1.1	180	189	76
5	.77	.83	.83	.95	.82	.95	1.0	1.0	1.1	180	161	63
6	.77	.83	.83	.95	.84	.95	1.0	1.1	1.0	186	148	56
7	.77	.83	.83	.95	.86	.95	1.1	1.1	1.0	204	123	45
8	.77	.83	.83	.95	.88	.95	1.1	1.1	1.0	213	108	45
9	.77	.83	.83	.95	.90	.95	1.1	1.0	.98	210	108	44
10	.77	.83	.86	.95	.90	.98	1.0	1.0	.98	210	108	19
11	.77	.83	.86	.96	.92	.98	1.1	1.0	.95	207	106	.68
12	.77	.83	.86	.96	.94	.98	1.0	1.0	.95	201	104	.66
13	.77	.89	.89	.96	.96	.98	1.0	1.0	.95	198	106	.61
14	.77	.89	.89	.97	.98	.98	1.0	1.0	.95	195	103	.61
15	.86	.89	.86	.97	1.0	.98	1.0	1.0	.95	192	94	.61
16	.83	.89	.83	.97	1.0	.98	1.0	1.0	.89	172	94	.58
17	.83	.89	.83	.97	1.0	.98	1.0	1.2	.89	126	82	.61
18	.83	.89	.83	.97	1.0	.98	1.0	1.2	.89	1.0	69	.61
19	.83	.89	.83	.98	1.0	1.0	1.0	1.1	.89	.89	69	.61
20	.80	.89	.83	.98	1.0	1.0	1.1	1.1	.89	.71	68	.61
21	.80	.89	.83	.98	.95	1.0	1.0	1.0	.89	35	76	.61
22	.80	.89	.83	.98	.95	1.0	.95	1.0	.89	71	87	.63
23	.80	.89	.83	.98	.95	1.0	.95	1.0	.89	.92	92	.66
24	.80	.89	.83	.98	.95	1.0	.95	.66	.89	27	104	.71
25	.83	.89	.83	.98	.95	1.0	.95	1.0	4.2	36	114	.71
26	.83	.89	.83	.98	.95	1.0	.95	1.2	42	14	114	.61
27	.83	.83	.83	.98	.95	1.0	.95	1.2	53	9.6	118	.61
28	.83	.83	.83	.94	.95	1.0	.95	1.2	81	11	116	.61
29	.83	.83	.83	.90	---	1.0	.95	1.2	116	16	106	.61
30	.83	.83	.83	.88	---	1.0	.95	1.2	156	35	101	.61
31	.83	---	.89	.84	---	1.0	---	1.2	---	71	99	---
TOTAL	24.74	25.68	26.03	29.49	25.82	30.37	30.05	32.82	475.62	3558.12	3335	627.56
MEAN	.80	.86	.84	.95	.92	.98	1.00	1.06	15.9	115	108	20.9
MAX	.86	.89	.89	.98	1.0	1.0	1.1	1.2	156	213	189	95
MIN	.74	.77	.83	.84	.80	.95	.95	.66	.89	.71	68	.58
AC-FT	49	51	52	58	51	60	60	65	943	7060	6610	1240
CAL YR 1980	TOTAL	8886.90	MEAN	24.3	MAX	217	MIN	.71	AC-FT	17630		
WTR YR 1981	TOTAL	8221.30	MEAN	22.5	MAX	213	MIN	.58	AC-FT	16310		

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 (76 m) upstream from bridge on State Highway 27, 4 mi (6 km) downstream from Rush Creek, and 11 mi (18 km) south of Gordon.

DRAINAGE AREA.--4,290 mi² (11,100 km²), 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 3,433.49 ft (1,046.528 m) National Geodetic Vertical Datum of 1929. Aug. 24, 1928, to June 30, 1932, nonrecording gage at bridge 4 mi (6 km) downstream at different datum. Dec. 3, 1945, to Mar. 24, 1970, water-stage recorder at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records good except those for winter period, 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 (259 m³/s) May 21, 1962, gage height, 5.25 ft (1.600 m); minimum daily, 16 ft³/s (0.45 m³/s) Dec. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 801 ft³/s (22.7 m³/s) Aug. 17, gage height, 1.36 ft (0.415 m); maximum gage height, 1.75 ft (0.533 m) Feb. 11, backwater from ice; minimum daily discharge, 49 ft³/s (1.39 m³/s) July 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	92	100	135	98	107	112	91	149	67	77	70
2	80	92	70	132	98	107	94	85	110	97	72	68
3	77	90	90	132	98	109	88	94	100	106	122	68
4	83	86	100	125	90	109	102	114	97	64	162	68
5	85	88	109	112	88	109	106	121	96	49	102	69
6	80	90	112	102	88	109	97	114	100	52	260	71
7	85	90	112	102	88	109	100	133	93	53	97	81
8	86	89	108	109	88	109	115	144	83	51	80	81
9	86	94	100	109	80	109	112	131	80	52	76	75
10	89	94	104	112	80	112	97	114	88	53	91	69
11	92	94	104	112	70	112	91	103	115	53	81	70
12	96	94	110	106	90	109	100	121	100	51	66	91
13	99	97	110	109	100	109	88	117	86	53	63	78
14	95	102	115	105	110	109	88	104	90	60	98	75
15	112	102	115	105	110	106	88	91	86	112	90	75
16	133	100	102	106	120	106	85	88	80	150	87	76
17	119	94	100	110	110	109	88	107	76	280	220	80
18	108	102	97	112	100	109	91	149	73	296	146	83
19	98	100	83	110	111	109	91	145	72	153	106	82
20	90	97	68	88	96	112	109	115	71	132	91	78
21	88	94	70	72	90	112	121	99	70	106	85	73
22	86	94	80	70	96	113	109	93	68	85	80	74
23	80	94	80	69	103	115	97	104	66	216	80	79
24	86	94	70	69	103	114	94	103	63	251	77	81
25	91	102	80	75	106	115	91	95	64	300	80	91
26	93	102	94	78	116	128	97	90	67	250	75	81
27	92	100	110	81	119	128	91	94	64	205	75	76
28	94	106	125	78	115	128	88	131	68	132	78	74
29	96	104	112	93	---	132	85	128	72	94	78	74
30	95	104	109	98	---	132	85	116	73	83	74	77
31	97	---	118	98	---	125	---	113	---	77	67	---
TOTAL	2868	2881	3057	3114	2761	3521	2900	3447	2520	3783	3036	2288
MEAN	92.5	96.0	98.6	100	98.6	114	96.7	111	84.0	122	97.9	76.3
MAX	133	106	125	135	120	132	121	149	149	300	260	91
MIN	77	86	68	69	70	106	85	85	63	49	63	68
AC-FT	5690	5710	6060	6180	5480	6980	5750	6840	5000	7500	6020	4540
CAL YR 1980	TOTAL	41184	MEAN	113	MAX	710	MIN	42	AC-FT	81690		
WTR YR 1981	TOTAL	36176	MEAN	99.1	MAX	300	MIN	49	AC-FT	71760		

NIOBRARA RIVER BASIN

06459200 SNAKE RIVER ABOVE MERRITT RESERVOIR, NE

LOCATION.--Lat 42°36'12", long 101°04'14", in NW1/4SW1/4 sec.3, T.30 N., R.32 W., Cherry County, Hydrologic Unit 10150005, on left bank 0.2 mi (0.3 km) south of Nebraska National Forest boundary fence, 2.6 mi (4.2 km) upstream from Shelbourn Bridge, 7.1 mi (11.4 km) southeast of headquarters for Nebraska National Forest (Niobrara Division), 12.4 mi (20.0 km) upstream from Boardman Creek, and 16.9 mi (27.2 km) upstream from Merritt Dam.

DRAINAGE AREA.--440 mi² (1,140 km²), approximately, of which about 28 mi² (73 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Prior to Sept. 9, 1977, at site 2.4 mi (3.9 km) downstream at different datum.

REMARKS.--Records fair except those for flow above 250 ft³/s (7.08 m³/s) and those for winter period, which are poor.

AVERAGE DISCHARGE.--19 years, 203 ft³/s (5.749 m³/s), 147,100 acre-ft/yr (0.181 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 637 ft³/s (18.0 m³/s) Aug. 12, 1966, gage height, 2.43 ft (0.741 m), site and datum then in use; maximum gage height, 8.63 feet, site and datum then in use, Mar. 14, 1977, ice jam; minimum daily discharge, 89 ft³/s (2.52 m³/s) Dec. 13, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since October 1960, 820 ft³/s (23.2 m³/s) June 30, 1962, gage height, 2,953.46 ft (900.215 m) National Geodetic Vertical Datum of 1929, from high-water profiles at reference point on downstream side of Shelbourn Bridge 2.6 mi (4.2 km) downstream, result of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 411 ft³/s (11.6 m³/s) July 17 at 0745, gage height, 2.60 ft (0.792 m), no other peak above base of 350 ft³/s (9.91 m³/s); maximum gage height, 5.60 ft (1.707 m) Jan. 29, ice jam; minimum daily discharge, 150 ft³/s (4.25 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	219	222	183	160	180	197	204	191	171	198	185
2	200	217	200	182	160	184	198	206	192	211	194	188
3	201	203	180	184	165	184	197	209	191	207	204	187
4	203	207	193	181	170	184	194	207	192	203	221	188
5	206	206	193	181	180	183	192	204	193	184	256	192
6	208	205	196	185	180	184	191	202	194	168	221	200
7	229	209	192	182	170	183	193	205	195	163	215	202
8	235	205	194	185	160	184	193	204	195	165	214	197
9	235	192	191	185	155	186	192	204	194	166	230	199
10	217	197	193	182	150	185	195	202	194	171	224	204
11	202	199	192	184	155	188	195	202	202	179	226	204
12	205	191	194	182	170	189	195	206	198	180	217	204
13	219	191	193	185	190	186	195	204	193	181	205	204
14	213	189	189	183	210	188	193	201	201	180	226	193
15	230	211	192	184	220	189	193	202	196	186	229	201
16	247	196	195	184	183	188	192	203	185	236	245	197
17	202	196	195	182	194	192	196	211	183	291	237	199
18	207	189	196	179	192	190	196	219	182	256	225	199
19	211	192	193	182	186	189	199	205	179	240	224	199
20	210	187	192	184	184	192	197	207	183	214	208	191
21	214	200	165	179	185	194	205	211	183	205	198	186
22	229	189	175	182	184	189	205	200	180	229	195	185
23	218	198	189	183	183	192	200	196	180	271	202	186
24	204	184	170	184	184	188	202	191	181	284	212	191
25	215	194	180	182	182	187	204	190	181	288	198	193
26	213	201	190	181	183	190	206	191	180	247	187	205
27	226	203	185	179	186	188	211	191	188	231	183	194
28	225	231	187	170	183	189	208	197	191	207	183	191
29	217	215	182	155	---	197	204	196	189	203	185	193
30	208	211	182	165	---	195	205	191	184	204	187	196
31	214	---	187	186	---	197	---	191	---	203	185	---
TOTAL	6660	6027	5877	5605	5004	5834	5943	6252	5670	6524	6534	5853
MEAN	215	201	190	181	179	188	198	202	189	210	211	195
MAX	247	231	222	186	220	197	211	219	202	291	256	205
MIN	197	184	165	155	150	180	191	190	179	163	183	185
AC-FT	13210	11950	11660	11120	9930	11570	11790	12400	11250	12940	12960	11610

CAL YR 1980 TOTAL 72402 MEAN 198 MAX 372 MIN 155 AC-FT 143600
 WTB YR 1981 TOTAL 71783 MEAN 197 MAX 291 MIN 150 AC-FT 142400

NIOBRARA RIVER BASIN

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06459200 SNAKE RIVER ABOVE MERRITT RESERVOIR, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1963 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Water years 1963-75, October 1977 to current year.

INSTRUMENTATION.--Temperature recorder from Oct. 1, 1963.

REMARKS.--Temperature recorder inoperable during period of October 1980 to March 1981 owing to unavailability of repair parts.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 32.0°C July 18, 1974; minimum, 0.0°C on many days during winter periods.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.0	9.5	20.0	11.5	26.0	17.0	26.5	20.5	26.5	21.0	21.5	14.5
2	18.0	10.0	20.5	13.0	23.5	18.0	24.0	20.5	28.5	19.5	22.0	15.0
3	14.5	10.0	19.0	14.5	24.0	16.0	26.0	20.0	29.5	21.5	21.5	17.0
4	11.5	9.5	14.5	12.0	25.5	18.0	29.0	20.0	26.0	21.0	21.5	15.0
5	14.0	9.5	19.0	10.0	25.5	17.0	29.5	20.5	28.0	19.5	24.0	17.0
6	16.5	10.0	15.5	11.5	25.0	18.0	28.5	21.0	26.0	20.5	21.0	17.0
7	14.0	10.5	12.0	10.5	26.0	18.5	28.0	20.0	24.0	19.0	21.0	14.5
8	13.5	9.5	18.0	9.5	26.0	18.5	23.5	17.0	23.0	18.5	23.0	15.5
9	16.5	9.5	16.0	10.5	23.0	18.5	25.5	17.0	23.5	18.0	23.5	16.5
10	17.0	11.0	18.0	9.5	22.0	15.5	28.5	20.5	25.0	17.0	23.0	17.0
11	16.5	10.0	15.0	11.0	25.0	17.0	31.0	21.5	26.0	18.5	22.0	17.0
12	19.5	11.0	18.5	11.5	25.0	19.5	29.0	23.0	26.0	19.5	21.5	16.5
13	16.5	10.5	16.0	11.5	26.0	19.5	29.5	21.0	25.0	20.5	21.0	16.0
14	16.0	9.5	19.5	10.0	23.5	17.0	29.5	21.5	26.0	20.5	20.0	15.5
15	14.0	9.0	18.5	12.0	19.5	15.0	26.5	21.0	25.5	20.0	19.0	14.0
16	19.0	9.5	16.0	13.0	21.5	13.0	25.5	19.5	23.0	20.5	17.0	11.5
17	20.0	13.0	13.0	11.0	22.0	15.0	26.0	18.5	20.5	18.5	18.5	11.5
18	18.0	12.0	13.5	10.0	22.0	15.5	26.0	20.5	25.5	18.0	20.0	11.5
19	16.5	11.5	18.0	10.0	24.5	15.5	28.5	20.5	27.0	19.5	21.0	14.0
20	11.5	10.5	17.0	11.5	25.5	19.0	29.0	20.5	27.0	20.0	19.5	15.0
21	17.0	10.5	17.0	11.5	24.5	19.0	26.5	19.5	26.5	19.5	18.5	15.0
22	15.0	11.0	20.5	13.0	26.5	18.0	27.0	19.5	24.0	20.5	18.5	13.5
23	18.0	9.5	17.0	13.0	26.0	19.0	26.0	20.0	25.5	19.0	21.5	15.5
24	20.5	11.5	19.5	10.5	28.5	20.0	25.0	19.5	25.0	18.5	20.0	16.0
25	21.0	14.0	21.5	14.0	28.0	20.0	23.5	18.0	26.0	19.5	20.5	15.5
26	22.0	16.0	22.0	16.0	26.0	20.0	18.0	15.5	22.0	19.0	19.0	14.0
27	22.0	16.0	21.0	17.0	30.5	20.5	16.0	15.0	21.5	17.0	17.0	12.0
28	20.5	14.5	23.0	17.0	27.0	22.0	23.0	15.5	23.5	16.0	19.0	11.5
29	19.5	15.0	21.0	17.0	26.5	19.5	28.0	19.5	25.0	17.0	17.0	14.0
30	17.0	13.5	23.5	15.0	27.0	19.5	27.0	21.0	26.5	19.5	13.0	13.0
31	---	---	23.0	16.0	---	---	29.0	21.0	24.0	17.0	---	---
MONTH	22.0	9.0	23.5	9.5	30.5	13.0	31.0	15.0	29.5	16.0	24.0	11.5

NIOBRARA RIVER BASIN

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 (13.0 km) southwest of Burge and 23 mi (37 km) southwest of Valentine.

DRAINAGE AREA.--640 mi² (1,660 km²), approximately, of which about 44 mi² (110 km²) 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 (89.9 hm³) between elevations 2,875.0 ft (876.30 m), sill of canal outlet works, and 2,946.0 ft (897.94 m), crest of spillway. Dead and inactive storage, 1,614 acre-ft (1.99 hm³) below elevation 2,875.0 ft (876.30 m). 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, 77,140 acre-ft (95.1 hm³) May 22-23, 1981, elevation 2,946.9 ft (898.22 m); minimum since appreciable storage was attained, 20,060 acre-ft (24.7 hm³) Oct. 1, 1968, elevation, 2,916.1 ft (888.83 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 77,140 acre-ft (95.1 hm³) May 22-23, elevation, 2,946.9 ft (898.22 m); minimum observed, 52,110 acre-ft (64.3 hm³) Sept. 12-18, elevation, 2,937.3 ft (895.29 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	2,934.2	45,620	-
Oct.	31	2,939.9	58,180	+12,560
Nov.	30	2,944.0	68,830	+10,650
Dec.	31	2,944.0	68,830	0
CAL YR 1980	.....	-	-	+4,030
Jan.	31	2,944.1	69,110	+280
Feb.	28	2,944.3	69,670	+560
Mar.	31	2,946.7	76,550	+6,880
Apr.	30	2,946.7	76,550	0
May	31	2,946.7	76,550	0
June	30	2,944.9	71,340	-5,210
July	31	2,940.1	58,670	-12,670
Aug.	31	2,937.7	53,010	-5,660
Sept.	30	2,938.7	55,310	+2,300
WTR YR 1981	-	-	+9,690

NIORARA RIVER BASIN

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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 (46 m) downstream from Nebraska National Forest boundary, 2.1 mi (3.4 km) downstream from Merritt Dam, 6.5 mi (10.5 km) southwest of Burge, and 22 mi (35 km) southwest of Valentine.

DRAINAGE AREA.--660 mi² (1,710 km²), approximately, of which about 44 mi² (110 km²) 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 (855.074 m) National Geodetic Vertical Datum of 1929, (levels by Bureau of Reclamation).

REMARKS.--Records good. Natural flow affected by storage in Merritt Reservoir (station 06459300) 2.1 mi (3.4 km) upstream.

AVERAGE DISCHARGE.--18 years (1963-81), 148 ft³/s (4.191 m³/s), 107,200 acre-ft/yr (0.132 km³/yr), since storage and diversion began.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,170 ft³/s (89.8 m³/s) Feb. 7, 1963, gage height, 6.96 ft (2.121 m), release of storage behind temporary construction dike, from rating curve extended above 520 ft³/s (14.7 m³/s) on basis of slope-area measurement at gage height 5.39 ft (1.643 m); minimum daily, 5.8 ft³/s (0.16 m³/s) May 24-27, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 244 ft³/s (6.91 m³/s) Apr. 16, May 21; maximum gage height, 2.03 ft (0.619 m) May 21; minimum daily discharge, 13 ft³/s (0.37 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	23	205	208	236	104	208	158	170	18	29	91
2	18	23	190	208	219	104	208	222	162	21	29	91
3	22	23	190	215	209	104	214	185	153	19	29	91
4	22	23	190	235	208	104	217	119	146	18	30	91
5	22	24	190	235	209	104	217	123	136	18	29	91
6	22	24	190	235	208	104	217	123	132	18	85	91
7	22	24	190	235	209	104	214	130	126	18	125	91
8	23	24	190	225	208	104	214	141	130	18	124	91
9	23	24	190	217	209	104	220	137	114	18	124	91
10	23	24	190	217	211	104	211	139	100	18	123	93
11	23	24	191	217	211	104	208	139	107	18	82	93
12	23	24	193	217	211	104	211	142	106	18	28	93
13	23	24	196	199	211	104	208	144	107	18	27	93
14	23	24	211	187	208	105	205	148	112	17	27	93
15	23	24	223	199	208	104	214	152	113	17	27	93
16	23	24	235	213	225	104	222	145	111	21	28	95
17	23	24	235	217	237	104	196	157	109	18	27	95
18	23	24	235	213	236	102	202	190	99	17	27	71
19	23	24	220	205	235	104	202	200	98	17	27	57
20	23	24	211	205	236	110	208	206	92	17	27	57
21	23	24	205	205	238	108	217	226	90	17	27	57
22	23	24	193	205	236	114	217	237	63	18	27	57
23	23	24	193	205	235	114	217	228	49	18	27	57
24	23	24	193	205	235	110	214	216	30	17	27	57
25	23	24	193	205	213	108	214	204	21	20	28	57
26	23	61	193	206	199	112	214	195	21	18	65	58
27	23	96	201	224	143	133	214	191	19	18	93	57
28	23	184	208	235	104	140	187	195	18	19	92	57
29	23	220	223	235	---	173	150	189	18	27	91	58
30	23	220	235	235	---	190	140	183	18	29	91	57
31	23	---	218	235	---	202	---	180	---	29	92	---
TOTAL	693	1377	6320	6697	5947	3589	6200	5344	2770	592	1714	2324
MEAN	22.4	45.9	204	216	212	116	207	172	92.3	19.1	55.3	77.5
MAX	23	220	235	235	238	202	222	237	170	29	125	95
MIN	13	23	190	187	104	102	140	119	18	17	27	57
AC-FT	1370	2730	12540	13280	11800	7120	12300	10600	5490	1170	3400	4610
CAL YR 1980	TOTAL	44736	MEAN 122	MAX 348	MIN 13	AC-FT 88730						
WTR YR 1981	TOTAL	43567	MEAN 119	MAX 238	MIN 13	AC-FT 86420						

NIOBRARA RIVER BASIN

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 (152 m) downstream from powerplant in city park at north edge of Valentine and 4 mi (6 km) upstream from mouth.

DRAINAGE AREA.--390 mi² (1,010 km²), approximately, of which about 200 mi² (520 km²) contributes directly to surface runoff.

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

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

GAGE.--Water-stage recorder. Altitude of gage is 2,470 ft (753 m), from topographic map.

REMARKS.--Records good. Flow regulated by powerplant 500 ft (152 m) above station.

AVERAGE DISCHARGE.--33 years (1948-81), 33.6 ft³/s (0.952 m³/s), 24,340 acre-ft/yr (30.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) Mar. 22, 1960, gage height, 8.00 ft (2.438 m); minimum daily, 2.6 ft³/s (0.074 m³/s) Feb. 22, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 227 ft³/s (6.43 m³/s) July 3, gage height, 3.03 ft (0.924 m); minimum daily, 8.6 ft³/s (0.24 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	28	33	33	27	34	47	22	27	19	16	16
2	11	29	11	32	15	33	41	24	26	46	18	14
3	17	27	18	34	25	34	38	22	17	102	11	15
4	23	27	34	18	31	33	42	28	22	54	58	14
5	8.6	25	34	31	26	50	38	33	26	40	51	17
6	12	29	28	32	25	19	36	26	26	28	62	21
7	15	9.7	24	32	26	31	26	31	20	21	56	14
8	16	46	13	29	24	27	29	27	12	26	52	13
9	18	30	23	24	21	30	33	33	20	18	37	25
10	21	26	28	27	24	30	27	31	12	17	23	16
11	13	29	23	23	21	32	28	33	22	21	27	12
12	17	21	34	22	20	29	25	31	19	16	37	19
13	18	29	33	31	22	30	27	19	17	17	25	18
14	20	28	28	29	25	30	27	31	15	14	30	13
15	20	29	29	28	26	32	24	31	23	9.4	31	19
16	29	31	29	21	33	32	23	21	24	13	29	19
17	36	26	30	19	50	30	23	33	18	18	28	15
18	29	27	37	18	51	30	29	37	21	24	13	22
19	35	32	13	38	44	27	25	43	18	23	28	17
20	33	19	15	31	31	29	23	41	18	14	15	20
21	28	36	18	27	44	34	26	36	15	17	19	18
22	21	30	33	23	43	30	30	33	11	24	20	17
23	31	25	35	38	44	30	24	37	19	23	18	18
24	22	28	26	29	37	31	28	33	13	24	15	19
25	35	26	15	31	36	31	25	33	13	30	19	17
26	30	29	38	33	38	30	28	30	12	25	18	38
27	22	28	27	33	37	30	26	30	15	25	24	30
28	29	25	38	26	34	40	27	29	19	35	22	12
29	32	25	33	20	---	45	22	29	20	25	16	29
30	24	25	37	15	---	37	27	29	15	28	17	20
31	33	---	26	29	---	38	---	29	---	22	16	---
TOTAL	712.6	824.7	843	856	880	998	874	945	555	818.4	851	557
MEAN	23.0	27.5	27.2	27.6	31.4	32.2	29.1	30.5	18.5	26.4	27.5	18.6
MAX	36	46	38	38	51	50	47	43	27	102	62	38
MIN	8.6	9.7	11	15	15	19	22	19	11	9.4	11	12
AC-FT	1410	1640	1670	1700	1750	1980	1730	1870	1100	1620	1690	1100
CAL YR 1980	TOTAL	10766.0	MEAN 29.4	MAX 107	MIN 3.7	AC-FT 21350						
WTR YR 1981	TOTAL	9714.7	MEAN 26.6	MAX 102	MIN 8.6	AC-FT 19270						

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 (5 m) downstream from highway bridge, 2.2 mi (3.5 km) downstream from Big Beaver Creek, 5.5 mi (8.8 km) downstream from Minnechaduzza Creek, and 6.5 mi (10.5 km) southwest of Sparks.

DRAINAGE AREA.--8,090 mi² (21,000 km²), 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(N), 1948-50(P). WDR NE-67: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,287.57 ft (697.251 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Natural flow of stream affected by irrigation and power developments, storage in Box Eutte Reservoir (station 06455000), and since May 1964 by storage in Merritt Reservoir (station 06459300).

AVERAGE DISCHARGE.--36 years, 772 ft³/s (21.86 m³/s), 559,300 acre-ft/yr (0.690 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) Mar. 5, 1949, gage height, 6.73 ft (2.051 m), from rating curve extended above 3,800 ft³/s (108 m³/s); maximum gage height recorded, 10.06 ft (3.066 m) Feb. 7, 1973, ice jam; minimum daily discharge, 100 ft³/s (2.83 m³/s) Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,230 ft³/s (63.2 m³/s) Nov. 26, gage height, 4.39 ft (1.338 m), from sluicing at dam above station; maximum gage height, 4.49 ft (1.369 m) July 6, from sluicing at dam above station; minimum daily discharge, 300 ft³/s (8.50 m³/s) Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	460	571	660	762	600	655	779	616	689	480	647	550
2	470	570	620	741	520	660	779	660	666	506	687	540
3	460	561	659	748	600	674	772	689	666	666	647	550
4	460	560	755	760	660	658	786	653	645	618	770	540
5	470	540	814	779	720	684	767	630	645	535	760	560
6	460	565	754	760	780	659	760	622	637	450	718	580
7	470	570	691	740	760	674	781	654	656	388	656	570
8	480	589	660	740	720	686	777	665	637	430	630	570
9	470	580	680	720	660	666	780	648	656	400	650	570
10	480	555	720	700	540	665	763	638	666	410	620	580
11	480	536	793	740	320	662	751	657	697	420	580	570
12	470	548	829	811	300	662	748	672	687	420	520	570
13	480	570	819	800	350	680	750	646	812	420	560	610
14	490	565	775	789	450	670	710	650	739	425	540	680
15	500	561	804	740	600	666	715	652	656	430	500	628
16	561	559	785	700	800	672	723	665	666	470	540	418
17	647	550	776	720	1000	660	712	682	676	550	660	589
18	608	572	763	740	921	655	689	761	599	620	560	599
19	567	552	707	740	908	659	703	718	580	640	600	589
20	561	556	640	740	860	679	697	713	580	570	510	580
21	590	560	665	740	819	686	717	682	580	510	480	628
22	586	578	711	740	776	702	710	722	550	550	480	611
23	549	556	680	750	764	696	709	704	535	640	540	574
24	557	557	640	740	765	703	706	656	508	730	610	663
25	521	577	680	740	764	713	694	658	490	680	720	664
26	529	621	726	740	742	698	708	675	490	610	480	760
27	538	627	793	740	731	722	691	662	560	650	600	640
28	563	708	811	730	646	777	692	675	570	630	590	560
29	537	783	795	720	---	842	669	690	520	589	580	610
30	539	740	787	740	---	811	625	651	500	552	580	580
31	560	---	783	680	---	799	---	673	---	628	560	---
TOTAL	16113	17537	22775	23030	19076	21495	21863	20739	18558	16617	18575	17733
MEAN	520	585	735	743	681	693	729	669	619	536	599	591
MAX	647	783	829	811	1000	842	786	761	812	730	770	760
MIN	460	536	620	680	300	655	625	616	490	388	480	418
AC-FT	31960	34780	45170	45680	37840	42640	43370	41140	36810	32960	36840	35170
CAL YR 1980	TOTAL	247185	MEAN 675	MAX 1520	MIN 317	AC-FT 490300						
WTR YR 1981	TOTAL	234111	MEAN 641	MAX 1000	MIN 300	AC-FT 464400						

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
DEC					MAY				
15...	1640	824	226	4.5	05...	1520	672	193	17.5
JAN					JUN				
12...	1530	809	220	1.5	01...	1550	642	206	24.0
FEB					JUL				
09...	1535	665	224	.5	01...	1055	440	220	22.0
MAR					AUG				
18...	1120	656	227	2.0	25...	1800	969	228	22.0
APR					SEP				
08...	1150	737	182	10.0	21...	1635	299	286	16.5

NIOBHARA RIVER BASIN

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06462000 NIOBHARA RIVER NEAR NORDEN, NE

LOCATION.--Lat 42°47'13", long 100°02'06", in N1/2SW1/4 sec.33, T.33 N., R.23 W., Keya Paha County, Hydrologic Unit 10150004, on left bank 60 ft (18 m) downstream from county road bridge, 1.5 mi (2.4 km) downstream from Fairfield Creek, and 6 mi (10 km) south of Norden.

DRAINAGE AREA.--8,390 mi² (21,700 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,108.93 ft (642.802 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 5, 1979, at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records poor. Flow affected by regulation at powerplants, diversions for irrigation, return flow from irrigated areas, storage in Box Butte Reservoir (station 06455000), and since May 1964 storage in Merritt Reservoir (station 06459300).

AVERAGE DISCHARGE.--29 years, 856 ft³/s (24.24 m³/s), 620,200 acre-ft/yr (0.765 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,380 ft³/s (209 m³/s) July 1, 1962, gage height, 8.10 ft (2.469 m) present datum, backwater from bridge in channel; maximum gage height, 11.24 ft (3.426 m) present datum, Mar. 11, 1966, ice jam and backwater from bridge in channel; minimum daily discharge, 130 ft³/s (3.68 m³/s) Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,700 ft³/s (105 m³/s) Aug. 4, gage height, 5.03 ft (1.533 m), from floodmark; minimum daily, 340 ft³/s (9.63 m³/s) Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	510	589	720	863	680	725	885	707	746	534	612	595
2	530	606	700	852	560	725	812	732	748	728	720	588
3	514	629	740	868	680	697	838	833	714	802	760	579
4	521	612	858	863	740	725	886	781	712	638	1550	590
5	537	629	841	863	800	753	843	719	708	542	1120	582
6	512	634	852	847	860	734	818	708	698	592	820	615
7	524	617	825	808	840	720	786	747	709	432	780	632
8	531	623	747	808	760	719	822	808	686	450	720	615
9	532	669	714	780	600	704	817	742	686	486	680	610
10	552	640	742	800	560	706	789	775	644	426	697	615
11	538	623	819	780	350	694	805	758	639	446	657	633
12	518	578	847	780	340	684	810	742	653	450	623	619
13	522	584	863	836	400	696	802	725	656	453	551	610
14	538	623	868	797	540	699	798	775	752	464	600	624
15	557	612	879	792	680	679	753	742	798	480	573	739
16	786	617	896	786	900	701	760	803	689	484	527	640
17	657	629	906	775	1100	713	780	841	663	617	584	505
18	659	640	840	792	1060	723	750	944	641	736	730	648
19	607	646	780	808	1020	723	760	879	644	758	589	605
20	595	634	720	814	980	731	795	825	628	728	629	614
21	600	646	740	797	960	753	772	858	640	617	545	670
22	589	657	803	803	944	780	805	841	624	606	518	587
23	589	640	760	814	906	742	778	836	585	680	518	638
24	573	657	720	808	885	744	747	786	561	820	545	446
25	584	663	780	819	885	752	745	736	533	747	645	606
26	584	646	840	808	863	726	775	747	526	680	628	919
27	578	797	879	803	879	695	781	764	533	725	492	693
28	617	808	890	808	781	851	807	753	592	725	649	707
29	589	819	939	792	---	955	756	797	599	656	622	513
30	584	780	922	792	---	933	710	758	552	699	607	636
31	573	---	896	792	---	906	---	755	---	599	609	---
TOTAL	17700	19547	25326	25148	21553	23088	23785	24217	19559	18800	20900	18673
MEAN	571	652	817	811	770	745	793	781	652	606	674	622
MAX	786	819	939	868	1100	955	886	944	798	820	1550	919
MIN	510	578	700	775	340	679	710	707	526	426	492	446
AC-FT	35110	38770	50230	49880	42750	45800	47180	48030	38800	37290	41460	37040

CAI YR 1980 TOTAL 279758 MEAN 764 MAX 1680 MIN 365 AC-FT 554900
WTR YR 1981 TOTAL 258296 MEAN 708 MAX 1550 MIN 340 AC-FT 512300

NIOBRARA RIVER BASIN

06462000 NIOBRARA RIVER NEAR NORDEN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-66, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1974 to current year.

WATER TEMPERATURES: August 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 489 micromhos June 29, 1976; minimum daily, 106 micromhos May 30, 1981.

WATER TEMPERATURES: Maximum, 30.0°C July 17, 1978; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 303 micromhos July 12; minimum daily, 106 micromhos May 30.

WATER TEMPERATURES: Maximum, 23.5°C Aug. 29; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 20...	1130	575	233	7.9	8.0	--	98	.00	32
NOV 18...	1150	641	215	7.6	2.0	10	89	.00	29
DEC 15...	1100	885	209	7.7	3.0	10	82	.00	27
JAN 12...	1125	814	209	7.4	.5	10	94	.00	31
FEB 09...	1135	684	221	7.6	.5	5	98	.00	32
MAR 16...	1330	704	214	7.8	13.0	5	88	.00	29
APR 06...	1320	837	209	7.9	15.5	5	84	.00	28
MAY 05...	1200	725	214	7.8	17.5	5	93	.00	31
JUN 01...	1110	754	223	8.1	23.5	10	96	.00	32
JUL 02...	1330	427	188	8.0	21.0	40	81	.00	27
AUG 25...	1120	639	224	8.3	25.0	10	94	.00	31
SEP 21...	1150	607	222	8.0	18.5	5	97	.00	32

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 CAC03) (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 20...	4.3	8.8	.4	6.3	110	6.7	2.5	.4	52
NOV 18...	4.1	8.8	.4	5.7	110	5.1	1.5	.3	52
DEC 15...	3.6	8.8	.4	6.0	100	7.2	1.2	.3	51
JAN 12...	4.0	8.7	.4	5.5	100	8.6	1.7	.3	53
FEB 09...	4.4	9.6	.4	6.5	110	10	1.3	.3	60
MAR 16...	3.7	9.6	.4	6.1	100	4.9	1.0	.4	52
APR 06...	3.5	8.4	.4	6.3	98	2.0	1.0	.4	51
MAY 05...	3.9	8.8	.4	6.1	100	1.6	.9	.3	53
JUN 01...	3.8	9.0	.4	7.2	110	2.7	.9	.3	51
JUL 02...	3.4	7.9	.4	6.4	87	2.7	1.5	.2	41
AUG 25...	4.0	9.1	.4	6.9	110	2.0	1.7	.3	56
SEP 21...	4.2	9.2	.4	6.2	110	<5.0	1.1	.3	55

NIOBRARA RIVER BASIN

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06462000 NIOBRARA RIVER NEAR NORDEN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 20...	179	.24	278	.00	--	.090	20	30	5
NOV 18...	176	.24	305	.66	.110	.090	60	20	2
DEC 15...	168	.23	401	.66	.140	.110	20	50	5
JAN 12...	176	.24	387	.58	.120	.020	20	70	6
FEB 09...	194	.26	358	.89	.120	.110	20	50	6
MAR 16...	169	.23	321	.43	.150	.080	10	40	5
APR 06...	161	.22	364	.38	.140	.090	10	30	5
MAY 05...	166	.23	325	.12	.130	.080	30	40	5
JUN 01...	173	.24	352	.09	.150	.080	20	30	6
JUL 02...	143	.19	165	.05	.250	.050	20	40	4
AUG 25...	178	.24	307	.13	.110	.040	30	31	6
SEP 21...	179	.24	293	.21	.090	.050	20	31	6

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	201	168	140	226	132	118	208	211	230	227	227
2	239	207	181	217	257	212	209	188	216	216	232	222
3	241	204	146	169	249	211	214	182	219	241	232	225
4	228	157	213	180	226	209	213	188	240	214	266	256
5	215	207	145	208	213	209	209	214	218	209	264	225
6	233	200	226	208	194	209	217	195	213	129	231	224
7	211	201	219	201	216	132	211	193	131	234	233	224
8	181	209	153	218	189	120	209	199	216	225	214	228
9	208	204	202	212	214	162	219	182	208	217	232	222
10	231	207	192	214	200	141	214	212	208	233	229	218
11	221	197	188	167	207	125	214	195	148	248	230	219
12	231	200	207	209	249	123	190	193	115	303	231	226
13	232	239	195	161	250	120	120	191	207	218	231	229
14	168	232	218	148	218	143	121	198	210	162	230	224
15	211	228	226	170	210	122	160	113	110	182	232	224
16	198	233	159	141	215	176	118	199	120	242	229	234
17	211	232	218	186	210	138	125	174	110	218	224	226
18	222	231	210	173	188	123	219	135	118	229	228	222
19	222	232	172	175	234	129	213	120	203	238	233	221
20	232	231	210	212	239	138	209	113	149	211	227	220
21	196	233	200	213	235	149	207	111	133	252	228	220
22	231	232	171	211	195	167	207	128	221	240	226	225
23	238	226	202	211	197	154	133	123	107	220	270	229
24	239	229	161	237	234	180	159	114	214	230	221	227
25	239	232	167	218	174	186	155	205	204	245	230	220
26	247	227	212	214	207	130	194	200	128	246	228	223
27	239	225	222	202	203	211	199	145	160	241	232	227
28	238	227	229	187	208	169	209	125	124	247	226	211
29	242	222	226	233	---	202	133	139	180	255	228	228
30	239	227	222	197	---	183	190	106	196	250	227	230
31	238	---	223	162	---	170	---	210	---	247	227	---

NIOBRARA RIVER BASIN

06462000 NIOBRARA RIVER NEAR NORDEN, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	6.0	1.0	.0	.0	1.0	6.0	17.0	19.0	21.5	19.5	21.0
2	14.0	7.0	2.0	.0	.0	1.0	7.0	12.0	18.0	22.0	21.0	20.0
3	12.0	7.0	2.0	.0	.0	1.5	7.0	11.0	20.0	22.0	20.0	18.0
4	7.0	7.0	1.0	.0	.0	1.0	7.0	13.0	19.0	23.0	19.5	18.0
5	12.0	5.0	.0	.5	.0	1.0	7.0	14.0	21.0	22.5	19.0	19.0
6	15.0	4.0	1.0	.5	.0	2.0	8.0	17.0	20.0	22.0	20.0	20.0
7	12.0	5.0	1.0	1.0	.0	2.0	8.0	16.0	19.0	22.0	21.0	21.0
8	16.0	6.0	1.0	1.0	.0	2.0	6.0	14.0	22.0	21.5	21.0	16.0
9	17.0	5.0	.0	1.0	.0	2.0	9.0	12.0	20.0	21.0	22.0	22.0
10	14.0	6.0	.0	1.0	.0	2.0	7.0	14.0	19.0	21.0	23.0	23.0
11	16.0	6.0	.0	1.0	.0	2.0	6.0	11.0	21.0	20.0	23.0	18.0
12	10.0	5.0	.0	1.0	.0	2.0	9.0	13.0	20.0	22.0	22.5	20.0
13	7.0	5.0	1.0	.0	.0	2.0	9.0	15.0	19.0	22.0	20.0	21.0
14	7.0	5.0	.0	1.0	.0	2.0	9.0	17.0	21.0	22.5	23.0	18.0
15	6.0	3.0	.0	.0	.0	2.0	9.0	18.0	19.0	22.0	19.5	17.0
16	4.0	3.0	1.0	.0	.0	2.0	7.0	13.0	19.0	22.0	22.0	17.0
17	4.0	3.0	.0	.0	.0	2.0	6.0	14.0	19.0	21.0	22.0	16.0
18	5.0	4.0	.0	1.0	1.0	3.0	8.0	12.0	18.0	22.0	21.0	17.0
19	4.0	4.0	1.0	1.0	1.0	2.0	12.0	10.0	18.0	21.5	21.0	17.0
20	11.0	5.0	1.0	1.0	1.0	2.5	7.0	18.0	19.0	21.0	22.5	19.0
21	10.0	5.0	.0	1.0	1.0	3.0	10.0	12.0	19.0	20.0	21.0	16.0
22	8.0	4.0	1.0	.0	1.0	3.0	6.0	15.0	19.0	19.0	22.0	17.0
23	5.0	3.0	1.0	1.0	1.0	3.0	12.0	13.0	18.0	21.0	23.0	16.0
24	7.0	3.0	1.0	.0	1.0	3.0	12.0	16.0	20.0	23.0	20.0	16.0
25	7.0	2.0	1.0	.0	1.0	3.0	8.0	18.0	21.0	21.0	18.0	16.0
26	5.0	5.0	1.0	.0	1.0	3.0	11.0	16.0	20.0	22.0	19.0	18.0
27	4.0	4.0	1.0	.0	1.0	3.5	8.0	16.0	21.0	20.5	19.0	17.0
28	5.0	3.0	1.0	.0	1.0	3.0	10.0	14.0	18.0	19.0	20.0	15.0
29	6.0	3.0	1.0	.0	---	2.0	10.0	16.0	19.0	20.0	23.5	16.0
30	6.0	3.0	1.0	.0	---	3.0	8.0	17.0	20.0	21.0	22.0	15.0
31	7.0	---	1.0	.0	---	3.5	---	14.0	---	22.5	21.0	---

MIORRARA RIVER BASIN

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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 (0.6 km) upstream from county road bridge, 1 mi (2 km) upstream from mouth, 1 mi (2 km) southwest of Meadville, and 17 mi (27 km) north of Ainsworth.

DRAINAGE AREA.--600 mi² (1,550 km²), approximately, of which about 340 mi² (880 km²) 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. Altitude of gage is 2,033 ft (619.7 m), from topographic map. Prior to Nov. 25, 1962, at site 6.5 mi (10.5 km) upstream at different datum. Nov. 25, 1962, to Nov. 14, 1966, at present site at datum 2.0 ft (0.61 m) higher. Nov. 15, 1966, to Oct. 2, 1979, at present site at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--32 years (1948-75, 1976-81), 108 ft³/s (3.059 m³/s), 78,250 acre-ft/yr (96.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) Sept. 18, 1967, gage height, 5.98 ft (1.823 m) present datum; maximum gage height observed, 8.54 ft (2.603 m) Dec. 6, 1964, backwater from ice, present datum; minimum daily discharge, 15 ft³/s (0.42 m³/s) Feb. 19, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 234 ft³/s (6.63 m³/s) Aug. 6, gage height, 1.87 ft (0.570 m), no peak above base of 300 ft³/s (8.50 m³/s); maximum gage height, 2.47 ft (0.753 m) Dec. 22, backwater from ice; minimum daily discharge, 63 ft³/s (1.78 m³/s) July 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	96	96	96	96	102	112	97	98	77	94	91
2	89	94	92	95	90	102	108	112	96	93	92	104
3	89	94	90	92	84	102	104	102	94	135	86	93
4	89	94	107	91	80	103	103	113	95	135	104	83
5	89	96	98	94	84	102	104	118	97	131	204	86
6	90	96	95	99	90	101	104	103	96	107	199	94
7	91	96	94	98	86	101	103	99	96	86	160	96
8	92	94	90	102	82	99	103	99	92	78	134	94
9	92	94	90	99	76	99	101	98	90	86	126	91
10	94	94	80	98	72	96	101	95	92	78	129	91
11	96	96	89	98	78	96	100	95	95	81	130	91
12	104	96	91	100	90	98	100	97	99	70	127	89
13	104	96	96	102	110	98	100	97	94	63	118	89
14	104	96	97	101	130	97	104	96	97	65	113	91
15	99	96	99	100	128	98	101	94	104	65	105	91
16	112	96	102	100	115	99	101	100	97	73	107	94
17	128	96	100	94	111	98	96	109	95	76	99	91
18	102	99	94	90	108	97	98	123	95	81	103	91
19	96	97	90	100	108	96	95	127	91	76	99	91
20	96	97	86	99	105	97	98	118	90	73	92	96
21	99	98	82	101	103	97	99	107	88	78	91	89
22	98	99	110	101	103	99	98	108	85	83	82	86
23	99	97	96	103	102	98	99	111	84	102	82	86
24	96	96	90	105	104	97	102	105	78	102	89	94
25	96	101	96	103	102	98	100	103	76	107	113	97
26	96	102	104	99	101	96	100	102	77	109	119	93
27	96	98	101	102	102	99	100	103	81	112	110	96
28	96	97	97	101	101	101	96	112	82	112	98	96
29	96	98	98	100	---	115	95	109	89	109	98	97
30	96	98	94	101	---	122	96	100	90	102	101	93
31	96	---	94	102	---	115	---	99	---	96	93	---
TOTAL	3006	2897	2938	3066	2741	3118	3021	3251	2733	2841	3497	2764
MEAN	97.0	96.6	94.8	98.9	97.9	101	101	105	91.1	91.6	113	92.1
MAX	128	102	110	105	130	122	112	127	104	135	204	104
MIN	86	94	80	90	72	96	95	94	76	63	82	83
AC-FT	5960	5750	5830	6080	5440	6180	5990	6450	5420	5640	6940	5480
CAL YR 1980	TOTAL	36718	MEAN	100	MAX	325	MIN	58	AC-FT	72830		
WTR YR 1981	TOTAL	35873	MEAN	98.3	MAX	204	MIN	63	AC-FT	71150		

NIOBRARA RIVER BASIN
06462500 PLUM CREEK AT HEADVILLE, NE--Continued

WATER QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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									
22...	1440	100	177	8.5	14.0	--	75	.00	25
NOV									
20...	1430	96	177	8.1	6.0	5	70	.00	23
DEC									
17...	1330	103	172	7.8	8.5	5	72	.00	24
JAN									
14...	1330	99	177	7.8	4.0	2	73	.00	24
FEB									
11...	1450	108	191	6.9	.5	5	81	.00	27
MAR									
19...	0955	97	184	7.9	6.0	5	75	.00	25
APR									
09...	0925	98	181	7.5	11.0	5	80	.00	27
MAY									
08...	0905	99	180	7.1	11.0	0	83	.00	28
JUN									
04...	1330	97	179	8.6	22.5	5	78	.00	26
JUL									
30...	0940	101	186	8.0	23.0	10	75	.00	25
AUG									
28...	0940	101	187	7.8	19.0	5	79	.00	26
SEP									
24...	0950	91	186	7.7	16.0	5	76	.00	25

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									
22...	3.1	6.7	.3	5.8	87	6.9	1.4	.4	57
NOV									
20...	3.0	6.3	.3	5.5	87	2.6	.9	.3	58
DEC									
17...	2.9	6.7	.3	5.5	88	4.6	1.4	.3	58
JAN									
14...	3.2	6.7	.3	5.1	86	4.7	.8	.4	58
FEB									
11...	3.4	7.3	.4	5.1	86	4.5	.9	.3	61
MAR									
19...	3.0	6.8	.3	4.9	82	5.9	.9	.3	56
APR									
09...	3.1	7.2	.4	5.3	87	8.2	.9	.3	56
MAY									
08...	3.2	6.4	.3	4.7	99	.6	.4	.3	53
JUN									
04...	3.1	7.0	.3	5.3	80	5.0	.9	.3	57
JUL									
30...	3.0	6.7	.3	5.6	82	1.0	1.1	.3	60
AUG									
28...	3.4	6.5	.3	6.0	97	<1.0	1.8	.2	59
SEP									
24...	3.2	6.6	.3	5.8	84	<5.0	.9	.3	60

NIOBRARA RIVER BASIN

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06462500 PLUM CREEK AT MEADVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS 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 22...	161	.22	43.5	.63	--	.190	10	20	1
NOV 20...	156	.21	40.4	.98	.100	.090	30	<10	<1
DEC 17...	160	.22	44.5	.88	--	.100	20	20	3
JAN 14...	159	.22	42.5	1.0	.050	.050	20	30	20
FEB 11...	166	.23	48.4	1.1	.130	.130	20	20	10
MAR 19...	156	.21	40.9	.83	.130	.130	0	20	1
APR 09...	163	.22	43.1	.69	.130	.110	5	30	5
MAY 08...	157	.21	42.0	.27	.120	.110	20	30	6
JUN 04...	155	.21	40.6	.46	--	.090	--	30	4
JUL 30...	155	.21	42.3	.64	.140	.120	20	19	2
AUG 28...	163	.22	44.5	.78	.180	.070	20	22	3
SEP 24...	158	.21	38.8	.58	.090	.070	20	14	2

NIOBRARA RIVER BASIN

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 (7.9 km) upstream from Bone Creek and 7 mi (11 km) north of Long Pine.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,080 ft (634 m), from topographic map.

REMARKS.--Records good. Minor diversions for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 395 ft³/s (11.2 m³/s) Aug. 5, 1981, gage height, 4.38 ft (1.335 m), from floodmark; minimum daily, 77 ft³/s (2.18 m³/s) Sept. 5, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 395 ft³/s (11.2 m³/s) Aug. 5, gage height, 4.38 ft (1.335 m), from floodmark; minimum daily, 87 ft³/s (2.46 m³/s) June 26, 27.

REVISIONS.--The maximum discharge for water year 1980 has been revised to 340 ft³/s (9.63 m³/s) June 14, 1980, gage height, 3.95 ft (1.204 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	95	95	97	101	98	97	92	95	92	100	104
2	89	96	94	97	100	98	97	96	92	92	105	104
3	91	96	96	97	101	99	96	98	95	87	104	104
4	92	95	97	96	100	99	96	99	97	88	106	105
5	92	96	96	97	102	98	95	97	96	87	218	106
6	92	96	95	97	102	97	96	97	96	93	113	105
7	92	96	96	97	101	97	95	99	97	93	101	103
8	91	95	96	97	100	97	95	104	94	92	98	102
9	91	95	96	97	101	97	96	102	93	89	97	100
10	91	94	96	96	102	97	96	101	93	86	96	99
11	92	94	97	95	98	98	97	99	94	89	92	97
12	92	94	97	97	95	98	96	103	94	91	94	99
13	93	95	98	97	98	97	96	103	94	89	94	99
14	92	94	98	97	98	98	96	103	105	92	94	97
15	94	94	98	96	100	97	96	102	97	97	94	97
16	104	94	100	94	103	97	96	102	95	92	94	97
17	98	94	99	94	103	98	96	109	94	89	94	98
18	95	94	98	96	101	97	96	119	90	89	93	98
19	94	95	96	97	100	98	97	109	88	89	92	95
20	94	94	96	97	100	97	97	104	90	88	93	94
21	94	94	97	98	99	97	96	104	90	87	93	94
22	95	95	97	100	98	97	95	106	88	86	93	94
23	93	94	97	100	98	97	95	103	87	88	93	94
24	94	94	97	101	98	95	97	101	88	88	96	95
25	94	94	98	102	98	95	99	101	94	88	100	96
26	95	95	98	100	97	96	99	101	92	90	98	101
27	96	95	99	100	99	95	98	101	92	101	99	98
28	96	96	99	99	98	99	96	103	90	101	106	98
29	96	96	98	100	---	114	95	102	89	98	106	101
30	97	96	99	100	---	108	91	99	90	103	104	99
31	97	---	98	103	---	98	---	99	---	101	106	---
TOTAL	2905	2845	3011	3031	2791	3043	2883	3158	2789	2835	3166	2973
MEAN	93.7	94.8	97.1	97.8	99.7	98.2	96.1	102	93.0	91.5	102	99.1
MAX	104	96	100	103	103	114	99	119	105	103	218	106
MIN	89	94	94	94	95	95	91	92	87	86	92	94
AC-FT	5760	5640	5970	6010	5540	6040	5720	6260	5530	5620	6280	5900
CAL YR 1980	TOTAL	34222	MEAN 93.5	MAX 175	MIN 77	AC-FT 67880						
WTR YR 1981	TOTAL	35430	MEAN 97.1	MAX 218	MIN 86	AC-FT 70280						

NIOBRARA RIVER BASIN

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06463500 LONG FINE CREEK NEAR RIVERVIEW, NE

LOCATION (REVISED).--Lat 42°41'21"N, long 99°40'43"W, in SE1/4NE1/4 sec.5, T.31 N., R.20 W., Brown County, Hydrologic Unit 10150004, on right bank 10 ft (3 m) downstream from county road bridge, 1 mi (2 km) downstream from Bone Creek, and 5.5 mi (8.8 km) southwest of Riverview.

DRAINAGE AREA.--390 mi² (1,010 km²), approximately.

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 (604.522 m) National Geodetic Vertical Datum of 1929, (levels by Water and Power Resources Service). Prior to Dec. 7, 1962, at site 100 ft (30 m) upstream at present datum. Dec. 7, 1962, to Sept. 20, 1978, at site 3 ft (0.9 m) upstream at present datum.

REMARKS.--Records good except those above 250 ft³/s (7.08 m³/s), which are poor. Flow includes return water from Ainsworth Irrigation District since 1965.

AVERAGE DISCHARGE.--32 years (1948-53, 1954-81), 138 ft³/s (3.908 m³/s), 99,980 acre-ft/yr (0.123 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,650 ft³/s (273 m³/s) July 1, 1962, gage height, 15.68 ft (4.779 m), backwater from fallen bridge, from rating curve extended above 3,600 ft³/s (102 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 44 ft³/s (1.25 m³/s) Jan. 10, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,930 ft³/s (54.7 m³/s) Aug. 5 at 0600, gage height, 6.89 ft (2.100 m) from floodmark, no other peak above base of 400 ft³/s (11.3 m³/s); minimum daily, 122 ft³/s (3.46 m³/s) June 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	155	142	144	132	155	155	172	152	127	139	158
2	132	161	137	144	130	155	152	172	147	190	142	155
3	137	155	142	144	137	158	150	175	147	219	158	152
4	143	152	150	142	129	155	147	175	147	187	225	155
5	143	155	144	150	134	155	144	155	155	187	1030	161
6	147	158	137	147	137	150	144	150	158	178	315	161
7	147	158	139	150	134	152	144	161	155	169	206	166
8	145	155	132	152	132	150	144	169	161	161	161	161
9	143	147	134	144	129	155	147	161	147	155	152	166
10	142	150	134	144	130	155	152	155	142	161	158	155
11	143	152	150	139	128	155	150	155	150	161	144	155
12	147	155	147	144	134	155	152	155	155	147	142	158
13	147	144	147	150	147	158	152	150	152	142	152	161
14	147	144	147	147	147	158	150	147	164	139	175	152
15	147	142	155	142	155	158	144	144	150	137	164	150
16	156	144	164	132	155	155	150	152	152	139	175	150
17	148	147	158	134	161	158	150	169	152	150	200	152
18	145	144	144	142	161	152	147	206	144	152	164	158
19	147	150	127	144	155	155	147	178	137	152	152	158
20	148	147	132	144	152	155	152	158	139	150	147	150
21	147	147	139	139	155	158	152	155	137	164	142	144
22	146	150	147	142	152	158	152	164	132	175	147	144
23	137	144	144	150	155	158	150	150	144	175	150	144
24	139	139	132	150	155	155	152	147	152	217	166	147
25	142	147	152	147	155	155	152	150	139	217	278	147
26	139	150	150	150	150	155	152	150	139	216	190	150
27	144	150	155	144	155	158	150	152	142	216	172	150
28	150	152	152	142	152	172	150	158	129	196	172	150
29	158	152	150	137	---	203	150	152	124	178	172	150
30	158	158	150	139	---	181	147	150	122	161	164	150
31	161	---	147	147	---	161	---	150	---	150	161	---
TOTAL	4510	4504	4480	4466	4048	4913	4480	4937	4366	5268	6215	4610
MEAN	145	150	145	144	145	158	149	159	146	170	200	154
MAX	161	161	164	152	161	203	155	206	164	219	1030	166
MIN	132	139	127	132	128	150	144	144	122	127	139	144
AC-FT	8950	8930	8890	8860	8030	9740	8890	9790	8660	10450	12330	9140

CAL YR 1980 TOTAL 58791 MEAN 161 MAX 355 MIN 115 AC-FT 116600
WTF YR 1981 TOTAL 56797 MEAN 156 MAX 1030 MIN 122 AC-FT 112700

NIOBRARA RIVER BASIN

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBAIT UNITS) (00080)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT									
22...	1110	146	174	7.7	11.0	--	71	.00	23
NOV									
20...	1115	139	173	7.6	6.0	10	65	.00	21
DEC									
17...	1040	151	175	7.6	7.0	5	68	.00	22
JAN									
14...	1110	140	175	7.5	4.0	4	74	.00	24
FEB									
11...	1150	127	172	7.2	.5	5	71	.00	23
MAR									
19...	1145	151	175	7.8	8.0	5	68	.00	22
APR									
09...	1145	146	174	7.4	13.5	3	70	.00	23
MAY									
08...	1040	170	170	7.4	12.0	5	71	.00	23
JUN									
04...	1040	146	173	7.7	18.0	5	70	.00	23
JUL									
30...	1145	163	182	7.7	22.5	10	69	.00	22
AUG									
28...	1120	170	184	7.7	17.5	15	69	.00	22
SEP									
24...	1200	150	179	7.7	16.0	5	68	.00	22

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- LITY LAR (MG/L AS CAC03) (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									
22...	3.3	7.4	.4	5.6	79	4.7	2.7	.3	56
NOV									
20...	3.1	7.0	.4	5.3	80	5.5	2.6	.3	56
DEC									
17...	3.2	7.9	.4	5.7	80	3.5	3.0	.3	56
JAN									
14...	3.3	7.3	.4	5.1	80	5.5	1.9	.3	56
FEB									
11...	3.2	7.3	.4	4.7	75	4.9	1.5	.3	59
MAR									
19...	3.1	7.3	.4	4.9	72	6.6	1.9	.2	54
APR									
09...	3.1	8.0	.4	5.1	73	5.8	1.9	.3	54
MAY									
08...	3.2	6.6	.3	5.0	90	.7	1.1	.3	51
JUN									
04...	3.1	7.6	.4	4.9	82	1.0	1.5	.2	55
JUL									
30...	3.3	7.0	.4	5.9	74	<1.0	2.3	.3	57
AUG									
28...	3.4	7.4	.4	6.9	90	1.0	2.7	.1	55
SEP									
24...	3.2	6.9	.4	5.9	78	<5.0	1.7	.3	57

NIOBRARA RIVER BASIN

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 22...	156	.21	61.5	1.2	--	.270	4	30	4
NOV 20...	156	.21	58.5	1.6	.180	.170	30	20	2
DEC 17...	156	.21	63.6	1.4	--	.200	20	20	1
JAN 14...	159	.22	60.1	1.6	.200	.200	20	40	6
FEB 11...	156	.21	53.5	1.6	.180	.180	20	20	5
MAR 19...	150	.20	61.2	1.4	.180	.150	0	20	<1
APR 09...	150	.20	59.1	1.1	.210	.180	0	30	1
MAY 08...	146	.20	67.0	.27	.190	.160	20	20	7
JUN 04...	150	.20	59.1	.92	--	.140	30	30	2
JUL 30...	148	.20	65.1	1.1	.370	.300	20	42	4
AUG 28...	158	.21	72.5	1.3	.450	.250	20	43	3
SEP 24...	150	.20	60.7	.89	.060	.060	30	19	2

NIOBRARA RIVER BASIN

06464500 KEYS PAKA 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 left bank 13 ft (4 m) downstream from bridge on U.S. Highway 183, 1.0 mi (1.6 km) north of Wewela, 4.5 mi (7.2 km) upstream from Holt Creek, and 11.5 mi (18.5 km) downstream from Lost Creek.

DRAINAGE AREA.--1,070 mi² (2,770 km²), 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 (624.773 m) National Geodetic Vertical Datum of 1929. Prior to June 21, 1957, nonrecording gage at site 13 ft (4.0 m) upstream at same datum.

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

AVERAGE DISCHARGE.--36 years (water years 1939-40, 1948-81), 66.5 ft³/s (1.883 m³/s), 48,180 acre-ft/yr (59.4 hm³/yr); median of yearly mean discharges, 57 ft³/s (1.614 m³/s), 41,300 acre-ft/yr (50.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s (154 m³/s) Mar. 31, 1952, gage height, 13.08 ft (3.987 m); maximum gage height, 13.5 ft (4.11 m) 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.--Maximum discharge, 711 ft³/s (20.1 m³/s) July 2, gage height, 4.20 ft (1.280 m); no other peak above base of 250 ft³/s (7.08 m³/s); minimum daily discharge, 8.7 ft³/s (0.25 m³/s) Sept. 6.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 13 to Nov. 24; stage-discharge relation
affected by ice Nov. 25 to Feb. 16)

0.60	7.6	1.2	38	2.5	208
.80	15	1.5	63	3.0	318
1.0	25	2.0	123	4.0	616

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	23	15	20	16	40	53	23	60	15	23	10
2	12	23	10	18	16	39	49	22	50	600	21	9.4
3	12	23	12	16	16	39	47	22	35	550	20	9.0
4	12	22	15	16	17	39	45	23	30	400	20	8.9
5	13	22	16	17	19	37	43	24	25	200	22	9.1
6	13	22	15	18	20	37	40	24	23	100	24	8.7
7	13	22	14	18	19	36	38	23	24	60	23	10
8	13	22	13	17	17	35	39	25	22	35	23	12
9	13	21	13	17	15	36	40	25	22	27	23	12
10	13	21	14	16	13	35	37	24	22	25	22	11
11	12	21	15	16	15	35	35	23	21	23	21	10
12	13	21	16	17	25	34	33	24	21	21	21	9.0
13	13	22	17	19	35	34	35	26	21	20	21	8.8
14	14	22	19	19	45	34	37	25	21	17	21	9.0
15	15	23	19	18	60	35	35	23	22	16	23	9.4
16	23	23	19	15	70	34	33	25	22	16	32	10
17	34	23	20	16	99	33	33	29	21	16	30	11
18	35	23	17	18	127	33	31	34	20	18	24	11
19	29	22	15	19	134	34	30	38	19	23	21	11
20	25	21	15	18	120	34	31	36	19	19	18	10
21	23	22	16	18	95	35	31	31	18	17	16	10
22	20	22	17	18	67	35	32	33	17	18	15	11
23	20	21	15	21	53	35	33	35	17	19	13	11
24	20	21	14	25	46	35	32	31	17	17	13	11
25	20	18	14	24	45	35	30	30	16	19	14	12
26	21	16	15	22	43	34	30	29	13	22	14	13
27	21	17	17	21	42	34	28	27	12	27	14	14
28	22	17	20	20	41	38	26	27	11	33	14	15
29	22	18	22	19	---	47	25	27	10	33	13	15
30	24	17	21	20	---	54	23	31	11	30	12	16
31	23	---	20	18	---	57	---	30	---	26	11	---
TOTAL	575	631	500	574	1330	1152	1054	849	662	2462	602	327.3
MEAN	18.5	21.0	16.1	18.5	47.5	37.2	35.1	27.4	22.1	79.4	19.4	10.9
MAX	35	23	22	25	134	57	53	38	60	600	32	16
MIN	12	16	10	15	13	33	23	22	10	15	11	8.7
AC-FT	1140	1250	992	1140	2640	2280	2090	1680	1310	4880	1190	649
CAL YR 1980	TOTAL	12950.7	MEAN	35.4	MAX	187	MIN	1.9	AC-FT	25690		
WTR YR 1981	TOTAL	10718.3	MEAN	29.4	MAX	600	MIN	8.7	AC-FT	21260		

NIOBHARA RIVER BASIN

55

06464900 KEYS PAHA RIVER NEAR WAPER, 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 (21 m) upstream from highway bridge, 3.3 mi (5.3 km) south of Waper, and 8.6 mi (13.8 km) upstream from mouth.

DRAINAGE AREA.--1,630 mi² (4,220 km²), approximately.

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

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

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft (512 m), from topographic map. Prior to May 2, 1958, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--24 years, 125 ft³/s (3.540 m³/s), 90,560 acre-ft/yr (0.112 km³/yr); median of yearly mean discharges, 110 ft³/s (3.115 m³/s), 79,700 acre-ft/yr (98.3 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,280 ft³/s (263 m³/s) July 1, 1962, gage height, 10.91 ft (3.325 m); maximum gage height, 13.34 ft (4.066 m) Mar. 23, 1960, backwater from ice; no flow July 22-30, Aug. 10, 11, 1976, Aug. 3, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) July 4 at 1330, gage height, 6.13 ft (1.868 m), no other peak above base of 900 ft³/s (25.5 m³/s); maximum gage height, 6.72 ft (2.048 m), from floodmark, Feb. 21, ice jam; minimum daily discharge, 7.8 ft³/s (0.22 m³/s) July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	48	30	40	37	86	163	45	40	7.8	55	13
2	15	48	18	43	33	84	135	45	96	28	48	12
3	16	45	24	35	30	87	121	43	57	419	36	11
4	16	43	30	40	33	81	117	49	50	725	40	10
5	16	42	32	45	35	79	105	50	45	526	61	11
6	16	42	28	41	38	73	96	47	49	298	43	10
7	18	42	25	46	37	69	87	46	50	148	32	13
8	19	41	22	41	41	69	81	53	43	81	29	16
9	19	42	24	35	35	71	83	50	43	54	31	16
10	19	41	27	37	27	69	78	47	44	40	30	14
11	18	41	32	35	29	69	77	42	40	36	28	13
12	20	42	35	40	45	69	73	49	38	32	26	11
13	21	43	37	43	60	65	78	56	39	26	25	9.5
14	22	43	39	47	76	65	84	49	59	22	29	9.0
15	25	44	42	43	94	67	80	38	44	34	38	9.4
16	55	45	45	35	110	64	75	42	39	17	52	11
17	72	45	50	30	130	65	66	69	33	16	76	13
18	61	48	42	35	120	60	67	113	30	14	132	15
19	69	51	30	40	140	61	68	98	30	24	104	15
20	66	49	28	36	180	63	68	94	30	20	74	16
21	59	47	34	32	220	62	72	85	34	27	50	14
22	50	51	43	38	131	70	71	86	29	27	40	14
23	49	51	37	47	104	74	76	70	28	22	35	15
24	45	45	26	58	119	73	69	68	23	19	30	16
25	42	37	29	66	107	76	66	67	24	32	26	17
26	40	40	32	58	97	75	64	61	22	50	24	32
27	44	44	38	52	90	75	62	57	18	54	23	42
28	45	47	40	48	85	86	58	57	14	72	21	30
29	47	50	42	43	---	149	52	53	14	72	19	25
30	47	52	44	47	---	169	48	45	11	66	17	25
31	48	---	45	45	---	165	---	38	---	55	15	---
TOTAL	1114	1349	1050	1321	2283	2490	2440	1812	1116	3063.8	1289	477.9
MEAN	35.9	45.0	33.9	42.6	81.5	80.3	81.3	58.5	37.2	98.8	41.6	15.9
MAX	72	52	50	66	220	169	163	113	96	725	132	42
MIN	15	37	18	30	27	60	48	38	11	7.8	15	9.0
AC-FT	2210	2680	2080	2620	4530	4940	4840	3590	2210	6080	2560	948

CAL YR 1980 TOTAL 21735.77 MEAN 59.4 MAX 266 MIN .00 AC-FT 43110
WTR YR 1981 TOTAL 19805.70 MEAN 54.3 MAX 725 MIN 7.8 AC-FT 39280

NIOBRARA RIVER BASIN

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 (8 km) southeast of Spencer.

DRAINAGE AREA.--12,100 mi² (31,300 km²), approximately.

WATER-DISCHARGE RECORDS

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 MSP 1309.

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

GAGE.--Water-stage recorder and hourly log of powerplant operation. Datum of gage is 1,473.67 ft (449.175 m) National Geodetic Vertical Datum of 1929. Elevation of taintor gate sill, 1,491.12 ft (454.493 m) National Geodetic Vertical Datum of 1929. Prior to December 1908, nonrecording gage on former highway bridge 275 ft (83.8 m) downstream and Aug. 1, 1913, to Sept. 30, 1915, nonrecording gage at highway bridge 10 mi (16 km) downstream at different datums. Aug. 1, 1927, to Sept. 30, 1936, and June 14, 1940, to Sept. 30, 1944, discharge computed as flow through powerhouse and over dam. Oct. 1, 1944, to Nov. 10, 1954, water-stage recorder at site 275 ft (83.8 m) downstream at datum 4.98 ft (1.518 m) higher, and Nov. 11, 1954, to Sept. 30, 1957, at site 0.3 mi (0.5 km) downstream at datum 9.78 ft (2.981 m) 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 (68.6 m) downstream at present datum. Aug. 14, 1963, gage moved to present site with discharge computed as flow through powerhouse and over dam.

REMARKS.--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 discharge, head, and gate openings.

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

AVERAGE DISCHARGE.--51 years (1913-14, 1927-36, 1940-81), 1,393 ft³/s (39.45 m³/s), 1,009,000 acre-ft/yr (1.24 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft³/s (776 m³/s) Mar. 12, 1955, gage height, 12.16 ft (3.706 m), site and datum then in use; minimum daily, 5 ft³/s (0.14 m³/s) Nov. 14, Dec. 18, 19, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,000 ft³/s (113 m³/s) Feb. 21; minimum daily, 262 ft³/s (7.42 m³/s) Dec. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	799	1100	1140	1800	788	1430	1620	1080	1110	706	1010	932
2	878	1110	262	1490	625	1340	1430	1060	1410	887	1220	835
3	887	1130	355	1200	544	1390	1460	1080	1240	2130	885	823
4	856	1090	674	1030	544	1340	1540	1380	1130	1760	897	839
5	827	1090	1540	953	608	1340	1510	1330	1130	1430	1720	769
6	856	1100	1350	1150	823	1330	1570	1160	1030	1140	2490	853
7	857	1110	1110	1370	1050	1370	1440	1160	1010	1040	1510	1060
8	867	1080	988	1500	1080	1310	1520	1340	943	1020	1200	945
9	880	1070	1030	1310	1070	1350	2050	1270	1030	677	1110	894
10	908	1120	824	1150	981	1290	1420	1290	1080	701	1130	869
11	958	1110	935	1040	652	1280	1260	1170	987	660	1060	826
12	916	1120	1130	1080	640	1290	1260	1360	998	609	929	814
13	925	1130	1460	1110	851	1270	1300	1460	958	586	936	821
14	967	1150	1740	1370	993	1270	1460	1300	1260	586	981	779
15	997	1150	1730	1480	1080	1260	1250	1130	1360	606	938	832
16	1680	1150	2190	1210	1560	1250	1230	1220	1210	654	946	1130
17	1860	1150	2290	919	2560	1220	1150	1640	1100	625	1080	935
18	1370	1130	1820	832	2880	1290	1220	2000	894	783	976	864
19	1220	1160	464	1130	3170	1260	1300	1770	975	761	921	800
20	1080	1160	445	1230	3880	1230	1320	1580	902	798	1000	871
21	1070	1120	394	1370	4000	1250	1290	1460	935	925	836	1060
22	1080	1140	581	1470	3400	1390	1290	1520	919	1100	867	1150
23	1100	1170	879	1490	2490	1320	1400	1530	830	955	965	1520
24	1110	1130	965	1710	1980	1310	1260	1520	793	928	946	1230
25	1070	1130	950	1820	1580	1270	1190	1400	739	942	1030	932
26	1110	1260	882	1910	1550	1270	1130	1280	725	1450	1100	1000
27	1130	1120	787	1590	1580	1210	1200	1260	731	1470	1220	1270
28	1170	1080	1010	1320	1540	1450	1230	1360	670	1540	906	1260
29	1150	1210	2160	1060	---	2050	1270	1400	714	1310	893	1010
30	1120	1240	2050	861	---	1970	1190	1370	710	1050	914	1010
31	1120	---	2190	933	---	1770	---	1170	---	888	894	---
TOTAL	32818	34010	36325	39888	44499	42370	40760	42050	29523	30717	33510	28933
MEAN	1059	1134	1172	1287	1589	1367	1359	1356	984	991	1081	964
MAX	1860	1260	2290	1910	4000	2050	2050	2000	1410	2130	2490	1520
MIN	799	1070	262	832	544	1210	1130	1060	670	586	836	769
AC-FT	65090	67460	72050	79120	88260	84040	80850	83410	58560	60930	66470	57390
CAL YR 1980 TOTAL	460802			MEAN 1259	MAX 5440	MIN 219	AC-FT 914000					
WTR YR 1981 TOTAL	435403			MEAN 1193	MAX 4000	MIN 262	AC-FT 863600					

NIOBRARA RIVER BASIN

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06465000 NIOBRARA RIVER NEAR SPENCER, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
DEC					MAY				
03...	1330	349	304	1.5	20...	1805	1430	227	19.5
JAN					JUN				
07...	1325	1470	256	.5	25...	1235	653	239	23.5
FEB					JUL				
25...	1440	1770	230	6.0	13...	1630	542	248	30.0
MAR					AUG				
25...	1440	1350	244	15.5	07...	1045	1560	266	23.5
APR					SEP				
29...	1650	1350	229	19.5	11...	1445	813	249	23.5

MIOERARA 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 (4 m) downstream from bridge on the county road, 7 mi (11 km) west of Redbird.

DRAINAGE AREA.--206 mi² (534 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,465 ft (446.5 m) from topographic map.

REMARKS.--Records good except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,330 ft³/s (94.3 m³/s) Aug. 5, 1981, gage height, 8.55 ft (2.606 m); minimum daily, 1.9 ft³/s (0.054 m³/s) Aug. 7, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,330 ft³/s (94.3 m³/s) Aug. 5, gage height, 8.55 ft (2.606 m); minimum daily, 9.9 ft³/s (0.28 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	33	35	43	23	34	37	31	27	20	12	23
2	21	33	30	36	22	34	34	32	33	41	25	24
3	22	32	33	32	23	35	35	35	32	616	24	20
4	23	32	40	29	27	35	34	37	29	123	22	20
5	24	32	38	32	35	33	34	35	27	60	716	23
6	25	30	36	37	32	32	33	32	23	45	102	26
7	26	32	32	36	33	32	33	34	22	40	55	32
8	26	32	30	33	29	33	36	36	22	31	47	28
9	27	30	32	32	30	33	33	32	21	26	42	26
10	26	29	30	31	27	33	33	31	22	23	39	24
11	27	30	35	27	20	33	34	33	19	22	37	24
12	27	32	39	29	25	34	35	42	18	20	36	22
13	29	33	38	32	30	33	36	43	21	19	36	20
14	27	33	38	32	36	33	34	37	102	14	39	21
15	28	32	40	29	41	34	34	36	80	16	36	23
16	52	33	43	27	45	33	35	38	50	14	35	25
17	53	32	42	27	48	32	34	45	44	11	31	25
18	42	33	39	29	46	31	34	51	38	9.9	23	25
19	40	35	30	32	43	30	34	45	35	12	25	25
20	37	37	26	31	42	31	35	39	34	10	22	25
21	35	37	29	29	40	31	34	37	38	15	18	25
22	35	38	35	32	38	32	35	39	31	17	17	25
23	35	36	32	35	38	32	33	36	29	21	20	26
24	31	34	28	39	36	32	33	34	25	19	31	27
25	28	36	25	40	36	31	33	32	23	60	31	29
26	27	38	28	34	35	34	34	32	22	26	25	32
27	29	40	31	37	35	31	35	30	24	27	24	28
28	30	37	35	29	35	39	33	31	25	30	27	27
29	33	37	38	25	---	55	32	30	24	25	25	29
30	34	38	42	27	---	43	31	29	22	19	25	29
31	34	---	45	30	---	40	---	28	---	16	23	---
TOTAL	955	1016	1074	993	950	1058	1020	1102	962	1447.9	1670	758
MEAN	30.8	33.9	34.6	32.0	33.9	34.1	34.0	35.5	32.1	46.7	53.9	25.3
MAX	53	40	45	43	48	55	37	51	102	616	716	32
MIN	21	29	25	25	20	30	31	28	18	9.9	12	20
AC-FT	1890	2020	2130	1970	1880	2100	2020	2190	1910	2870	3310	1500
CAL YR 1980	TOTAL	13991.0	MEAN 38.2	MAX 150	MIN 1.9	AC-FT 27750						
WTE YR 1981	TOTAL	13005.9	MEAN 35.6	MAX 716	MIN 9.9	AC-FT 25800						

NIOBBARA RIVER BASIN

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 (3 m) downstream from county road bridge at Redbird, 0.9 mi (1.4 km) upstream from mouth and 4.6 mi (7.4 km) south-southeast of Lynch.

DRAINAGE AREA.--157 mi² (407 km²).

PERIOD OF RECORD.--October 1980 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 1,412.75 ft (430.606 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 239 ft³/s (6.77 m³/s) Aug. 2, gage height, 3.01 ft (0.917 m); maximum gage height recorded, 3.19 ft (0.972 m) Jan. 12, backwater from ice, but may have been higher during period of no gage-height record Jan. 30 to Feb. 20; minimum daily discharge, 3.8 ft³/s (0.11 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	20	21	30	20	25	22	16	15	5.4	17	9.8
2	10	20	19	28	19	24	22	16	21	16	95	9.3
3	11	20	22	26	20	24	19	18	19	107	62	9.3
4	12	19	25	25	24	24	22	24	18	53	30	11
5	12	19	24	28	27	22	19	22	16	40	82	11
6	13	20	23	35	25	21	19	21	14	27	71	10
7	13	20	23	34	25	21	19	19	13	20	41	18
8	13	20	22	32	24	21	19	20	13	16	26	17
9	14	19	23	30	22	21	17	19	13	14	19	16
10	14	19	22	28	19	20	17	19	13	12	14	14
11	13	19	23	24	17	20	18	20	13	10	13	14
12	14	20	26	26	20	21	18	24	12	7.0	10	13
13	16	20	25	28	22	20	22	29	11	7.0	10	13
14	17	20	27	27	27	20	19	26	77	3.8	16	12
15	17	20	26	25	30	20	19	24	60	7.0	11	13
16	27	20	30	24	33	19	19	24	48	6.6	11	14
17	25	20	29	24	35	20	18	29	30	5.1	9.8	14
18	22	22	28	25	37	19	19	33	21	7.4	8.4	14
19	21	21	25	27	36	19	19	31	18	8.8	7.4	14
20	20	21	22	26	35	19	19	26	17	7.9	8.4	13
21	21	21	24	24	33	19	20	23	20	6.6	6.6	12
22	21	21	27	27	31	20	19	23	15	7.4	5.7	10
23	20	21	26	29	31	20	20	22	14	12	9.3	11
24	19	21	23	32	28	20	19	20	13	11	14	15
25	19	26	19	33	26	19	19	20	12	24	15	18
26	20	25	21	29	25	19	18	19	8.8	26	12	19
27	20	22	23	25	27	19	18	18	10	20	14	18
28	20	22	26	23	26	24	18	18	11	22	15	17
29	20	22	30	21	---	39	17	18	9.8	21	15	17
30	21	22	32	22	---	34	16	17	7.4	20	12	18
31	20	---	33	23	---	27	---	16	---	19	11	---
TOTAL	536	622	769	840	744	680	569	674	583.0	570.0	691.6	414.4
MEAN	17.3	20.7	24.8	27.1	26.6	21.9	19.0	21.7	19.4	18.4	22.3	13.8
MAX	27	26	33	35	37	39	22	33	77	107	95	19
MIN	10	19	19	21	17	19	16	16	7.4	3.8	5.7	9.3
AC-FT	1060	1230	1530	1670	1480	1350	1130	1340	1160	1130	1370	822
WTR YR 1981	TOTAL	7693.0	MEAN	21.1	MAX	107	MIN	3.8	AC-FT	15260		

NIOBRARA RIVER BASIN

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

LOCATION.--Lat 42°44'25", long 98°12'45", near center of N1/2 sec.23, T.32 N., R.8 W., Knox County, Hydrologic Unit 10150007, on left bank 4 ft (1 m) downstream from Pishelville Bridge, 6 mi (10 km) south of Verdel, and 7 mi (11 km) upstream from Verdigre Creek.

DRAINAGE AREA.--12,600 mi² (32,600 km²), 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 1,308.12 ft (398.715 m) National Geodetic Vertical Datum of 1929. Apr. 25, 1938, to June 16, 1939, nonrecording gage at same site and datum. June 17, 1939, to June 13, 1940, nonrecording gage 250 ft (76 m) downstream at present datum.

REMARKS.--Records fair. Natural flow of stream affected by irrigation and power developments.

AVERAGE DISCHARGE.--24 years, 1,509 ft³/s (42.73 m³/s), 1,093,000 acre-ft/yr (1.35 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft³/s (1,100 m³/s) Mar. 27, 1960, gage height, 10.10 ft (3.078 m); maximum gage height, 10.62 ft (3.237 m) Mar. 12, 1966, backwater from ice; minimum daily discharge, 104 ft³/s (2.95 m³/s) Nov. 30, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,090 ft³/s (116 m³/s) Feb. 21; maximum gage height, 7.32 ft (2.231 m) Feb. 1, backwater from ice; minimum daily discharge, 335 ft³/s (9.49 m³/s) Dec. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	1170	1430	2130	913	1630	1750	1200	1220	746	920	981
2	885	1180	482	1560	729	1430	1590	1140	1340	769	1350	908
3	924	1190	335	1410	615	1460	1500	1120	1400	2710	1170	872
4	934	1170	661	1150	633	1440	1590	1330	1210	2450	964	877
5	881	1160	1280	1040	654	1410	1610	1530	1210	1510	2200	841
6	911	1160	1620	1210	798	1410	1620	1250	1100	1330	3070	824
7	905	1180	1260	1340	1090	1420	1570	1190	1090	1160	1730	1120
8	900	1160	1090	1600	1140	1410	1440	1370	1000	1030	1400	1030
9	935	1160	1110	1510	1170	1440	1940	1400	1030	902	1190	978
10	953	1150	950	1230	1070	1390	1900	1370	1160	747	1190	927
11	1000	1180	980	1150	802	1330	1290	1260	1010	691	1170	892
12	981	1190	1120	1170	674	1380	1340	1310	1070	707	1040	870
13	988	1190	1440	1140	840	1350	1350	1600	996	589	998	866
14	1010	1230	1790	1330	1050	1330	1490	1460	1290	613	1070	820
15	1040	1210	1770	1610	1140	1360	1400	1230	1680	625	969	860
16	1410	1210	2120	1380	1380	1300	1340	1250	1390	674	1010	1110
17	2100	1230	2410	1100	2350	1310	1230	1550	1240	643	1060	1030
18	1590	1210	2150	871	2990	1330	1240	2110	991	714	1120	989
19	1370	1240	983	1090	3110	1340	1360	1970	1030	842	944	811
20	1200	1240	448	1310	3850	1300	1380	1720	1040	806	1110	913
21	1140	1210	507	1380	4090	1280	1400	1570	977	858	872	1010
22	1140	1200	568	1520	3690	1450	1350	1570	981	1160	887	1280
23	1180	1250	882	1560	2750	1420	1450	1610	926	1020	965	1460
24	1170	1220	1020	1740	2500	1380	1400	1610	861	984	996	1310
25	1150	1210	1020	1890	1690	1360	1260	1530	779	1020	1030	1090
26	1170	1220	990	2010	1640	1340	1180	1410	781	1340	1150	948
27	1170	1340	856	1810	1650	1300	1280	1280	768	1530	1210	1340
28	1250	1140	957	1450	1650	1420	1300	1420	742	1610	1130	1460
29	1220	1300	1910	1240	---	1920	1320	1520	747	1480	887	1030
30	1220	1280	2190	939	---	2250	1270	1360	753	1180	1030	1130
31	1200	---	2260	987	---	1880	---	1290	---	982	934	---
TOTAL	35147	36180	38589	42857	46658	44770	43140	44530	31812	33422	36766	30577
MEAN	1134	1206	1245	1382	1666	1444	1438	1436	1060	1078	1186	1019
MAX	2100	1340	2410	2130	4090	2250	1940	2110	1680	2710	3070	1460
MIN	881	1140	335	871	615	1280	1180	1120	742	589	872	811
AC-FT	69710	71760	76540	85010	92550	88800	85570	88330	63100	66290	72930	60650
CAL YR 1980	TOTAL	494612	MEAN	1351	MAX	4890	MIN	288	AC-FT	981100		
WTR YR 1981	TOTAL	464448	MEAN	1272	MAX	4090	MIN	335	AC-FT	921200		

NIOBRARA RIVER BASIN

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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 current year.

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

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to current year.

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

REMARKS.--Prior to July 1, 1971, sediment records were obtained by U.S. Corps of Engineers. Daily specific conductance values have not been published owing to questionable reliability of observations for most of the year.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 470 micromhos Dec. 22, 1976; minimum daily, 110 micromhos 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 (385,000 tonnes) Mar. 19, 1979; minimum daily, 60 tons (55 tonnes) Dec. 07, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 35.0°C July 11, 12, 17; minimum 0.0°C on many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 4,600 mg/L Feb. 11; minimum daily, 130 mg/L Dec. 1.

SEDIMENT LOADS: Maximum daily, 31,000 tons (28,200 tonnes) Feb. 22; minimum daily, 230 tons (209 tonnes) Dec. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TUR- RID- 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)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CaCO3) (00900)
OCT											
07...	1430	803	242	7.7	21.5	26	9.1	--	K56	110	95
NOV											
04...	0900	1110	240	8.0	8.0	55	13.6	15	--	--	100
DEC											
02...	1330	576	284	8.2	.5	43	13.5	25	K19	96	120
JAN											
06...	1025	1400	258	8.2	.5	50	13.3	20	K37	120	110
FEB											
24...	1345	1860	236	7.9	7.0	260	11.3	61	K67	140	99
MAR											
24...	1210	1450	247	7.8	14.0	65	9.9	23	4	100	97
APR											
28...	1235	1160	252	8.2	20.5	38	8.7	140	K44	120	99
MAY											
19...	1110	2020	239	7.8	20.5	90	8.5	19	360	460	110
JUN											
24...	1125	753	246	8.4	26.0	17	8.4	25	120	84	100
JUL											
22...	1105	1210	231	8.2	29.0	37	8.0	36	700	180	90
AUG											
04...	1500	955	241	8.3	30.5	60	7.7	49	520	160	94
SEP											
09...	1340	993	235	8.5	27.0	31	8.6	62	100	600	93

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 1980 TO SEPTEMBER 1981

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)
OCT 07...	.00	31	4.3	9.0	.4	6.1	110	9.9	1.7	.3
NOV 04...	.00	33	4.5	9.4	.4	5.9	110	13	1.9	.3
DEC 02...	.00	37	5.6	11	.4	5.7	120	16	1.9	.3
JAN 06...	.00	35	4.7	8.7	.4	5.4	110	18	1.0	.3
FEB 24...	10	33	4.1	8.8	.4	5.3	89	20	2.0	.2
MAR 24...	.00	32	4.1	9.5	.4	6.2	100	14	1.6	.3
APR 28...	.00	33	4.1	10	.4	7.5	110	17	1.3	.4
MAY 19...	.00	37	4.1	8.9	.4	6.7	120	14	1.4	.2
JUN 24...	.00	34	4.3	10	.4	7.2	120	7.6	1.3	.3
JUL 22...	.00	30	3.6	8.8	.4	6.8	100	<5.0	1.6	.3
AUG 04...	.00	31	3.9	8.7	.4	7.5	110	<5.0	2.7	.5
SEP 09...	.00	31	3.8	8.7	.4	7.3	120	<5.0	1.6	.3

DATE	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, TOTAL (MG/L) (00500)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED TOTAL (MG/L AS N) (00608)
OCT 07...	49	183	179	.25	397	--	.42	.41	.000	.000
NOV 04...	49	189	187	.26	566	232	.81	.77	.060	.040
DEC 02...	56	204	210	.28	317	337	1.0	1.0	.020	.020
JAN 06...	48	205	192	.28	775	308	1.0	1.0	.050	.050
FEB 24...	41	189	172	.26	949	--	.80	.80	.140	.080
MAR 24...	47	183	178	.25	716	465	.80	.80	.030	.020
APR 28...	51	194	192	.26	608	324	.23	.23	.060	.060
MAY 19...	42	183	189	.25	998	206	.56	.54	.120	.080
JUN 24...	54	195	191	.27	396	284	.01	.01	.070	.060
JUL 22...	52	186	165	.25	608	358	.21	.01	.130	.120
AUG 04...	50	182	166	.25	469	367	<.10	.00	.150	.110
SEP 09...	53	181	183	.25	485	524	<.09	.01	.070	.090

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	
	DATE											
	OCT 07...	.92	.34	.92	.58	.34	1.3	.75	.120	.040	3.9	
	NOV 04...	.71	.65	.77	.08	.69	1.6	1.5	.300	.170	--	
	DEC 02...	.84	.54	.86	.30	.56	1.9	1.6	.140	.110	6.4	
	JAN 06...	.44	.33	.49	.11	.38	1.5	1.4	.150	.100	3.5	
	FEB 24...	1.9	.41	2.00	1.5	.49	2.8	1.3	.620	.110	--	
	MAR 24...	.48	.48	.51	.00	.51	1.3	1.3	.310	.100	6.7	
	APR 28...	2.2	.45	2.30	1.8	.51	2.5	.75	.190	.060	10	
	MAY 19...	1.1	.68	1.20	.44	.76	1.8	1.3	.240	.100	15	
	JUN 24...	1.0	.51	1.10	.53	.57	1.1	.58	.150	.030	8.3	
	JUL 27...	1.1	.76	1.20	.32	.88	1.4	.89	.230	.020	6.6	
	AUG 04...	1.1	.89	1.20	.20	1.0	--	1.0	.230	.040	15	
	SEP 09...	1.1	--	1.20	--	4.22	--	--	.190	.020	8.1	
			ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR) (01031)
NOV 04...	0900	5	0	6	200	100	100	0	--	<1	10	10
FEB 24...	1345	8	4	4	300	200	100	1	0	1	10	0
MAY 19...	1110	8	2	6	100	0	100	1	--	<1	10	0
AUG 04...	1500	9	1	8	100	10	90	1	--	<1	20	20
		CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO) (01036)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
NOV 04...		0	2	--	<3	8	5	3	2400	2400	30	6
FEB 24...		10	5	5	0	19	16	3	9800	9700	60	7
MAY 19...		10	1	--	<3	7	2	5	3600	3600	40	7
AUG 04...		0	3	--	<3	8	7	1	3100	3100	42	5

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
NOV 04...	4	2	190	190	4	.0	.0	.1	8	6	2
FEB 24...	7	0	690	690	0	.1	.1	.0	12	9	3
MAY 19...	6	1	210	200	10	.1	.0	.2	10	8	2
AUG 04...	5	0	230	230	1	.0	.0	.0	6	6	0

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG) (01076)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
NOV 04...	1	0	1	0	0	0	30	20	10	11	.4
FEB 24...	3	2	1	0	0	0	50	40	10	8.3	>4.0
MAY 19...	1	0	1	0	0	0	10	10	0	7.8	2.0
AUG 04...	1	0	1	0	0	0	70	70	3	3.1	2.0

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 4,80 0900	MAY 19,81 1110	JUN 24,81 1125	JUL 22,81 1105	AUG 4,81 1500	SEP 9,81 1340				
TOTAL CELLS/ML	6400	12000	130000	8900	160000	78000				
DIVERSITY: DIVISION	1.3	1.4	1.2	1.5	0.4	0.7				
..CLASS	1.3	1.4	1.2	1.5	0.4	0.7				
..ORDER	2.8	2.9	1.7	2.9	0.6	1.1				
...FAMILY	3.1	3.3	2.6	3.2	1.8	2.4				
....GENUS	3.7	3.5	3.1	3.7	2.4	3.3				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)										
..BACILLARIOPHYCEAE										
...ACHNANTHALES										
....ACHNANTHACEAE										
.....ACHNANTHES	55	1	140	1	--	--	--	--	--	--
.....COCCONEIS	--	--	70	1	--	--	--	--	--	--
...BACILLARIALES										
....NITZSCHIA	1100#	17	3500#	28	2300	2	57	1	1500	1
....EPITHEMIALES										
.....EPITHEMIA	--	--	70	1	--	--	--	--	--	--
....EUPODISCALES										
.....COSCINODISCACEAE										
.....CYCLOTELLA	940	15	1600	13	4800	4	720	8	1500	1
.....MELOSIRA	470	7	--	--	*	0	930	10	--	--
....STEPHANODISCUS	--	--	--	--	--	--	*	0	--	--
...FRAGILARIALES										
....FRAGILARIACEAE										
.....ASTERIONELLA	--	--	--	--	--	--	*	0	--	--
.....DIATOMA	55	1	--	--	--	--	--	--	--	--
....FRAGILARIA	640	10	1300	10	--	--	1300	14	--	--
....OPEPHORA	--	--	70	1	--	--	*	0	1000	1
....SYNEDRA	83	1	--	--	--	--	*	0	--	--
....TABELLARIA	--	--	--	--	--	--	*	0	--	--
...NAVICULALES										
....CYMBELLACEAE										
.....AMPHORA	--	--	70	1	--	--	*	0	--	--
.....CYMBELLA	*	0	70	1	--	--	--	--	--	--
....GOMPHONEMACEAE										
.....GOMPHONEMA	170	3	140	1	--	--	*	0	--	--
....NAVICULACEAE										
.....ANOMOEONEIS	--	--	70	1	--	--	--	--	--	--
....NAVICULA	410	6	980	8	--	--	250	3	*	0
....NEIDIUM	*	0	--	--	--	--	--	--	--	--
....STAURONEIS	55	1	--	--	--	--	--	--	--	--
...SURIRELLALES										
....SURIRELLACEAE										
.....SURIRELLA	--	--	--	--	--	--	*	0	--	--
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHLOROCOCCACEAE										
.....TETRAEDRUM	--	--	70	1	*	0	--	--	*	0
....DICTYOSPHAERIACEAE										
.....DICTYOSPHAERIUM	--	--	560	5	9400	7	--	--	12000	8
....HYDRODICTYACEAE										
.....PEDIASTRUM	220	3	--	--	5200	4	--	--	--	--
....MICRACTINIACEAE										
.....GOLENKINIA	--	--	--	--	--	--	--	--	--	--
....MICRACTINIUM	--	--	--	--	*	0	--	--	--	--
....OOCYSTACEAE										
.....ANKISTRODESMUS	83	1	770	6	7800	6	*	0	4500	3
....KIRCHNERIELLA	--	--	--	--	--	--	--	--	1000	1
....OOCYSTIS	*	0	--	--	7100	5	76	1	7600	5
....SELENASTRUM	--	--	--	--	*	0	--	--	1500	1
....TREUBARIA	--	--	--	--	--	--	--	--	--	--
...PALMELLACEAE										
....SPHAEROCYSTIS	--	--	--	--	--	--	150	2	13000	8
....SCENEDESMACEAE										
.....ACTINASTRUM	--	--	--	--	--	--	--	--	2000	1
....COELASTRUM	--	--	--	--	7800	6	150	2	6100	4
....GLOEOACTINIUM	--	--	--	--	--	--	--	--	--	--
....SCENEDESMUS	830	13	1100	9	35000#	27	510	6	96000#	60
....TETRASTRUM	110	2	--	--	1300	1	--	--	2000	1
...VOLVOCALES										
....CHLAMYDOMONADACEAE										
.....CHLAMYDOMONAS	140	2	280	2	3600	3	110	1	4500	3

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 4,80 0900		MAY 19,81 1110		JUN 24,81 1125		JUL 22,81 1105		AUG 4,81 1500		SEP 9,81 1340	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
....CRYPTOCHRYSIDACEAE												
.....CHROOMONAS	--	-	70	1	--	-	--	-	--	-	--	-
....CRYPTOMONADACEAE												
.....CRYPTOMONAS	--	-	--	-	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHAMAESIPHONALES												
....CHAMAESIPHONACEAE												
.....ENTOPHYSALIS	--	-	--	-	--	-	300	3	--	-	--	-
..CHROOCOCCALES												
....CHROOCOCCACEAE												
.....ANACYSTIS	300	5	--	-	36000#	27	430	5	4000	3	--	-
....NOSTOCALES												
.....NOSTOCACEAE												
.....ANABAENA	--	-	560	5	9000	7	--	-	--	-	2500	3
....APHANIZOMENON	--	-	--	-	--	-	380	4	--	-	--	-
...SCYTONEMATACEAE												
....PLECTONEMA	--	-	--	-	--	-	1500#	17	--	-	--	-
..OSCILLATORIALES												
....OSCILLATORIA												
.....LYNGBYA	500	8	--	-	--	-	450	5	--	-	--	-
.....OSCILLATORIA	170	3	560	5	--	-	1300	14	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
.....EUGLENA	--	-	70	1	--	-	--	-	--	-	--	-
.....PHACUS	--	-	--	-	--	-	--	-	*	0	--	-
....TRACHELOMONAS	--	-	210	2	--	-	*	0	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...DINOKONTAE												
....PERIDINIACEAE												
.....PERIDINIUM	--	-	--	-	--	-	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	14.5	10.0	5.5	2.0	.0	1.0	.5	1.0	1.0	6.5	1.5
2	14.5	10.0	11.0	6.5	.5	.0	1.0	.5	1.5	1.5	6.5	2.0
3	15.0	8.5	12.0	8.0	.0	.0	1.5	1.0	1.5	1.0	8.5	3.0
4	19.0	11.0	10.5	6.0	.0	.0	1.0	1.0	1.5	1.0	8.5	4.5
5	19.0	10.5	11.5	6.5	.0	.0	1.0	.5	1.0	1.0	9.0	3.5
6	20.5	13.0	13.0	7.0	.0	.0	.5	.5	1.0	1.0	5.5	3.0
7	21.5	13.5	13.0	8.5	.0	.0	.5	.5	1.0	1.0	6.5	1.5
8	21.5	13.5	12.0	8.5	.5	.0	.5	.5	1.5	1.0	7.0	1.5
9	21.0	14.5	10.5	6.5	.5	.0	1.0	.5	1.5	1.5	8.5	3.0
10	15.0	10.5	8.0	5.0	.5	.0	1.0	.5	1.5	1.5	9.5	3.5
11	15.0	8.5	6.5	5.5	1.0	.5	1.0	.5	3.0	2.0	11.0	4.0
12	14.0	8.0	6.5	6.0	.5	.0	.5	.0	2.0	1.5	12.0	5.0
13	14.0	9.0	6.0	3.5	.5	.0	.5	.5	1.5	1.0	11.5	5.0
14	15.0	9.0	4.5	3.5	.5	.0	.5	.5	1.0	1.0	12.0	4.5
15	11.5	9.0	5.0	3.0	.5	.0	.5	.5	1.0	1.0	11.5	6.0
16	13.5	9.0	4.5	2.0	.5	.0	1.0	.5	1.0	.5	13.5	5.5
17	9.0	7.0	3.5	1.5	3.0	.0	1.0	.5	1.0	.5	10.0	7.0
18	8.0	6.0	3.5	1.0	1.5	.5	.5	.5	1.0	1.0	8.5	3.0
19	11.5	5.0	4.0	1.0	1.0	.0	.5	.5	1.0	1.0	9.0	4.0
20	14.0	8.0	4.5	1.0	.0	.0	.5	.5	2.0	1.5	8.5	4.0
21	13.5	9.0	4.5	1.0	1.0	.0	.5	.5	4.0	2.0	6.0	5.0
22	12.0	7.0	4.5	1.0	1.0	.0	.5	.5	5.5	2.0	13.5	5.0
23	10.5	5.0	4.0	1.5	.5	.5	.5	.5	6.0	2.0	14.5	6.0
24	9.5	5.0	1.5	.5	1.0	.5	.5	.5	6.5	3.0	16.0	8.0
25	9.0	4.5	1.0	.5	1.0	.5	.5	.5	7.0	3.5	14.5	7.0
26	5.5	3.0	1.0	.0	.5	.5	.5	.5	5.0	3.5	13.5	8.0
27	4.0	1.5	1.0	.5	.5	.0	.5	.5	4.5	4.0	15.0	6.5
28	5.5	1.5	3.0	.5	.0	.0	.5	.5	4.0	3.0	13.5	10.5
29	7.0	3.0	1.0	.0	.5	.0	.5	.5	---	---	10.5	8.5
30	9.5	4.5	3.5	.5	.5	.5	.5	.5	---	---	15.5	8.0
31	10.5	5.5	---	---	1.0	.5	.5	.5	---	---	12.0	8.0
MONTH	21.5	1.5	13.0	.0	3.0	.0	1.5	.0	7.0	.5	16.0	1.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.0	6.0	22.0	11.5	29.0	16.5	30.0	20.5	29.5	22.0	24.5	15.0
2	17.0	9.0	22.0	11.5	26.0	18.5	24.0	21.0	33.0	20.5	24.5	15.5
3	14.0	8.0	19.5	15.5	28.5	16.5	22.0	20.5	33.0	23.5	21.0	17.0
4	10.5	6.0	19.0	13.0	27.0	19.0	30.0	19.5	31.5	23.0	23.5	14.5
5	12.0	6.5	21.5	11.5	28.5	19.0	33.5	22.0	30.5	21.5	26.5	18.0
6	16.0	6.0	19.0	12.0	29.0	18.5	31.5	23.0	29.5	24.0	23.0	20.5
7	15.5	10.0	14.0	10.5	30.0	20.5	30.5	22.0	24.5	20.5	24.5	17.0
8	15.0	9.5	20.5	10.0	30.0	20.5	26.0	23.0	26.5	19.5	26.5	16.5
9	15.5	9.0	16.0	11.0	25.5	20.5	28.5	18.5	25.0	20.0	26.0	18.5
10	18.0	11.0	19.5	8.0	26.5	17.0	31.5	21.0	26.0	18.0	27.0	18.0
11	14.0	10.5	17.0	9.5	27.0	19.5	35.0	23.5	28.5	19.0	25.0	19.0
12	18.0	9.0	13.5	10.5	27.0	20.5	35.0	25.0	29.0	21.0	25.0	16.0
13	15.5	9.5	14.5	9.5	31.0	21.0	34.5	24.5	24.5	21.5	26.0	18.0
14	16.5	6.5	21.5	9.5	25.5	20.0	34.5	24.5	28.5	21.5	24.0	16.0
15	14.5	8.0	21.0	12.0	20.5	17.0	30.5	24.0	28.5	21.5	18.5	15.0
16	20.0	9.5	16.5	13.5	25.0	14.0	28.0	21.5	27.0	21.0	18.0	12.0
17	21.0	13.5	13.5	10.5	27.0	15.0	35.0	23.0	26.0	18.5	20.5	10.5
18	17.0	11.5	16.5	10.0	23.5	18.0	29.0	23.0	25.5	18.5	22.0	12.0
19	15.0	13.0	21.0	10.0	21.0	16.5	31.5	20.5	28.0	18.5	24.5	14.5
20	15.0	10.0	20.5	12.0	24.5	17.0	30.5	21.5	28.5	19.5	24.0	15.5
21	19.5	10.5	20.0	13.0	26.0	15.5	30.5	21.0	28.0	19.5	22.0	14.5
22	16.5	13.0	24.5	14.0	26.5	17.0	30.0	21.5	24.0	19.0	21.0	14.5
23	18.5	9.5	20.0	13.5	30.5	18.5	32.0	22.0	27.0	20.0	23.5	15.5
24	22.0	10.5	18.5	12.0	30.0	21.0	27.0	23.0	24.0	19.5	20.0	16.5
25	26.5	14.0	21.5	14.5	31.0	19.5	25.0	20.5	27.0	19.5	23.5	18.0
26	24.5	17.0	25.5	14.5	28.5	20.0	20.5	18.0	24.5	20.5	20.5	15.5
27	26.5	18.0	23.0	17.0	33.5	20.0	19.0	16.5	22.0	19.5	19.5	13.0
28	21.0	14.5	25.0	18.5	29.5	24.0	20.5	16.0	22.0	18.5	19.5	11.5
29	20.5	15.5	23.5	18.0	30.0	21.0	23.0	17.0	27.0	18.0	20.0	15.5
30	20.0	13.0	28.0	15.0	29.5	19.5	28.5	20.0	29.0	21.0	18.0	14.0
31	---	---	24.5	17.0	---	---	30.0	22.0	25.5	18.5	---	---
MONTH	26.5	6.0	28.0	8.0	33.5	14.0	35.0	16.0	33.0	18.0	27.0	10.5

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1220	850	2800	1170	1100	3500	1430	130	500
2	885	810	1900	1180	1000	3200	482	180	230
3	924	880	2200	1190	1100	3500	335	430	390
4	934	950	2400	1170	1100	3500	661	680	1200
5	881	850	2000	1160	1200	3800	1280	560	1900
6	911	720	1800	1160	1200	3800	1620	380	1700
7	905	600	1500	1180	1000	3200	1260	650	2200
8	900	1700	4100	1160	830	2600	1090	950	2800
9	935	2000	5000	1160	860	2700	1110	760	2300
10	953	1800	4600	1150	920	2900	950	500	1300
11	1000	1500	4000	1180	930	3000	980	480	1300
12	981	1400	3700	1190	960	3100	1120	520	1600
13	988	2300	6100	1190	1200	3900	1440	500	1900
14	1010	3100	8500	1230	1600	5300	1790	510	2500
15	1040	2500	7000	1210	1800	5900	1770	600	2900
16	1410	1600	6100	1210	1800	5900	2120	720	4100
17	2100	1800	10000	1230	1400	4600	2410	710	4600
18	1590	2100	9000	1210	940	3100	2150	690	4000
19	1370	2200	8100	1240	720	2400	983	650	1700
20	1200	2100	6800	1240	580	1900	448	630	760
21	1140	2200	6800	1210	600	2000	507	1100	1500
22	1140	2200	6800	1200	680	2200	568	1800	2800
23	1180	2000	6400	1250	480	1600	882	1400	3300
24	1170	1600	5100	1220	260	860	1020	710	2000
25	1150	1500	4700	1210	210	690	1020	550	1500
26	1170	1500	4700	1220	200	660	990	650	1700
27	1170	1600	5100	1340	200	720	856	1200	2800
28	1250	1700	5700	1140	210	650	957	1700	4400
29	1220	1600	5300	1300	180	630	1910	1500	7700
30	1220	1500	4900	1280	160	550	2190	1100	6500
31	1200	1300	4200	---	---	---	2260	1000	6100
TOTAL	35147	---	157300	36180	---	82360	38589	---	80180

NIOBRARA RIVER BASIN

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06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	2130	1100	6300	913	1100	2700	1630	950	4200
2	1560	1200	5100	729	1100	2200	1430	980	3800
3	1410	1400	5300	615	1600	2700	1460	940	3700
4	1150	1500	4700	633	2200	3800	1440	900	3500
5	1040	1400	3900	654	2300	4000	1410	1000	3800
6	1210	1300	4200	798	2300	5000	1410	1200	4600
7	1340	1400	5100	1090	2700	8000	1420	1100	4200
8	1600	1500	6500	1140	3900	12000	1410	950	3600
9	1510	1300	5300	1170	3800	12000	1440	920	3600
10	1230	1000	3300	1070	3800	11000	1390	990	3700
11	1150	1300	4000	802	4600	10000	1330	1100	4000
12	1170	1600	5100	674	4000	7200	1380	1300	4800
13	1140	1500	4600	840	3400	7600	1350	1200	4400
14	1330	1400	5000	1050	2800	7900	1330	970	3500
15	1610	1100	4800	1140	2700	8300	1360	930	3400
16	1380	820	3100	1380	2500	9300	1300	950	3300
17	1100	1300	3900	2350	2600	16000	1310	1000	3500
18	871	2000	4700	2990	2900	23000	1330	1200	4300
19	1090	1900	5600	3110	2700	23000	1340	1000	3600
20	1310	1100	3900	3850	2400	25000	1300	930	3300
21	1380	1500	5600	4090	2600	29000	1280	1100	3800
22	1520	1300	5300	3690	3100	31000	1450	1200	4700
23	1560	1000	4200	2750	2900	22000	1420	1000	3800
24	1740	720	3400	2500	2500	17000	1380	910	3400
25	1890	760	3900	1690	2600	12000	1360	750	2800
26	2010	950	5200	1640	2800	12000	1340	580	2100
27	1810	1600	7800	1650	2100	9400	1300	660	2300
28	1450	930	3600	1650	1200	5300	1420	830	3200
29	1240	960	3200	---	---	---	1920	770	4000
30	939	1300	3300	---	---	---	2250	640	3900
31	987	1300	3500	---	---	---	1880	590	3000
TOTAL	42857	---	143400	46658	---	338400	44770	---	113800

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	1750	570	2700	1200	410	1300	1220	570	1900
2	1590	550	2400	1140	520	1600	1340	480	1700
3	1500	640	2600	1120	540	1600	1400	540	2000
4	1590	770	3300	1330	520	1900	1210	610	2000
5	1610	670	2900	1530	560	2300	1210	580	1900
6	1620	540	2400	1250	630	2100	1100	530	1600
7	1570	670	2800	1190	570	1800	1090	870	2600
8	1440	840	3300	1370	470	1700	1000	1400	3800
9	1940	820	4300	1400	380	1400	1030	1200	3300
10	1900	700	3600	1370	300	1100	1160	630	2000
11	1290	570	2000	1260	240	820	1010	370	1000
12	1340	430	1600	1310	210	740	1070	320	920
13	1350	440	1600	1600	270	1200	996	310	830
14	1490	520	2100	1460	360	1400	1290	330	1100
15	1400	580	2200	1230	290	960	1680	320	1500
16	1340	630	2300	1250	210	710	1390	310	1200
17	1230	750	2500	1550	270	1100	1240	380	1300
18	1240	910	3000	2110	420	2400	991	530	1400
19	1360	890	3300	1970	850	4500	1030	500	1400
20	1380	800	3000	1720	680	3200	1040	370	1000
21	1400	810	3100	1570	530	2200	977	290	760
22	1350	870	3200	1570	500	2100	981	260	690
23	1450	720	2800	1610	740	3200	926	250	620
24	1400	470	1800	1610	1100	4800	861	270	630
25	1260	360	1200	1530	1100	4500	779	280	590
26	1180	340	1100	1410	810	3100	781	320	670
27	1280	460	1600	1280	800	2800	768	290	600
28	1300	640	2200	1420	940	3600	742	250	500
29	1320	550	2000	1520	910	3700	747	250	500
30	1270	400	1400	1360	800	2900	753	250	510
31	---	---	---	1290	680	2400	---	---	---
TOTAL	43140	---	74300	44530	---	69130	31812	---	40520

NIOBRARA RIVER BASIN

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06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	746	480	970	920	1000	2500	981	830	2200
2	769	830	1700	1350	1000	3600	908	770	1900
3	2710	730	5300	1170	780	2500	872	730	1700
4	2450	380	2500	964	430	1100	877	700	1700
5	1510	230	940	2200	1300	7700	841	650	1500
6	1330	220	790	3070	1100	9100	824	600	1300
7	1160	330	1000	1730	1100	5100	1120	630	1900
8	1030	490	1400	1400	1200	4500	1030	640	1800
9	902	620	1500	1190	1100	3500	978	380	1000
10	747	740	1500	1190	1000	3200	927	480	1200
11	691	640	1200	1170	1000	3200	892	700	1700
12	707	500	960	1040	1100	3100	870	930	2200
13	589	630	1000	998	1200	3200	866	1100	2600
14	613	540	900	1070	1300	3800	820	1300	2900
15	625	560	940	969	1300	3400	860	1200	2800
16	674	600	1100	1010	1200	3300	1110	950	2800
17	643	580	1000	1060	1100	3100	1030	900	2500
18	714	570	1100	1120	1000	3000	989	860	2300
19	842	570	1300	944	930	2400	811	950	2100
20	806	550	1200	1110	800	2400	913	1000	2500
21	858	560	1300	872	850	2000	1010	1000	2700
22	1160	550	1700	887	930	2200	1280	1100	3800
23	1020	500	1400	965	1000	2600	1460	1600	6300
24	984	500	1300	996	1200	3200	1310	2200	7800
25	1020	670	1800	1030	1100	3100	1090	750	2200
26	1340	850	3100	1150	950	2900	948	620	1600
27	1530	780	3200	1210	880	2900	1340	520	1900
28	1610	670	2900	1130	890	2700	1460	530	2100
29	1480	870	3500	887	900	2200	1030	610	1700
30	1180	1000	3200	1030	950	2600	1130	620	1900
31	982	1000	2700	934	890	2200	---	---	---
TOTAL	33422	---	54400	36766	---	102300	30577	---	72600

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCT							
07...	1430	803	21.5	482	1040	5	6
NOV							
04...	0900	1110	8.0	1120	3360	7	7
JAN							
06...	1025	1400	.5	1220	4610	5	5
27...	1140	1890	--	1850	9440	5	5
FEB							
24...	1345	1860	7.0	2380	12000	23	25
MAR							
24...	1210	1450	14.0	892	3490	9	11
APR							
28...	1235	1160	20.5	902	2820	8	11
MAY							
19...	1110	2020	20.5	1470	8020	8	10
JUN							
24...	1125	753	26.0	244	496	20	21
JUL							
22...	1105	1210	29.0	574	1880	11	12
AUG							
04...	1500	955	30.5	350	902	25	29
SEP							
09...	1340	993	27.0	358	960	17	20

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)
OCT						
07...	7	13	18	47	93	98
NOV						
04...	10	16	24	73	98	100
JAN						
06...	8	13	25	83	100	--
27...	6	9	24	84	100	--
FEB						
24...	34	47	56	84	98	100
MAR						
24...	16	28	44	81	98	100
APR						
28...	12	22	35	82	100	--
MAY						
19...	14	29	45	89	100	--
JUN						
24...	27	40	53	84	100	--
JUL						
22...	13	23	36	71	94	100
AUG						
04...	35	43	51	82	100	--
SEP						
09...	23	33	39	81	100	--

NIOBRARA RIVER BASIN

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06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)
OCT											
07...	1430	803	5	--	0	24	81	97	98	99	100
NOV											
04...	0900	1110	5	0	1	25	87	99	100	--	--
JAN											
06...	1025	1400	5	0	1	27	88	98	98	99	100
27...	1140	1890	5	0	2	33	79	85	88	94	98
FEB											
24...	1345	1860	5	0	6	41	90	98	99	100	--
MAR											
24...	1210	1450	5	0	7	54	95	100	--	--	--
APR											
28...	1235	1160	5	0	2	47	94	97	99	100	--
MAY											
19...	1110	2020	5	0	2	30	77	87	92	95	96
JUN											
24...	1125	753	5	0	1	41	83	90	94	95	96
JUL											
22...	1105	1210	5	0	4	37	84	93	95	96	--
AUG											
04...	1500	955	5	0	3	38	86	93	95	96	96
SEP											
09...	1340	993	5	0	3	55	91	96	96	96	--

NIOBRARA RIVER BASIN

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 (5 m) downstream from bridge on paved county road 5 mi (8 km) west of Verdigre.

DRAINAGE AREA.--137 mi² (355 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,468 ft (447.4 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220 ft³/s (6.23 m³/s) June 14, 1981, gage height, 5.54 ft (1.689 m), from floodmark; minimum daily, 2.5 ft³/s (0.071 m³/s) Jan. 6, 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 220 ft³/s (6.23 m³/s) June 14, gage height, 5.54 ft (1.689 m), from floodmark; minimum daily, 6.0 ft³/s (0.17 m³/s) Dec. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	17	17	15	20	19	16	16	14	11	17
2	16	20	6.0	16	14	19	19	15	22	25	13	14
3	16	20	8.0	14	13	19	19	16	20	31	8.9	11
4	17	20	15	11	14	20	20	17	19	21	14	11
5	17	20	22	13	16	19	19	16	19	18	63	14
6	17	21	19	14	18	19	18	16	18	17	24	15
7	17	20	16	15	16	19	18	18	17	15	20	22
8	17	21	16	14	14	20	18	20	17	14	18	19
9	17	20	17	12	12	19	18	18	16	12	17	18
10	16	20	17	11	11	19	18	18	16	9.8	16	17
11	16	20	18	10	9.0	19	18	18	17	9.8	16	16
12	16	20	19	11	12	19	18	21	17	7.0	13	16
13	17	20	20	12	17	19	18	22	17	8.4	9.9	16
14	17	20	19	13	21	19	18	21	75	9.2	15	16
15	17	20	19	13	30	19	18	20	29	10	16	16
16	24	20	19	12	35	19	18	22	21	13	16	17
17	19	20	18	11	39	19	18	25	18	13	15	17
18	18	20	17	13	31	19	18	26	18	9.2	12	17
19	18	20	15	15	26	19	19	22	18	10	15	17
20	18	20	13	14	23	19	18	19	19	9.5	11	16
21	18	20	14	13	22	20	18	18	40	12	11	16
22	18	20	16	15	21	20	18	21	19	13	12	16
23	18	20	14	19	21	19	17	22	18	14	15	17
24	18	20	12	23	21	19	17	20	16	12	18	17
25	18	18	10	20	20	19	16	19	14	11	21	18
26	18	18	13	19	20	19	16	20	13	11	21	18
27	19	19	15	18	21	19	15	19	12	14	19	17
28	20	19	18	16	20	22	16	19	12	18	21	17
29	20	19	19	14	---	28	16	18	11	17	20	17
30	20	19	20	18	---	22	17	18	12	16	20	18
31	20	---	19	16	---	20	---	17	---	13	19	---
TOTAL	553	594	500.0	452	552.0	610	533	597	596	426.9	540.8	493
MEAN	17.8	19.8	16.1	14.6	19.7	19.7	17.8	19.3	19.9	13.8	17.4	16.4
MAX	24	21	22	23	39	28	20	26	75	31	63	22
MIN	16	18	6.0	10	9.0	19	15	15	11	7.0	8.9	11
AC-FT	1100	1180	992	897	1090	1210	1060	1180	1180	847	1070	978
CAL YR 1980	TOTAL	6448.2	MEAN	17.6	MAX	37	MIN	2.5	AC-FT	12790		
WTR YR 1981	TOTAL	6447.7	MEAN	17.7	MAX	75	MIN	6.0	AC-FT	12790		

BAZILE CREEK BASIN

75

06466500 BAZILE CREEK NEAR NIOBRARA, NE

LOCATION.--Lat 42°45'26", long 97°56'50", in SW1/4 sec.17, T.32 N., R.5 W., Knox County, Hydrologic Unit 10170101, on left bank 60 ft (18 m) shoreward and 20 ft (6 m) downstream from centerline of bridge on State Highway 12, 2.5 mi (4.0 km) upstream from mouth and 4.5 mi (7.2 km) east of Niobrara.

DRAINAGE AREA.--440 mi² (1,140 km²), 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). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and nonrecording gage read once daily. Datum of gage is 1,210.81 ft (369.055 m) 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 (1.28 m), at present site at datum 4 ft (1.2 m) higher. June 17, 1957, to Sept. 14, 1958, water-stage recorder above 8.2 ft (2.50 m) at present datum. Sept. 15, 1958, to Oct. 17, 1978, water-stage recorder at downstream end of left pier, above 4.3 ft (1.31 m), at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--29 years, 79.1 ft³/s (2.240 m³/s), 57,300 acre-ft/yr (70.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,600 ft³/s (1,940 m³/s) June 16, 1957, gage height, 19.96 ft (6.084 m), present datum, from high point on surge, from rating curve extended above 6,500 ft³/s (184 m³/s) on basis of contracted-opening measurements at gage heights 15.36 ft (4.682 m) and 19.96 ft (6.084 m), present datum; maximum gage height, 20.25 ft (6.172 m) 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 (4.682 m), present datum, from floodmarks, discharge, 24,400 ft³/s (691 m³/s) on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft³/s (70.5 m³/s) June 14, gage height, 17.35 ft (5.288 m), from floodmark, no other peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily, 7.6 ft³/s (0.22 m³/s) Dec. 2.

REVISIONS.--Revised maximum discharges for water years 1977, 1979-80, and revised daily discharges, in cubic feet per second, for high-water periods in these years, are given below. These figures supersede those published in the reports for 1977, 1979-80.

Water year	Date	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Water year	Date	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
1977	May 21, 1977	780 22.1	13.73 4.185	1980	Aug. 11, 1980	480 13.6	13.35 4.069
1979	Aug. 19, 1979	1,220 34.5	14.85 4.526				

May 21, 1977.....258	June 18, 1977.....144	Mar. 25, 1979.....760	Aug. 20, 1979.....480
May 22.....229	Mar. 23, 1979.....540	Mar. 26.....350	Aug. 10, 1980.....193
June 17.....221	Mar. 24.....880	Aug. 19.....547	Aug. 11.....237

Month	Total	Mean	Max	Min	Acre-ft
May 1977	1,886	60.8	258	29	3,740
June 1977	1,299	43.3	221	22	2,580
Wtr Yr 1977	15,536.5	42.6	400	8.4	30,820
Cal Yr 1977	16,314.5	44.7	400	8.4	32,360
March 1979	4,215	136	880	31	8,360
August 1979	2,736	88.3	547	19	5,430
Wtr Yr 1979	19,572	53.6	880	10	38,820
Cal Yr 1979	20,104	55.1	880	11	39,880
August 1980	1,158.2	37.4	237	9.2	2,300
Wtr Yr 1980	15,453.9	42.2	261	1.1	30,650

06466500 BAZILE CREEK NEAR NIOBRARA, NE--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	33	18	27	30	52	59	26	22	25	15	20
2	19	33	7.6	23	28	50	49	26	26	28	181	19
3	20	32	12	19	26	47	46	28	25	48	72	19
4	20	31	23	16	28	45	46	33	23	40	35	20
5	20	31	33	17	30	45	42	30	22	32	367	20
6	22	31	30	20	32	44	41	28	20	29	120	21
7	21	31	26	22	28	41	40	28	17	25	44	28
8	21	31	27	19	25	40	40	29	17	21	28	24
9	21	31	27	18	23	41	40	29	17	20	21	21
10	21	30	28	17	20	39	38	28	17	19	19	19
11	21	30	30	16	19	40	38	29	17	17	17	17
12	22	31	31	18	22	41	38	34	17	15	15	16
13	22	31	32	20	25	41	39	39	22	14	17	15
14	23	31	31	21	33	41	37	36	866	12	23	14
15	23	31	30	22	40	40	37	34	82	12	23	15
16	43	32	29	21	50	40	38	34	51	11	20	18
17	37	33	28	20	54	41	37	39	41	11	17	18
18	31	33	26	23	60	40	36	39	33	9.5	16	18
19	31	34	25	25	66	39	36	37	30	11	17	18
20	29	34	23	25	80	38	37	35	27	23	15	16
21	28	35	25	24	90	39	37	33	180	19	14	16
22	28	36	26	28	80	42	36	33	159	15	13	17
23	28	35	24	33	66	42	35	31	64	32	15	17
24	28	31	22	60	45	43	34	29	45	25	22	18
25	28	29	20	56	46	41	34	28	37	41	22	20
26	29	30	22	52	47	39	32	28	32	23	20	23
27	31	28	25	45	50	38	31	28	29	21	21	24
28	33	25	27	40	52	46	28	27	28	23	25	23
29	31	28	30	30	---	112	28	24	26	21	25	22
30	32	31	30	35	---	114	27	23	26	19	23	22
31	32	---	29	32	---	86	---	23	---	16	21	---
TOTAL	813	942	796.6	844	1195	1487	1136	948	2018	677.5	1303	578
MEAN	26.2	31.4	25.7	27.2	42.7	48.0	37.9	30.6	67.3	21.9	42.0	19.3
MAX	43	36	33	60	90	114	59	39	866	48	367	28
MIN	18	25	7.6	16	19	38	27	23	17	9.5	13	14
AC-FT	1610	1870	1580	1670	2370	2950	2250	1880	4000	1340	2580	1150
CAL YR 1980	TOTAL	14599.5	MEAN	39.9	MAX	261	MIN	1.1	AC-FT	28960		
MTB YR 1981	TOTAL	12738.1	MEAN	34.9	MAX	866	MIN	7.6	AC-FT	25270		

MISSOURI RIVER MAIN STEM

77

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, Nebraska, Hydrologic Unit 10170101, in powerhouse of Gavins Point Dam on Missouri River, 3.75 mi (6.03 km) southwest of Yankton, 13.6 mi (21.9 km) upstream from James River, 32.5 mi (52.3 km) downstream from Niobrara River, and at mi 811.0 (1,304.9 km).

DRAINAGE AREA.--279,500 mi² (723,900 km²), 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, 517,000 acre-ft (0.637 km³) below elevation 1,210.0 ft (368.81 m), top of spillway gates. Normal maximum, 455,000 acre-ft (0.561 km³) below elevation 1,208.0 ft (368.20 m). Inactive storage, 163,000 acre-ft (0.201 km³) below elevation 1,195.0 ft (364.24 m). Dead storage, 26,000 acre-ft (32.1 hm³) below elevation 1,180.0 ft (359.66 m), crest of spillway. From capacity table put into use May 1, 1981: Maximum capacity, 504,000 acre-ft (0.621 km³). Normal maximum, 443,000 acre-ft (0.546 km³). Inactive storage, 157,000 acre-ft (0.194 km³). Dead storage, 23,000 acre-ft (28.4 hm³). Figures given herein represent elevations at powerhouse and total contents adjusted for wind effect.

The spillway consists of 14 taintor gates, each 40 ft (12 m) wide by 30 ft (9 m) high; spillway capacity, 280,000 ft³/s (7,930 m³/s) at pool elevation 1,210.0 ft (368.81 m). Crest of spillway is at elevation 1,180 ft (360 m). Normal releases are through 3 power units, installation completed in January 1957; maximum release through power units is 35,000 ft³/s (991 m³/s) at pool elevation 1,210.0 ft (368.81 m). Water is used for flood control, navigation, power, and incidental uses.

COOPERATION.--Elevations and contents furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 565,000 acre-ft (0.697 km³) Apr. 1, 1960, affected by wind; minimum since initial filling, 61,950 acre-ft (76.4 hm³) Apr. 23, 1956.

EXTREMES FOR CURRENT YEAR.--Period of Oct. 1 to Apr. 30: Maximum contents, 479,000 acre-ft (0.591 km³) Jan. 1; minimum, 373,000 acre-ft (0.460 km³) Apr. 7. Period of May 1 to Sept. 30: Maximum contents, 454,000 acre-ft (0.560 km³) Aug. 6; minimum, 363,000 acre-ft (0.448 km³) June 10.

CORRECTIONS.--Capacity and storage figures in the REMARKS paragraph are in error for some years. The following table gives the correct figures for water years 1956-80.

Date	Maximum capacity	Normal maximum	Inactive storage	Dead storage
July 1955 to Dec. 31, 1967	541,000	477,000	156,000	18,000
Jan. 1, 1968 to Feb. 28, 1971	536,000	473,000	173,000	28,000
Mar. 1, 1971 to Dec. 31, 1975	522,000	460,000	165,000	26,000
Jan. 1, 1976 to Sept. 30, 1980	517,000	455,000	163,000	26,000

Elevations shown in EXTREMES FOR PERIOD OF RECORD and EXTREMES FOR CURRENT YEAR, for water years 1956-80, may have been incorrectly computed and may be slightly in error.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,207.84	449,000	-
Oct. 31	1,208.15	458,000	+9,000
Nov. 30	1,207.90	454,000	-4,000
Dec. 31	1,208.71	475,000	+21,000
CAL YR 1980	-	-	+12,000
Jan. 31	1,207.99	454,000	-21,000
Feb. 28	1,205.75	390,000	-64,000
Mar. 31	1,206.01	394,000	+4,000
Apr. 30	1,205.34	379,000	-15,000
Apr. 30	1,205.34	*369,000	-10,000
May 31	1,205.46	371,000	+2,000
June 30	1,205.97	387,000	+16,000
July 31	1,207.80	441,000	+54,000
Aug. 31	1,207.92	439,000	-2,000
Sept. 30	1,208.22	447,000	+8,000
WTR YR 1981	-	-	-2,000

NOTE.--Reservoir frozen over Dec. 10 to Mar. 10.

*New capacity table put into use May 1, 1981.

MISSOURI RIVER MAIN STEM

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 (8.4 km) downstream from Gavins Point Dam, 6.0 mi (9.7 km) upstream from James River, and at mi 805.8 (1.296.5 km).

DRAINAGE AREA.--279,500 mi² (723,900 km²), 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 date (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 (347.374 m) 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 (6.10 m) higher.

REMARKS.--Records good. Flow completely regulated by Lewis and Clark Lake 5.2 mi (8.4 km) upstream since July 1955 (see station 06467000). Many diversions for irrigation and water supply above station. Corps of Engineers gage-height telemeter at station. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 26,430 ft³/s (748.5 m³/s), 19,150,000 acre-ft/yr (23.6 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480,000 ft³/s (13,600 m³/s) Apr. 13, 1952; maximum gage height, 35.5 ft (10.82 m) Apr. 13, 14, 1952 (present datum); minimum daily discharge, 2,700 ft³/s (76.5 m³/s) Nov. 15, 16, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 50.5 ft (15.39 m) Apr. 5, 1881 (ice jam), present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,700 ft³/s (1,100 m³/s) Nov. 12, gage height, 18.75 ft (5.715 m); minimum daily, 10,600 ft³/s (300 m³/s) Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37200	35500	17800	14700	14200	14500	32900	34900	32100	32600	30700	31000
2	37000	35400	17500	14700	14500	14500	33100	35300	32400	32600	30600	31300
3	37000	35400	17500	14900	14700	14600	33200	35300	32100	32400	30700	31200
4	37000	35200	17500	14800	14400	14600	32800	34900	31800	31500	30600	31500
5	36900	35400	17500	14700	14500	14600	33000	34300	31800	30800	30700	31600
6	36800	35400	17500	14700	14200	14700	33100	34000	32300	30800	30700	31600
7	36700	35300	17500	14700	14100	14700	33200	33900	32300	30800	30500	31300
8	36700	35300	17500	14700	14200	14700	33300	34200	32300	30800	30500	31000
9	36500	35300	17500	14700	14200	14800	33300	34100	32900	31200	30400	31000
10	36300	35600	17500	14500	14200	14800	33800	34200	33100	31700	30500	31300
11	36200	36400	17500	14500	14300	14800	34500	35100	33100	32200	30800	31600
12	36200	37200	17500	14600	14300	11000	34500	34500	32800	32800	31100	32000
13	36100	38500	17500	14600	14300	14800	34500	33900	32700	33200	31500	32000
14	36000	38400	17500	14500	14300	14800	34200	33400	32600	33200	32000	31900
15	35900	38400	17500	14400	14300	14800	33500	33200	30500	33500	31700	32100
16	35900	38300	17500	14400	14300	15800	33600	33200	27700	33400	31600	32400
17	35700	38300	17500	14500	14400	18400	33600	33900	26500	34000	31900	32700
18	35700	38300	15700	14500	14400	21000	33700	33500	27600	34100	31900	32800
19	35600	38300	15700	14500	14300	23700	33800	32700	29300	33800	32000	32800
20	35600	38100	15700	14400	14500	26600	33300	31300	29700	33900	31900	32800
21	35700	38300	15700	14400	14400	29300	33000	30900	30000	33900	31900	32800
22	35800	38300	15900	14400	14300	32000	33400	30600	30100	34000	31800	32800
23	35600	38300	15800	14400	14400	35100	33800	30200	30600	33500	31800	32800
24	35500	36300	15800	14400	14500	35200	33900	30200	31000	33000	31700	32900
25	35300	32200	15800	14300	14700	35200	33900	30200	31200	32900	31800	32600
26	35700	29200	15800	14300	14600	35600	33900	30400	31700	32400	31400	32100
27	35500	26500	15800	14300	14500	36300	34000	31000	32100	31700	31000	32000
28	35100	24300	15600	14400	14400	35800	33900	31300	32600	31400	30600	32100
29	34500	21400	15600	14500	---	35700	34400	31300	32500	31400	30700	32100
30	34500	18900	15400	14500	---	35900	34500	31400	32900	31400	31100	32100
31	34700	---	15400	14400	---	33900	---	31400	---	31100	31000	---
TOTAL	1114900	1037700	517500	450300	402400	702200	1009600	1018700	940300	1006000	967100	960200
MEAN	35960	34590	16690	14530	14370	22650	33650	32860	31340	32450	31200	32010
MAX	37200	38500	17800	14900	14700	36300	34500	35300	33100	34100	32000	32900
MIN	34500	18900	15400	14300	14100	11000	32800	30200	26500	30800	30400	31000
AC-FT	2211000	2058000	1026000	893200	798200	1393000	2003000	2021000	1865000	1995000	1918000	1905000
CAL YR 1980	TOTAL	10300300	MEAN	28140	MAX	38500	MIN	11000	AC-FT	20430000		
WTR YR 1981	TOTAL	10126900	MEAN	27740	MAX	38500	MIN	11000	AC-FT	20090000		

ROW CREEK BASIN

79

06478518 ROW 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 (0.40 km) west of intersection of St. James road and State Highway 12, 0.7 mi (1.1 km) south of St. James.

DRAINAGE AREA.--304 mi² (787 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,190 ft (363 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,840 ft³/s (137 m³/s) Aug. 19, 1979, gage height, 9.38 ft (2.859 m); minimum daily, 7.4 ft³/s (0.21 m³/s) Jan. 15, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,310 ft³/s (37.1 m³/s) June 14, gage height, 5.90 ft (1.798 m); minimum daily, 7.9 ft³/s (0.22 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	28	31	33	22	36	32	22	19	18	21	13
2	23	27	30	32	22	37	31	23	84	17	187	13
3	24	27	28	32	21	37	31	23	31	21	40	12
4	24	26	28	31	20	39	32	26	25	20	30	12
5	25	26	28	30	20	38	31	22	23	18	26	13
6	25	27	27	31	21	37	29	21	22	16	22	12
7	25	28	26	29	22	37	29	22	22	16	21	13
8	25	29	25	30	22	39	29	22	21	15	20	11
9	25	28	24	28	23	37	30	23	21	14	19	11
10	24	27	24	25	22	36	30	23	20	14	18	11
11	24	27	28	24	18	35	29	23	19	13	17	10
12	25	28	30	25	22	34	29	25	21	12	16	9.6
13	24	28	32	28	24	32	30	28	28	11	16	8.7
14	25	28	32	29	30	31	30	26	603	12	19	8.0
15	25	28	33	27	33	31	28	25	178	12	17	7.9
16	28	29	34	26	35	30	28	25	46	12	16	8.7
17	30	28	35	29	37	30	27	27	36	12	15	9.3
18	26	30	33	29	40	29	26	28	31	11	15	9.7
19	25	30	25	28	44	28	26	27	28	14	15	10
20	27	30	26	29	49	28	25	25	26	14	13	9.3
21	28	30	26	31	42	27	27	25	26	15	13	8.6
22	27	30	26	32	42	28	27	24	65	12	12	8.8
23	28	31	26	32	40	27	27	24	33	103	12	8.7
24	29	27	24	33	40	27	26	23	26	50	13	9.7
25	28	27	27	30	38	27	25	23	24	22	12	11
26	28	32	29	26	36	28	26	23	20	20	12	16
27	29	34	30	23	39	28	24	22	21	18	14	15
28	29	35	35	21	39	32	23	22	21	20	16	12
29	28	35	37	22	---	59	24	22	24	19	17	16
30	29	33	38	23	---	40	22	20	21	18	15	13
31	29	---	37	88	---	33	---	20	---	17	14	---
TOTAL	813	873	914	936	863	1037	833	734	1585	606	713	331.0
MEAN	26.2	29.1	29.5	30.2	30.8	33.5	27.8	23.7	52.8	19.5	23.0	11.0
MAX	30	35	38	88	49	59	32	28	603	103	187	16
MIN	22	26	24	21	18	27	22	20	19	11	12	7.9
AC-FT	1610	1730	1810	1860	1710	2060	1650	1460	3140	1200	1410	657
CAL YR 1980	TOTAL	16061.0	MEAN	43.9	MAX	446	MIN	16	AC-FT	31860		
WIE YR 1981	TOTAL	10238.0	MEAN	28.0	MAX	603	MIN	7.9	AC-FT	20310		

MISSOURI RIVER MAIN STEM

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

LOCATION (REVISED).--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, NE, 1.9 mi (3.1 km) downstream from Big Sioux River, and at mi 732.3 (1,178.3 km). Prior to Jan. 31, 1981, at site 227 ft (69 m) downstream.

DRAINAGE AREA.--314,600 mi² (814,800 km²), 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 the National Weather Service.

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

GAGE.--Water-stage recorder. Datum of gage is 1,056.98 ft (322.168 m) National Geodetic Vertical Datum of 1929. Sept. 2, 1878, to Dec. 31, 1905, nonrecording gages at various locations within 1.7 mi (2.7 km) 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 (69.2 m) downstream at datum 19.98 ft (6.090 m) higher, and Oct. 1, 1969 to Sept. 30, 1970 at datum 20.00 ft (6.096 m) higher. Oct. 1, 1970 to Jan. 30, 1981, water-stage recorder at site 227 ft (69.2 m) downstream at present datum.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage height telemeter at station.

AVERAGE DISCHARGE.--84 years, 32,030 ft³/s (907.1 m³/s), 23,210,000 acre-ft/yr (28.6 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441,000 ft³/s (12,500 m³/s) Apr. 14, 1952, gage height, 24.28 ft (7.401 m), datum then in use; minimum, 2,500 ft³/s (70.8 m³/s) Dec. 29, 1941; minimum gage height, 9.00 ft (2.743 m), Jan. 8, 1980, based on gage readings at site 14 mi (23 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,900 ft³/s (1,160 m³/s) June 14, gage height, 20.97 ft (6.392 m); minimum daily, 11,000 ft³/s (312 m³/s) Feb. 2; minimum gage height observed, 9.55 ft (2.911 m) Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38300	37300	20900	17300	15300	15300	34800	34000	30800	32700	31400	31800
2	38100	38400	19400	16400	11000	15400	33100	34200	32100	32400	31400	31900
3	37800	38500	18500	15900	11500	15500	33200	35200	32400	33700	31700	32100
4	37700	38300	18700	15500	14800	15500	33500	35600	32100	34100	32500	32200
5	37600	38200	18400	15000	16200	15500	33400	34600	31700	33200	31900	32300
6	37900	38400	18400	18400	17200	15500	33100	33800	31600	32000	31600	32200
7	37900	38600	18200	16400	17800	15500	33500	33600	31700	31300	31100	32500
8	37700	38300	17900	15700	15400	15400	33600	33600	31900	31200	31000	31900
9	37300	38100	17800	17600	11500	15400	33500	33800	32000	31100	30900	31700
10	37100	37600	17800	16000	13400	15500	33500	33800	32800	31300	30800	32000
11	37100	37600	17800	15800	13500	15500	34400	33600	33100	31700	30800	32300
12	36700	38400	18800	16500	12800	15600	34800	34500	33500	32100	31000	32700
13	36800	38700	18400	17200	14900	15500	34800	34500	33900	32500	31400	32900
14	37100	40200	18000	16400	17100	13400	34800	33700	36700	33000	32300	32800
15	36900	40100	18100	16000	16900	14500	34400	33400	36300	33000	32400	32700
16	37500	40200	18200	15200	16900	15200	33300	33100	34600	33400	32100	33200
17	37700	40300	18200	14500	17800	15400	33400	33300	31500	33500	32000	33600
18	37200	40500	17400	16000	19000	17100	33300	33600	29200	33900	32200	34200
19	37000	40400	16300	15500	18600	19800	33400	33300	28700	34600	32400	34400
20	37000	40300	15000	14900	15500	22500	33500	32600	29600	34500	32400	34300
21	37100	40000	15500	15200	15400	25100	33400	31200	30100	33900	32400	34400
22	37200	40200	16500	14600	15400	28300	33100	30600	30300	33900	32300	34400
23	37000	40400	18300	14600	15200	31300	33200	30600	30600	33900	32600	34200
24	36800	40100	17600	14700	15000	34200	33400	30200	31200	33800	32600	34300
25	36500	38400	16200	14800	15000	34600	33600	29900	31700	33100	32600	34600
26	36500	35200	17600	15000	15100	34300	33600	29800	31800	32800	32500	34400
27	37100	32600	18500	14800	15300	34300	33600	29900	32000	32500	32500	33800
28	37200	29800	18700	14800	15400	35500	33600	30400	32800	31800	32000	33500
29	36800	27200	18100	14900	---	37000	33500	30700	34000	31100	31400	33400
30	36700	23900	17900	14600	---	36200	33900	30800	33000	30900	31300	34000
31	37000	---	17900	15000	---	36100	---	30800	---	30700	31800	---
TOTAL	1154300	1126200	555000	485200	428900	685900	1010200	1012700	963700	1013600	987300	994700
MEAN	37240	37540	17900	15650	15320	22130	33670	32670	32120	32700	31850	33160
MAX	38300	40500	20900	18400	19000	37000	34800	35600	36700	34600	32600	34600
MIN	36500	23900	15000	14500	11000	13400	33100	29800	28700	30700	30800	31700
AC-FT	2290000	2234000	1101000	962400	850700	1360000	2004000	2009000	1911000	2010000	1958000	1973000
CAL YR 1980 TOTAL	11054000			MEAN 30200		MAX 42000		MIN 13800		AC-FT 21930000		
WTR YR 1981 TOTAL	10417700			MEAN 28540		MAX 40500		MIN 11000		AC-FT 20660000		

OMAHA CREEK BASIN

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 (24 m) downstream from bridge on main street of Homer.

DRAINAGE AREA.--168 mi² (435 km²).

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 (329.931 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 4, 1952, at bridge 0.5 mi (0.8 km) downstream at datum 8.03 ft (2.448 m) lower. Aug. 4, 1952, to Nov. 3, 1966, at site 80 ft (24 m) upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--36 years, 32.9 ft³/s (0.932 m³/s), 23,840 acre-ft/yr (29.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,100 ft³/s (513 m³/s) Feb. 19, 1971, gage height, 26.47 ft (8.068 m), from floodmark, from rating curve extended above 3,700 ft³/s (105 m³/s) on basis of slope-area measurements at gage heights 16.38 ft (4.993 m) and 23.62 ft (7.199 m); minimum daily, 0.1 ft³/s (0.003 m³/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 (9.91 m), present site and datum, discharge estimated as 51,000 ft³/s (1,440 m³/s) at site 2.5 mi (4.0 km) upstream from present site.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,170 ft³/s (61.5 m³/s) July 17 at 2345, gage height, 10.36 ft (3.158 m), no other peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily, 0.55 ft³/s (0.016 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	7.7	4.4	10	6.8	7.8	8.4	3.9	1.4	7.3	3.0	1.6
2	2.2	6.4	4.5	8.0	6.2	7.2	7.1	3.8	2.3	2.3	28	1.1
3	2.1	6.0	5.0	6.8	5.6	6.9	6.6	4.7	3.5	28	6.0	1.1
4	2.9	5.7	4.4	7.0	6.2	7.2	6.0	11	3.2	39	2.4	.98
5	2.5	4.9	5.6	7.4	6.6	7.5	5.5	8.0	2.8	7.5	2.6	1.1
6	2.6	4.8	6.6	6.6	7.6	6.6	5.5	6.1	1.9	3.1	3.3	1.1
7	2.4	4.7	6.3	5.0	7.0	6.4	5.3	4.3	1.8	2.3	2.6	1.9
8	2.7	4.9	5.5	3.8	6.0	6.2	5.4	3.6	1.6	2.3	1.6	1.3
9	2.7	5.2	4.6	3.1	6.6	6.8	5.5	4.0	2.0	1.8	1.4	1.6
10	2.7	5.0	4.5	3.0	6.0	6.0	5.8	4.4	2.2	1.7	1.3	.98
11	2.6	5.1	4.9	2.9	5.0	5.8	6.3	3.4	1.7	1.4	1.3	.98
12	3.1	5.8	6.1	3.5	5.4	6.1	5.8	3.7	1.4	1.3	1.3	.80
13	3.5	6.1	6.0	3.7	7.0	6.0	5.2	5.0	1.5	1.4	1.7	.66
14	3.8	6.5	6.1	1.0	9.0	6.4	5.2	5.0	94	1.4	2.6	.66
15	3.8	5.4	6.3	1.0	15	7.8	5.1	4.2	42	2.1	3.2	.66
16	7.0	6.0	6.7	1.1	20	7.3	4.9	3.7	7.4	1.8	2.0	.88
17	7.0	6.2	7.7	3.0	22	7.4	5.9	4.4	2.6	111	1.9	.66
18	5.7	5.7	7.9	4.0	24	7.7	5.7	6.8	1.8	107	1.4	.80
19	4.1	5.3	5.6	4.3	20	6.7	5.8	4.7	1.9	5.6	1.4	.88
20	4.0	5.7	4.0	4.4	19	6.5	6.4	3.5	2.0	8.3	1.7	.72
21	3.8	5.7	5.8	4.3	19	6.8	5.9	2.9	2.2	2.7	1.6	.66
22	3.9	5.9	6.4	4.5	18	7.4	8.6	2.7	2.7	2.3	1.9	.55
23	4.3	5.8	6.0	5.0	17	7.0	8.8	3.2	2.3	2.2	1.7	1.1
24	4.3	5.2	4.5	5.8	13	6.9	6.6	2.4	1.8	2.1	1.6	.60
25	4.4	3.9	5.4	7.0	11	7.1	6.0	2.3	1.2	2.3	2.6	.88
26	4.9	4.4	6.2	7.8	10	6.8	5.6	2.1	1.1	2.7	2.0	.98
27	6.1	4.7	7.2	8.0	9.0	6.6	5.6	2.2	1.4	3.7	2.0	.80
28	7.5	4.5	8.6	8.0	8.4	11	4.8	2.9	2.2	4.6	2.0	.80
29	7.0	5.2	9.6	6.4	---	41	4.2	2.4	12	3.7	3.7	.66
30	6.8	5.1	10	7.0	---	27	4.0	2.1	22	3.2	1.8	.80
31	7.6	---	11	7.2	---	15	---	1.8	---	2.7	1.8	---
TOTAL	130.2	163.5	193.4	160.6	316.4	278.9	177.5	125.2	227.9	368.8	93.4	28.29
MEAN	4.20	5.45	6.24	5.18	11.3	9.00	5.92	4.04	7.60	11.9	3.01	.94
MAX	7.6	7.7	11	10	24	41	8.8	11	94	111	28	1.9
MIN	2.1	3.9	4.0	1.0	5.0	5.8	4.0	1.8	1.1	1.3	1.3	.55
AC-FT	258	324	384	319	628	553	352	248	452	732	185	56
CAL YR 1980	TOTAL	6536.00	MEAN	17.9	MAX	1090	MIN	2.1	AC-FT	12960		
WTR YR 1981	TOTAL	2264.09	MEAN	6.20	MAX	111	MIN	.55	AC-FT	4490		

TEKANAH CREEK BASIN

06608000 TEKAMAH CREEK AT TEKAMAH, NE

LOCATION.--Lat 41°46'30", long 96°13'10", in SE1/4 sec.19, T.21 N., R.11 E., Burt County, Hydrologic Unit 10230001, on left bank 30 ft (9 m) upstream from bridge 1 block east of U.S. Highway 73 in Tekamah.

DRAINAGE AREA.--23.0 mi² (59.6 km²).

PERIOD OF RECORD.--July 1949 to September 1981 (discontinued).

REVISED RECORDS.--WSP 1630: Drainage area.

GAGE.--Water-stage recorder and crest-stage indicator. Datum of gage is 1,032.26 ft (314.633 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 15, 1949, nonrecording gage at site 30 ft (9 m) downstream at present datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--32 years, 6.24 ft³/s (0.177 m³/s), 4,520 acre-ft/yr (5.57 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,180 ft³/s (175 m³/s) June 5, 1963, gage height, 16.62 ft (5.066 m); no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32 ft³/s (0.91 m³/s) Aug. 5, gage height, 4.14 ft (1.262 m); no peak above base of 400 ft³/s (11.3 m³/s); maximum gage height, 4.28 ft (1.305 m) Feb. 15, backwater from ice; minimum daily discharge, no flow June 26, July 9-24, Sept. 15-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.29	1.4	1.6	.60	1.7	1.3	.17	.14	1.0	2.0	.03
2	.11	.26	.11	.90	.40	1.1	.88	.18	2.0	.11	1.8	.02
3	.11	.26	.21	.60	.50	1.1	1.3	1.2	1.1	1.9	.46	.02
4	.16	.33	2.1	.60	.50	2.2	4.4	4.1	.37	.86	.18	.02
5	.14	.42	2.3	.60	.60	1.4	.88	1.0	.26	.24	12	.02
6	.15	.29	2.2	.70	.80	1.6	.58	.35	.12	.07	2.8	.22
7	.13	.29	1.8	.50	.80	.40	.58	.34	.16	.03	.20	.37
8	.21	.29	.93	.40	.80	.30	.58	.42	.13	.05	.08	.14
9	.08	.33	.42	.40	.70	.20	.42	.29	.22	.06	.05	.03
10	.15	.33	.40	.40	.50	.20	.58	.20	.12	.00	.03	.02
11	.08	.33	.50	.40	.40	.30	.72	.23	.08	.00	.03	.02
12	.11	.42	.50	.40	.50	.30	.88	1.8	.07	.00	.02	.01
13	.13	.50	.50	.50	.70	.30	.64	.72	.08	.00	.15	.01
14	.23	.60	.56	.50	1.0	.20	.88	.46	.25	.00	.11	.01
15	.16	.50	.60	1.0	1.5	.30	.88	.26	.29	.00	.06	.00
16	.20	.50	.70	.80	3.0	.30	1.3	.29	.05	.00	.03	.00
17	.20	.60	.70	.90	3.5	.30	1.0	.64	.02	.00	.02	.00
18	.30	.60	.80	1.1	2.5	1.1	.92	1.1	.02	.00	.02	.00
19	.30	.48	.60	2.0	2.0	.88	.97	.55	.02	.00	.02	.00
20	.42	.70	.10	3.5	1.5	1.2	.72	.23	.01	.00	.02	.00
21	.42	.96	.08	2.5	1.4	1.8	.82	.20	.19	.00	.01	.00
22	.42	.76	.09	2.0	1.3	3.2	2.0	.23	.13	.00	.01	.00
23	.88	1.0	.10	2.5	1.5	2.3	1.2	.46	.03	.00	.24	.00
24	.64	.67	.10	3.0	1.5	1.8	1.3	.42	.03	.00	.95	.57
25	.72	.82	.10	3.2	1.1	2.4	1.0	.37	.01	.02	.44	.04
26	.72	1.2	.10	2.5	1.3	1.6	.64	.26	.00	.02	.10	.15
27	.79	1.6	.10	2.0	1.4	1.6	.37	.26	.03	.42	.07	.02
28	.46	1.5	.10	1.5	2.0	2.9	.38	.29	.01	.03	.09	.01
29	.29	1.8	.60	1.5	---	5.6	.33	.20	1.5	.03	.10	.01
30	.29	1.7	1.0	1.3	---	2.8	.17	.26	1.4	.03	.04	.01
31	.29	---	1.5	1.0	---	1.7	---	.18	---	.05	.03	---
TOTAL	9.45	20.33	21.30	40.80	34.30	43.08	28.62	17.66	8.84	4.92	22.16	1.75
MEAN	.30	.68	.69	1.32	1.23	1.39	.95	.57	.29	.16	.71	.058
MAX	.88	1.8	2.3	3.5	3.5	5.6	4.4	4.1	2.0	1.9	12	.57
MIN	.08	.26	.08	.40	.40	.20	.17	.17	.00	.00	.01	.00
AC-FT	19	40	42	81	68	85	57	35	18	9.8	44	3.5

CAI YR 1980 TOTAL 1099.46 MEAN 3.00 MAX 100 MIN .07 AC-FT 2180
WTR YR 1981 TOTAL 253.21 MEAN .69 MAX 12 MIN .00 AC-FT 502

MISSOURI RIVER MAIN STEM

83

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 (84 m) downstream from Interstate 480 Highway bridge in Omaha, and at mi 615.9 (991.0 km).

DRAINAGE AREA.--322,800 mi² (836,100 km²), 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 National Weather Service.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 958.24 ft (292.072 m) National Geodetic Vertical Datum of 1929. See WSP 1730 for history of changes prior to Sept. 30, 1936.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years, 29,850 ft³/s (845.4 m³/s), 21,630,000 acre-ft/yr (26.7 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 396,000 ft³/s (11,200 m³/s) Apr. 18, 1952, gage height, 30.20 ft (9.205 m); minimum, about 2,200 ft³/s (62.3 m³/s) Jan. 6, 1937; minimum gage height observed, -2.77 ft (-0.844 m) Jan 10, 1957, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,800 ft³/s (1,350 m³/s) June 16, gage height, 9.68 ft (2.950 m); minimum daily, 12,900 ft³/s (365 m³/s) Feb. 11; minimum gage height, 0.00 ft (0.000 m) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39600	36900	25700	18500	18000	18000	37700	34700	32800	38600	34300	33800
2	39600	37800	23800	18500	16000	17900	37100	35100	32400	37800	36800	35000
3	39300	39100	21600	18000	15100	17500	35900	35300	33100	37900	36000	35100
4	39400	39400	20400	17200	13400	17500	36100	38900	34600	40200	35200	35100
5	39400	38800	20500	16700	13300	17400	36200	38100	34200	43400	35600	35300
6	39000	38200	20300	15600	14500	17300	35900	37900	33800	40300	37000	35000
7	39000	38400	19900	15500	15400	17400	35800	36700	33800	37200	35400	35800
8	38500	38600	19800	17900	16400	17400	35700	35700	34200	36800	34900	36000
9	38400	38600	19600	17000	16000	17500	36100	35900	34700	37200	34100	36100
10	38800	37800	19100	16200	14100	17400	36000	36000	34300	35800	33600	35300
11	38900	38000	19100	17200	12900	17200	36100	36000	34400	34500	33400	34900
12	38600	37800	18500	16600	13700	17300	35800	36200	35300	33800	33500	34600
13	38600	38300	19000	16000	13500	17300	36200	36200	35200	33500	33700	34600
14	37800	39000	20300	17000	13700	17100	36300	36400	35400	33400	34200	34900
15	37500	40700	19600	17100	16300	13400	35800	35900	40200	33300	35000	35600
16	39700	41000	19000	16600	18300	15900	35900	34800	47200	34100	35800	35500
17	40500	41000	19100	16200	19100	17000	35100	35300	44400	34200	35200	36000
18	40900	40600	19100	15300	20900	17000	34800	36700	40000	34400	34600	36000
19	39800	40700	18300	14700	23900	18200	34700	37000	35100	34600	34500	36100
20	39600	40600	17400	16600	25700	20200	35400	37200	33700	34800	34400	35800
21	38900	40500	16100	16100	22500	23500	35600	36100	34400	35600	34200	35300
22	38800	40300	15500	15500	17900	26200	36100	34700	34200	35000	34000	35500
23	38600	41200	16100	15300	17900	29100	35700	35200	33900	34800	34300	35900
24	38600	40700	16900	15100	17700	32600	35200	35500	33800	35300	34500	36200
25	38200	39900	18500	15700	17100	34800	35200	35400	34600	36000	34400	36100
26	38300	37000	17900	16000	16600	35400	35000	34200	34800	38800	34800	36100
27	38100	34400	15700	16300	16900	35700	34600	33300	34900	37500	34300	36100
28	37900	32500	17500	16300	17300	35800	34600	32900	34800	35900	34400	35300
29	38000	30000	18800	16200	---	36900	34800	33200	36600	35700	34400	35500
30	37800	28000	19000	16200	---	38300	34500	33300	39800	34600	34000	36100
31	37000	---	18400	15900	---	38200	---	33100	---	33900	33600	---
TOTAL	1203100	1145800	590500	509000	474100	712400	1069900	1102900	1070600	1118900	1074100	1064600
MEAN	38810	38190	19050	16420	16930	22980	35660	35580	35690	36090	34650	35490
MAX	40900	41200	25700	18500	25700	38300	37700	38900	47200	43400	37000	36200
MIN	37000	28000	15500	14700	12900	13400	34500	32900	32400	33300	33400	33800
AC-FT	2386000	2273000	1171000	1010000	940400	1413000	2122000	2188000	2124000	2219000	2130000	2112000
CAL YR 1980 TOTAL	11832600			MEAN 32330	MAX 47000	MIN 15500	AC-FT 23470000					
WTR YR 1981 TOTAL	11135900			MEAN 30510	MAX 47200	MIN 12900	AC-FT 22090000					

PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'25", long 104°02'57", in SW1/4NE1/4SE1/4 sec.4, T.23 N., R.58 W., Scotts Bluff County, Nebraska, Hydrologic Unit 10180009, on right bank 650 ft (198 m) upstream from bridge on Nebraska State Highway 86, 700 ft (213 m) downstream from Wyoming-Nebraska State line, and 0.5 mi (0.8 km) south of Henry, NE.

DRAINAGE AREA.--22,218 mi² (57,545 km²), of which 1,929 mi² (4,996 km²), 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 (1,225.707 m), 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 (0.8 km) upstream at datum 4.42 ft (1.347 m) higher. Oct. 7, 1959 to Feb. 22, 1972, water-stage recorder, at site 0.5 mi (0.8 km) upstream at datum 3.42 ft (1.042 m) higher.

REMARKS.--Records good. 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 (1.3 km) upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 17,900 ft³/s (507 m³/s) June 2, 1929, gage height, 7.04 ft (2.146 m), site and datum then in use; minimum daily, 13 ft³/s (0.37 m³/s) May 12, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,330 ft³/s (66.0 m³/s) July 13, gage height, 4.23 ft (1.289 m); minimum daily, 14 ft³/s (0.40 m³/s) May 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	560	322	251	200	170	167	140	152	172	1460	1110	963
2	538	316	245	199	165	167	140	153	152	1500	1180	982
3	500	316	246	199	169	167	141	169	179	1550	1270	917
4	485	313	249	198	167	165	145	184	349	1480	1290	881
5	465	309	245	201	168	165	142	105	363	1490	1370	803
6	455	306	241	202	167	164	138	53	407	1450	1430	787
7	446	306	240	200	167	164	144	98	437	1360	1450	737
8	428	303	237	198	167	163	151	77	443	1390	1470	706
9	406	300	235	197	168	162	147	57	412	1360	1470	662
10	398	294	234	195	160	159	144	22	387	1400	1460	634
11	394	291	233	193	140	158	141	14	414	1420	1370	608
12	390	291	232	191	158	157	138	28	395	1430	1370	590
13	363	291	230	191	173	157	137	44	391	2110	1360	572
14	335	291	229	189	183	156	135	55	385	1810	1350	584
15	349	288	228	189	181	154	136	55	390	1710	1330	602
16	335	285	227	187	180	152	137	48	390	1780	1290	634
17	332	282	225	188	178	152	135	100	403	1830	1400	602
18	325	282	224	185	174	152	135	166	424	1970	1290	578
19	319	279	220	184	171	151	137	151	454	1860	1150	596
20	309	276	218	183	174	150	152	115	581	1730	1110	602
21	303	270	216	181	172	154	149	93	676	1630	1110	627
22	306	270	214	176	169	154	145	164	723	1520	1090	669
23	300	267	214	176	170	152	139	206	823	1410	1220	690
24	338	265	210	176	170	149	135	201	1030	1310	1090	662
25	352	265	210	174	169	147	135	198	1200	1490	1020	566
26	349	262	209	172	169	146	136	196	1300	1590	945	490
27	349	259	207	172	169	145	144	190	1420	1410	954	460
28	342	256	205	171	168	145	178	185	1550	1200	973	450
29	335	251	204	170	---	145	180	183	1510	1100	954	398
30	332	251	203	170	---	143	163	179	1490	1100	963	428
31	329	---	201	172	---	142	---	176	---	1080	963	---
TOTAL	11767	8557	6982	5779	4736	4804	4319	3817	19250	46930	37802	19480
MEAN	380	285	225	186	169	155	144	123	642	1514	1219	649
MAX	560	322	251	202	183	167	180	206	1550	2110	1470	982
MIN	300	251	201	170	140	142	135	14	152	1080	945	398
AC-FT	23340	16970	13850	11460	9390	9530	8570	7570	38180	93090	74980	38640
CAL YR 1980	TOTAL	347966	MEAN 951	MAX 3370	MIN 201	AC-FT 690200						
WTR YR 1981	TOTAL	174223	MEAN 477	MAX 2110	MIN 14	AC-FT 345600						

PLATTE RIVER BASIN

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

WATER QUALITY RECORDS

LOCATION.--Daily water temperatures and sampling for specific conductance collected at Farmers Canal diversion dam 1.0 mi (1.6 km) downstream from discharge station.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS, NONCAR- BONATE (MG/L CAC03) (00902)	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)
OCT 08...	1400	423	860	8.5	15.0	9.6	35	300	120	78	22	100
NOV 05...	1330	319	935	8.2	12.0	11.0	K20	290	55	81	22	89
DEC 02...	1200	245	1060	8.1	2.0	12.6	K10	290	27	82	21	120
JAN 05...	0930	201	1000	8.4	5.0	10.6	47	290	36	85	19	110
FEB 13...	1510	191	1020	8.1	7.0	11.4	47	280	26	80	18	110
MAR 24...	1530	145	1050	8.2	11.0	10.8	K10	280	9	78	21	120
APR 06...	1430	139	990	8.2	13.0	10.6	2	280	34	80	19	110
MAY 05...	1500	130	920	8.1	17.0	8.6	K250	290	69	75	24	97
JUN 01...	1400	173	990	8.2	19.5	10.4	0	280	110	76	22	94
JUL 07...	1430	1280	800	8.2	25.0	7.8	100	260	96	67	21	61
AUG 11...	1400	1380	600	8.1	23.0	8.4	56	240	84	62	21	66
SEP 08...	1630	647	800	8.0	20.0	9.2	120	250	70	67	20	77

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

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
OCT 08...	2.6	7.6	270	22	.5	19	630	.86	720	1.7	.020
NOV 05...	2.3	7.0	200	20	.5	25	587	.80	506	2.0	.000
DEC 02...	3.1	10	250	20	.6	15	681	.93	450	2.2	.120
JAN 05...	2.8	8.2	230	19	.7	29	653	.89	354	2.4	.030
FEB 13...	2.9	8.3	230	3.1	.5	.0	602	.82	310	2.5	.020
MAR 24...	3.1	9.5	240	24	.5	24	680	.92	266	2.8	.030
APR 06...	2.9	8.0	230	22	.5	44	670	.91	251	2.0	.030
MAY 05...	2.5	8.4	220	27	.7	20	609	.83	214	2.5	.030
JUN 01...	2.4	9.2	240	37	.5	21	600	.82	280	1.9	.040
JUL 07...	1.7	5.2	210	17	.6	4.2	480	.65	1660	1.6	.200
AUG 11...	1.8	4.9	200	14	.9	9.6	470	.64	1750	.48	.090
SEP 08...	2.1	6.7	200	18	.6	18	520	.71	908	2.2	.250

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 (3 m) upstream from county highway bridge, 1.8 mi (2.9 km) upstream from mouth, 2.2 mi (3.5 km) downstream from Owl Creek, and 3.2 mi (5.1 km) northeast of Lyman.

DRAINAGE AREA.--1,570 mi² (4,070 km²), approximately, of which about 40 mi² (100 km²) 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 (1,217.018 m), National Geodetic Vertical Datum of 1929 (levels by private engineering firm). See WSP 2118 for history of changes prior to Apr. 17, 1967.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--50 years, 68.6 ft³/s (1.943 m³/s), 49,700 acre-ft/yr (61.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,110 ft³/s (145 m³/s) June 6, 1967, gage height, 10.82 ft (3.298 m), from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.4 ft³/s (0.011 m³/s) Feb. 1, 2, 1949.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,500 ft³/s (70.8 m³/s) July 13, gage height, 7.78 ft (2.371 m); minimum daily, 9.5 ft³/s (0.27 m³/s) May 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	48	34	23	18	19	14	10	14	67	142	179
2	130	47	34	23	17	19	13	9.5	11	77	108	179
3	113	46	34	23	15	19	14	13	12	93	95	172
4	125	44	34	23	14	19	15	26	21	82	101	182
5	100	44	32	23	16	19	14	22	154	75	96	218
6	89	45	31	22	18	19	14	15	230	84	104	273
7	84	44	30	22	20	19	14	49	240	68	176	282
8	80	43	30	22	20	20	15	26	185	65	157	244
9	77	43	30	22	20	19	14	19	157	64	142	258
10	75	42	28	22	16	19	13	18	190	94	148	252
11	75	42	33	22	12	19	12	16	272	60	138	224
12	74	42	33	22	12	20	11	15	148	64	123	221
13	102	43	32	20	18	20	11	14	131	812	120	208
14	191	42	31	20	23	20	12	15	174	238	130	188
15	191	40	32	20	32	19	12	13	166	205	130	177
16	181	39	32	20	30	19	12	12	126	194	151	157
17	180	38	31	20	30	19	12	32	130	198	166	147
18	174	36	30	20	25	21	12	132	132	231	175	145
19	171	38	29	23	25	20	14	50	135	264	176	151
20	169	37	28	26	25	18	24	39	85	265	160	163
21	164	37	28	26	23	24	20	31	97	241	123	175
22	152	38	30	26	19	28	16	27	102	222	123	206
23	142	39	29	27	20	22	15	25	109	211	125	252
24	97	36	26	22	20	20	14	23	72	162	144	230
25	53	36	24	22	21	18	13	21	62	148	137	279
26	52	36	25	24	20	16	13	19	55	203	124	268
27	51	36	23	24	19	15	12	19	60	212	126	198
28	51	36	23	24	19	15	11	18	84	221	138	210
29	50	36	23	24	---	15	10	17	80	223	141	210
30	49	35	23	25	---	14	10	16	58	207	157	234
31	49	---	23	20	---	14	---	15	---	166	169	---
TOTAL	3465	1208	905	702	567	587	406	776.5	3492	5516	4245	6282
MEAN	112	40.3	29.2	22.6	20.3	18.9	13.5	25.0	116	178	137	209
MAX	191	48	34	27	32	28	24	132	272	812	176	282
MIN	49	35	23	20	12	14	10	9.5	11	60	95	145
AC-FT	6870	2400	1800	1390	1120	1160	805	1540	6930	10940	8420	12460
CAL YR 1980	TOTAL	34144.0	MEAN	93.3	MAX	1120	MIN	14	AC-FT	67720		
WTR YR 1981	TOTAL	28151.5	MEAN	77.1	MAX	812	MIN	9.5	AC-FT	55840		

PLATTE RIVER BASIN

87

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 (12 m) upstream from Burlington Northern Inc. bridge, 50 ft (15 m) downstream from bridge on U.S. Highway 26, 1 mi (2 km) west of Morrill, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--362 mi² (938 km²), of which about 25 mi² (65 km²) 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 (1,217.688 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1940, nonrecording gage at site 20 ft (6 m) upstream at same datum.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--50 years, 55.1 ft³/s (1.560 m³/s), 39,920 acre-ft/yr (49.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 516 ft³/s (14.6 m³/s) July 21, 1978, gage height, 6.62 ft (2.018 m); maximum gage height, 6.75 ft (2.057 m) Aug. 2, 1932, from floodmark, due to break in Interstate Canal (discharge not determined); minimum daily discharge, 0.1 ft³/s (0.003 m³/s) Dec. 16, 23, 1956, Jan. 18, Mar. 12, 1957, result of diversion for construction upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 147 ft³/s (4.16 m³/s) Sept. 25, gage height, 2.97 ft (0.905 m); minimum daily, 2.1 ft³/s (0.059 m³/s) June 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	102	98	88	81	75	70	62	2.6	3.0	4.8	5.1
2	118	99	97	88	82	74	70	60	2.6	3.0	4.6	5.1
3	118	99	97	86	83	74	73	66	2.9	3.2	4.3	4.8
4	117	98	97	86	83	77	73	29	2.9	3.4	4.8	4.8
5	115	97	95	86	83	77	70	2.2	2.7	3.6	4.3	5.1
6	114	97	94	85	81	77	70	2.4	2.7	3.8	4.3	5.1
7	114	98	94	84	82	79	71	2.7	2.9	3.8	4.3	4.6
8	114	102	94	84	81	78	76	2.4	2.7	3.8	4.3	4.6
9	114	101	94	83	80	78	76	2.9	2.6	3.8	4.3	4.6
10	113	102	97	82	81	78	76	2.9	2.6	3.8	4.3	5.2
11	114	102	97	82	82	77	76	2.9	2.4	4.1	4.1	4.3
12	114	102	95	82	80	78	76	3.2	2.4	4.6	4.1	4.1
13	114	102	95	82	81	78	76	3.8	2.4	37	4.3	4.1
14	113	102	95	83	80	78	76	4.3	2.4	14	4.3	4.1
15	114	102	94	83	78	77	76	4.6	2.4	11	4.3	3.8
16	114	102	94	83	78	77	76	5.1	2.1	3.6	4.6	3.8
17	109	102	94	83	78	78	76	8.2	2.1	4.1	4.6	3.6
18	107	102	94	83	78	78	76	9.9	2.4	20	4.6	3.6
19	107	102	91	83	74	77	77	6.8	2.4	14	4.3	3.8
20	107	102	91	82	74	77	77	5.9	2.4	8.6	4.3	4.1
21	106	102	90	82	74	75	73	5.6	2.4	4.8	4.3	3.8
22	106	102	89	82	73	72	70	5.9	2.2	4.3	4.3	4.1
23	106	104	88	82	73	71	70	5.6	2.2	4.3	4.3	4.1
24	107	103	86	82	74	72	68	7.5	2.7	4.3	4.3	3.8
25	107	103	87	82	74	72	67	2.9	2.9	4.1	4.3	75
26	106	102	88	82	74	73	65	2.9	2.9	34	4.3	101
27	106	100	88	82	74	73	66	2.9	2.9	33	4.6	102
28	105	100	89	82	74	73	65	2.7	8.0	26	4.6	105
29	104	101	88	82	---	72	66	2.6	8.9	26	4.6	104
30	103	102	88	82	---	72	63	2.7	7.0	26	4.6	104
31	103	---	89	82	---	72	---	2.6	---	18	4.8	---
TOTAL	3429	3034	2867	2580	2190	2339	2160	331.1	92.7	341.0	136.8	695.1
MEAN	111	101	92.5	83.2	78.2	75.5	72.0	10.7	3.09	11.0	4.41	23.2
MAX	120	104	98	88	83	79	77	66	8.9	37	4.8	105
MIN	103	97	86	82	73	71	63	2.2	2.1	3.0	4.1	3.6
AC-FT	6800	6020	5690	5120	4340	4640	4280	657	184	676	271	1380

CAL YR 1980 TOTAL 21658.0 MEAN 59.2 MAX 124 MIN 2.9 AC-FT 42960
WTR YR 1981 TOTAL 20195.7 MEAN 55.3 MAX 120 MIN 2.1 AC-FT 40060

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 on downstream side of bridge on State Highway 29, 0.5 mi (0.8 km) south of Mitchell.

DRAINAGE AREA.--24,300 mi² (62,900 km²), approximately, of which about 22,300 mi² (57,800 km²) 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 (1,197.65 m) 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 (0.305 m) higher.

REMARKS.--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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,500 ft³/s (779 m³/s) June 3, 1909, gage height, 6.45 ft (1.966 m), datum then in use, from graph based on gage readings, from rating curve extended above 17,000 ft³/s (481 m³/s); minimum daily observed, 25 ft³/s (0.71 m³/s) Sept. 25-29, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) July 13, gage height, 4.21 ft (1.283 m); minimum daily, 122 ft³/s (3.46 m³/s) June 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	902	616	530	491	394	406	339	340	125	275	366	340
2	870	613	517	490	379	406	338	327	122	282	328	335
3	834	602	526	482	398	410	338	353	130	329	320	351
4	813	600	534	482	390	406	341	338	201	327	301	345
5	788	609	526	479	394	398	334	202	171	295	291	348
6	763	616	526	474	394	398	335	207	308	258	304	399
7	756	609	526	473	398	402	338	195	445	207	348	427
8	743	606	517	470	394	402	353	183	465	199	381	417
9	735	592	517	469	394	398	345	163	373	218	373	395
10	726	589	517	465	338	390	343	154	369	279	426	371
11	723	587	526	457	323	390	341	151	408	236	428	358
12	717	584	526	454	394	386	342	146	364	256	418	344
13	709	584	526	457	477	386	338	140	291	1210	408	334
14	731	583	526	454	470	379	336	138	310	895	384	321
15	767	575	521	451	472	379	338	127	284	753	380	308
16	777	569	521	443	466	375	340	125	262	714	382	306
17	767	559	518	439	460	375	336	143	222	743	402	304
18	755	557	515	441	450	375	336	213	189	930	430	308
19	739	555	506	439	445	371	346	198	183	849	385	308
20	718	553	499	437	444	367	383	168	195	777	356	329
21	696	551	501	430	438	379	379	160	171	694	327	349
22	676	548	505	429	427	375	366	157	174	600	312	370
23	659	556	503	426	423	367	357	154	165	508	338	418
24	655	543	497	422	422	360	348	148	160	430	362	404
25	645	539	498	420	421	360	343	143	151	475	363	482
26	638	539	506	415	418	356	340	146	135	721	331	694
27	635	530	501	410	418	352	339	143	140	748	317	689
28	629	539	494	408	410	352	362	140	238	606	318	788
29	629	534	490	406	---	352	381	138	429	505	314	878
30	625	534	494	406	---	344	376	135	301	470	337	858
31	623	---	493	410	---	343	---	135	---	423	341	---
TOTAL	22443	17171	15902	13829	11651	11739	10431	5610	7481	16212	11071	12878
MEAN	724	572	513	446	416	379	348	181	249	523	357	429
MAX	902	616	534	491	477	410	383	353	465	1210	430	878
MIN	623	530	490	406	323	343	334	125	122	199	291	304
AC-FT	44520	34060	31540	27430	23110	23280	20690	11130	14840	32160	21960	25540
CAL YR 1980	TOTAL	321784	MEAN	879	MAX	3440	MIN	284	AC-FT	638300		
HYR YR 1981	TOTAL	156418	MEAN	429	MAX	1210	MIN	122	AC-FT	310300		

PLATTE RIVER BASIN

89

06681500 GERING DRAIN NEAR GERING, NE

LOCATION (REVISED).--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 (61 m) downstream from county road bridge, 0.2 mi (0.3 km) downstream from bridge on State Highway 92, 1 mi (2 km) upstream from mouth, and 2 mi (3 km) 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 (1,174.279 m) 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 (1.22 m) higher, Oct. 28, 1970, to Dec. 8, 1975, at datum 2.0 ft (0.61 m) higher, Dec. 9, 1975, to Sept. 30, 1980, at datum 1.0 ft (0.30 m) higher, all at site 200 ft (60 m) upstream.

REMARKS.--Records good. Base flow is mainly return water from land irrigated by Fort Laramie Canal.

AVERAGE DISCHARGE.--47 years, 47.1 ft³/s (1.334 m³/s), 34,120 acre-ft/yr (42.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,560 ft³/s (271 m³/s) June 8, 1958, gage height, 16.0 ft (4.88 m), present datum, from floodmarks, from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of slope-area measurements at gage heights 14.67 ft (4.471 m) and 16.0 ft (4.88 m) present datum; minimum daily, 5 ft³/s (0.14 m³/s) Aug. 13, 16, 19, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 568 ft³/s (16.1 m³/s) Aug. 16, gage height, 4.25 ft (1.295 m); minimum daily, 21 ft³/s (0.59 m³/s) June 1, 2, 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	31	31	26	24	22	25	25	21	70	112	124
2	52	31	31	26	25	22	27	24	21	86	108	121
3	40	31	32	26	26	23	27	25	46	79	96	128
4	39	31	32	26	25	23	27	30	39	79	92	133
5	38	31	31	26	26	23	26	24	21	81	82	138
6	37	31	30	26	25	22	27	25	21	78	87	139
7	38	31	30	26	25	23	27	48	80	75	89	139
8	37	30	30	26	25	22	28	82	107	78	89	146
9	38	31	30	26	24	22	28	74	75	75	91	148
10	37	31	30	26	24	22	28	70	89	79	99	150
11	37	31	30	25	26	22	27	71	131	78	94	143
12	37	31	29	26	26	22	27	61	165	74	92	138
13	37	32	29	26	26	22	25	55	164	80	95	138
14	37	31	29	26	26	22	25	52	164	84	108	143
15	40	31	29	26	26	23	23	49	158	88	99	139
16	38	31	29	26	26	23	24	49	143	89	197	140
17	36	31	28	25	26	23	23	58	126	90	148	148
18	35	31	28	25	25	23	23	70	126	95	148	150
19	35	31	27	25	25	23	23	58	119	91	131	144
20	34	31	27	25	25	23	26	62	125	99	116	140
21	34	31	27	25	25	25	26	80	103	95	116	141
22	34	33	28	25	25	24	25	79	72	92	132	135
23	33	34	27	25	23	25	25	48	53	92	129	131
24	32	32	26	25	23	24	25	24	45	116	126	132
25	32	32	27	25	23	24	25	23	52	160	116	155
26	32	32	27	24	23	25	25	23	52	196	111	160
27	32	32	27	24	23	26	25	24	59	194	113	161
28	31	32	27	24	23	26	25	25	65	164	112	171
29	31	32	26	24	---	26	25	22	67	124	117	182
30	31	32	27	24	---	26	25	22	68	109	127	163
31	31	---	26	24	---	25	---	22	---	107	125	---
TOTAL	1141	942	887	784	694	726	767	1404	2577	3097	3497	4320
MEAN	36.8	31.4	28.6	25.3	24.8	23.4	25.6	45.3	85.9	99.9	113	144
MAX	66	34	32	26	26	26	28	82	165	196	197	182
MIN	31	30	26	24	23	22	23	22	21	70	82	121
AC-FT	2260	1870	1760	1560	1380	1440	1520	2780	5110	6140	6940	8570
CAL YR 1980	TOTAL	23336	MEAN 63.8	MAX 184	MIN 22	AC-FT 46290						
WTR YR 1981	TOTAL	20836	MEAN 57.1	MAX 197	MIN 21	AC-FT 41330						

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 (67 m) upstream from bridge on State Highway 326 and 1.8 mi (2.9 km) 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 (15 m) upstream from bridge on State Highway 326 and 750 ft (229 m) north of main channel bridge.

DRAINAGE AREA.--24,700 mi² (64,000 km²), approximately, of which about 22,700 mi² (58,800 km²) (revised) 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 (1,161.50 m) National Geodetic Vertical Datum of 1929. Nov. 2, 1966, to July 13, 1976, water-stage recorder at datum 1.00 ft (0.305 m) 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 (1,161.99 m) National Geodetic Vertical Datum of 1929. See WDR NE-72 for history of changes prior to Aug. 25, 1971.

REMARKS.--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. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft³/s (552 m³/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 (0.31 m³/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, 1,520 ft³/s (43.0 m³/s) July 13; minimum daily, 164 ft³/s (4.64 m³/s) June 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1290	884	793	697	650	668	520	440	235	341	648	646
2	1240	882	772	696	647	667	520	420	249	381	591	654
3	1170	880	772	692	649	677	523	431	208	400	554	674
4	1130	880	776	688	649	673	523	495	329	438	475	704
5	1100	878	779	687	648	666	516	429	293	424	374	713
6	1060	881	771	675	655	662	513	376	306	382	374	727
7	1040	877	771	673	659	669	516	434	563	334	404	779
8	1030	877	768	673	658	668	523	433	745	302	505	796
9	1020	877	763	672	661	665	520	433	738	277	528	792
10	1010	875	758	668	655	654	516	431	697	301	605	765
11	1000	872	753	670	623	653	512	419	749	298	609	737
12	1010	872	754	667	625	653	512	413	740	261	581	720
13	1010	876	753	667	646	649	511	337	619	1000	585	709
14	1010	871	748	666	668	649	502	302	577	1210	647	693
15	1070	864	747	661	672	648	501	271	591	1020	636	683
16	1090	859	746	661	682	645	525	251	584	861	732	668
17	1070	857	745	656	675	652	525	302	520	786	781	657
18	1060	856	742	656	668	654	521	348	479	926	761	660
19	1040	840	733	665	672	650	529	374	436	960	732	678
20	1040	835	732	660	675	650	548	354	414	919	673	660
21	1040	834	732	656	673	664	533	350	367	789	633	660
22	1020	830	731	655	670	661	511	328	306	679	643	664
23	1000	834	735	654	669	652	488	312	247	602	654	697
24	985	825	718	654	668	649	481	278	205	567	666	737
25	989	820	715	653	668	633	474	261	187	762	639	784
26	978	813	722	651	668	619	472	249	164	1240	615	957
27	970	809	717	651	668	593	473	234	171	1220	604	1100
28	921	804	713	655	668	578	475	249	189	1070	588	1140
29	889	803	709	648	---	564	478	235	582	971	592	1320
30	890	802	701	648	---	523	477	244	435	860	624	1250
31	888	---	701	659	---	520	---	239	---	763	647	---
TOTAL	32060	25567	23070	20634	18489	19828	15238	10672	12925	21344	18700	23424
MEAN	1034	852	744	666	660	640	508	344	431	689	603	781
MAX	1290	884	793	697	682	677	548	495	749	1240	781	1320
MIN	898	802	701	648	623	520	472	234	164	261	374	646
AC-FT	63590	50710	45760	40930	36670	39330	30220	21170	25640	42340	37090	46460
CAL YR 1980	TOTAL	433810	MEAN	1185	MAX	3850	MIN	354	AC-FT	860500		
WTE YR 1981	TOTAL	241951	MEAN	663	MAX	1320	MIN	164	AC-FT	479900		

PLATTE RIVER BASIN

91

06682505 NORTH PLATTE RIVER AT MC GREW, NEBR.

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 (1.9 km) north of State Highway 92, 0.3 mi (0.5 km) downstream from Ninemile Creek and 0.9 mi (1.4 km) north of McGrew.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
OCT											
20...	0915	1160	920	8.0	10.5	9.8	17	130	120	310	86
NOV											
17...	0915	968	940	8.2	2.5	11.7	14	390	460	310	89
DEC											
15...	0900	839	950	8.1	5.0	10.7	12	867	820	320	91
JAN											
12...	0915	752	1310	8.2	2.5	11.3	46	1600	680	320	90
FEB											
09...	0930	744	950	8.2	1.0	11.1	0	2300	3000	310	88
MAR											
16...	0930	723	920	8.2	8.0	10.9	9	350	640	310	86
APR											
13...	0930	555	960	8.1	12.0	9.6	19	370	310	310	85
MAY											
11...	0935	610	1000	8.3	11.5	9.2	11	420	660	300	82
JUN											
15...	1015	770	935	8.3	14.5	9.2	24	680	550	300	81
JUL											
20...	0915	937	870	8.0	20.0	7.8	42	2700	5300	300	77
AUG											
17...	0945	940	895	8.1	20.0	8.0	40	4200	K10000	260	71
SEP											
21...	0930	806	920	7.9	14.5	8.4	42	1500	8800	300	83

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
20...	22	210	19	1840	2.8	.090	.79	.88	3.7	.210	12
NOV											
17...	21	230	21	693	3.1	.240	.96	1.20	4.3	.080	14
DEC											
15...	22	230	22	709	3.5	.060	1.2	1.30	4.8	.140	11
JAN											
12...	23	220	22	734	3.3	.240	1.1	1.30	4.6	.100	9.0
FEB											
09...	22	240	22	726	3.6	.280	1.0	1.30	4.9	.130	7.5
MAR											
16...	23	250	27	708	3.3	.110	1.1	1.20	4.5	.120	9.2
APR											
13...	23	230	24	757	3.0	.060	1.4	1.50	4.5	.140	8.8
MAY											
11...	22	240	22	808	2.6	.100	1.7	1.80	4.4	.150	5.3
JUN											
15...	23	220	--	799	1.7	.160	1.1	1.30	3.0	.400	37
JUL											
20...	26	240	23	1130	1.7	.210	1.9	2.10	3.8	.490	11
AUG											
17...	20	190	22	1380	1.6	.080	2.5	2.60	4.2	.730	14
SEP											
21...	22	230	22	745	1.9	.070	1.1	1.20	3.1	.110	5.3

PLATTE RIVER BASIN

06682505 NORTH PLATTE RIVER AT MC GREW, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 17...	0915	49	100	2.5	12	260	.5	42	686
FEB 09...	0930	50	110	2.7	11	260	.4	46	712
MAY 11...	0935	25	110	2.8	11	270	.4	31	692
AUG 17...	0945	40	89	2.6	11	220	.4	32	575

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 17...	.94	1810	3.1	.040	9	100	120	1	30
FEB 09...	.97	1430	3.6	.090	--	--	150	--	--
MAY 11...	.94	1140	2.6	.080	6	100	160	1	10
AUG 17...	.78	1460	1.6	.090	--	--	150	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELF- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 17...	10	20	2	20	.0	4	0	20
FEB 09...	--	60	--	20	--	--	--	--
MAY 11...	11	40	0	10	.4	5	0	20
AUG 17...	--	18	--	10	--	--	--	--

PLATTE RIVER BASIN

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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 (0.5 km) upstream from bridge on U.S. Highway 26, 0.8 mi (1.3 km) 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 left bank 0.2 mi (0.3 km) upstream from culvert on U.S. Highway 26 and 0.8 mi (1.3 km) north of Bridgeport.

DRAINAGE AREA.--25,300 mi² (65,500 km²), approximately, of which about 23,300 mi² (60,300 km²) 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 (1,114.391 m) National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Oct. 7, 1927. Browns Creek channel: Water-stage recorder. Datum of gage is 3,663.51 ft (1,116.638 m) National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to June 1, 1943.

REMARKS.--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. River flows in two independently rated channels for which separate records are computed; figures herein represent combined discharge.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,900 ft³/s (705 m³/s) June 26, 1899, gage height, 5.39 ft (1.643 m), site and datum then in use, from graph based on gage readings; minimum daily, 55 ft³/s (1.56 m³/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, 2,070 ft³/s (58.6 m³/s) July 25; minimum daily, 209 ft³/s (5.92 m³/s) June 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	1160	1000	797	758	721	668	533	271	354	933	812
2	1460	1130	1020	794	735	719	668	514	256	419	851	847
3	1410	1120	1010	796	799	704	681	501	261	479	754	892
4	1380	1090	1010	817	761	695	704	587	313	471	673	942
5	1350	1060	985	831	727	694	690	595	318	495	610	985
6	1280	1080	984	806	750	705	675	536	326	461	577	1010
7	1300	1090	970	799	771	695	675	576	512	355	555	1080
8	1330	1080	946	813	767	683	668	612	715	307	586	1120
9	1290	1020	926	809	730	702	632	613	751	262	649	1130
10	1220	1030	878	804	718	700	621	608	744	277	741	1040
11	1210	1050	882	812	672	676	622	605	777	296	789	959
12	1230	1070	879	823	743	685	636	575	742	264	813	938
13	1260	1070	878	806	847	671	622	534	666	338	778	934
14	1230	1060	884	803	927	673	591	488	588	920	785	955
15	1320	1020	864	780	903	673	591	451	584	994	866	935
16	1370	1010	877	766	864	680	589	422	556	854	954	924
17	1320	956	879	748	847	682	574	458	509	780	1150	916
18	1250	936	863	763	821	687	555	520	476	803	1100	895
19	1260	954	842	780	804	651	573	527	450	954	1080	884
20	1250	972	868	787	794	640	671	558	398	983	971	855
21	1220	974	913	789	784	654	659	574	372	916	885	863
22	1190	980	906	800	778	674	632	528	344	824	830	898
23	1200	957	906	810	757	671	610	485	310	776	809	901
24	1240	992	868	843	736	664	607	462	258	781	821	912
25	1270	1010	856	848	731	663	594	462	221	1090	821	994
26	1260	995	854	824	730	674	589	426	206	1610	803	1050
27	1240	987	847	816	733	667	551	372	206	1680	769	1210
28	1230	999	818	807	725	668	528	336	209	1610	753	1250
29	1200	968	782	774	---	669	539	317	255	1400	716	1440
30	1170	981	795	768	---	668	545	326	422	1190	719	1400
31	1180	---	799	750	---	668	---	293	---	1050	790	---
TOTAL	39750	30801	27789	24763	21712	21076	18560	15394	13016	23993	24931	29971
MEAN	1282	1027	896	799	775	680	619	497	434	774	804	999
MAX	1630	1160	1020	848	927	721	704	613	777	1680	1150	1440
MIN	1170	936	782	748	672	640	528	293	206	262	555	812
AC-FT	78840	61090	55120	49120	43070	41800	36810	30530	25820	47590	49450	59450
CAL YR 1980	TOTAL	508538	MEAN	1389	MAX	4380	MIN	487	AC-FT	1009000		
WTR YR 1981	TOTAL	291756	MEAN	799	MAX	1680	MIN	206	AC-FT	578700		

PLATTE RIVER BASIN

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 (revised) bank 250 ft (76 m) downstream from bridge on U.S. Highway 385 and State Highway 92, 0.5 mi (0.8 km) upstream from mouth, and 4 mi (6 km) southeast of Bridgeport.

DRAINAGE AREA.--1,020 mi² (2,640 km²), 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 (1,108.250 m) National Geodetic Vertical Datum of 1929. Prior to June 25, 1934, nonrecording gage on downstream side of bridge 240 ft (73 m) upstream and June 25, 1934, to May 18, 1936, water-stage recorder at upstream side of bridge 260 ft (79 m) upstream, both at datum 0.29 ft (0.088 m) 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 (76 m) downstream from bridge at present datum.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--50 years, 28.8 ft³/s (0.816 m³/s), 20,870 acre-ft/yr (25.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,880 ft³/s (223 m³/s) June 9, 1965, gage height, 9.98 ft (3.042 m), from floodmark, from rating curve extended above 3,500 ft³/s (99.1 m³/s) on basis of rating extension for main channel and determination of flow over road; no flow July 22, 24-26, Aug. 5-8, 1975; July 9, 11, 22, 23, 28, 29, 1976; July 2-6, Aug. 2, 1977; June 25-July 22, Aug. 2-7, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49 ft³/s (1.39 m³/s) May 18, gage height, 1.94 ft (0.591 m); maximum gage height, 2.14 ft (0.652 m) Dec. 20, backwater from ice; minimum daily discharge, no flow June 25-July 22, Aug. 2-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	11	15	17	18	10	9.9	11	20	.00	3.6	9.8
2	13	11	15	17	19	11	10	11	19	.00	.00	21
3	13	12	14	17	17	11	10	11	19	.00	.00	12
4	11	12	16	17	17	11	10	13	21	.00	.00	12
5	10	13	15	17	18	11	10	12	22	.00	.00	12
6	10	12	15	17	20	10	12	12	21	.00	.00	11
7	9.6	13	15	17	20	10	10	13	17	.00	.00	12
8	7.9	13	14	17	19	10	16	13	14	.00	.01	11
9	7.5	13	14	17	18	10	16	21	13	.00	.02	11
10	7.9	12	14	16	19	9.9	15	37	12	.00	3.8	11
11	7.9	12	14	17	17	10	15	39	8.8	.00	18	11
12	7.9	12	13	16	19	10	16	40	11	.00	9.6	10
13	8.3	12	13	17	21	10	16	30	21	.00	9.5	10
14	7.9	13	14	17	17	10	16	34	20	.00	8.8	13
15	8.3	13	13	17	16	11	16	41	17	.00	8.2	13
16	8.7	13	13	16	13	10	16	35	21	.00	8.0	10
17	8.7	12	13	16	13	10	17	40	20	.00	2.6	14
18	8.7	11	13	16	12	10	17	46	20	.00	16	26
19	8.7	11	14	19	11	10	18	36	20	.00	12	26
20	9.1	12	14	18	11	10	20	33	17	.00	6.6	26
21	8.7	12	14	17	11	10	18	33	16	.00	2.3	27
22	8.7	13	14	18	12	9.7	16	28	13	.00	2.8	28
23	8.7	14	13	19	12	9.7	16	26	.17	.04	3.8	28
24	9.1	14	14	19	12	9.7	15	25	.02	.09	3.4	28
25	9.1	14	14	19	12	9.9	14	16	.00	.03	2.3	29
26	9.1	14	15	18	14	9.7	13	27	.00	4.3	1.6	29
27	9.6	14	15	18	11	10	12	13	.00	5.3	1.6	30
28	9.6	15	17	19	11	10	12	25	.00	13	1.8	30
29	9.1	15	17	19	---	9.9	12	24	.00	21	1.8	29
30	11	15	17	19	---	9.7	12	25	.00	13	1.5	27
31	11	---	17	18	---	9.8	---	23	---	14	.93	---
TOTAL	291.8	383	448	541	430	313.0	425.9	793	382.99	70.76	130.56	566.8
MEAN	9.41	12.8	14.5	17.5	15.4	10.1	14.2	25.6	12.8	2.28	4.21	18.9
MAX	14	15	17	19	21	11	20	46	22	21	18	30
MIN	7.5	11	13	16	11	9.7	9.9	11	.00	.00	.00	9.8
AC-FT	579	760	889	1070	853	621	845	1570	760	140	259	1120
CAL YR 1980	TOTAL	5806.36	MEAN	15.9	MAX	62	MIN	.03	AC-FT	11520		
WTR YR 1981	TOTAL	4776.81	MEAN	13.1	MAX	46	MIN	.00	AC-FT	9470		

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PLATTE RIVER BASIN

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 current year.

WATER TEMPERATURES: October 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,280 micromhos Feb. 11; minimum daily, 755 micromhos Apr. 18.

WATER TEMPERATURES: Maximum, 28.0°C July 11; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
OCT											
21...	1220	1500	1040	8.4	10.5	4.0	10.5	--	K20	100	280
NOV											
19...	1045	1200	983	7.8	1.5	20	12.5	17	10	52	290
DEC											
16...	1030	1130	894	8.3	5.5	12	11.1	17	K8	51	280
JAN											
13...	1030	1020	900	7.9	1.0	18	12.5	15	K4	59	290
FEB											
10...	1230	477	1020	8.0	.5	7.9	12.1	5	K13	65	330
MAR											
17...	1015	837	960	7.6	8.0	12	10.5	16	54	150	290
APR											
14...	1030	771	935	8.0	11.5	15	10.4	22	120	70	290
MAY											
12...	1100	793	910	8.2	14.0	23	9.5	13	83	110	290
JUN											
16...	1105	683	870	8.4	18.5	55	9.2	31	110	140	270
JUL											
21...	1030	880	863	8.3	24.0	210	7.4	61	2200	820	280
AUG											
18...	1205	1250	828	8.4	22.0	160	7.6	77	2900	K10000	260
SEP											
22...	1205	979	903	8.2	17.5	33	9.0	41	K130	K490	290

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 NA) (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)
OCT										
21...	57	78	20	94	2.5	12	220	210	21	.5
NOV										
19...	36	83	19	90	2.3	10	250	230	19	.5
DEC										
16...	33	82	19	95	2.5	12	250	200	22	.5
JAN										
13...	41	82	21	100	2.6	10	250	240	22	.5
FEB										
10...	56	93	23	100	2.4	11	270	250	21	.5
MAR										
17...	47	82	20	100	2.6	10	240	220	29	.5
APR										
14...	64	83	21	91	2.3	9.7	230	210	22	.4
MAY										
12...	31	82	21	97	2.5	10	260	210	22	.5
JUN										
16...	64	75	21	92	2.4	9.1	210	220	19	.5
JUL										
21...	71	78	21	90	2.3	9.8	210	230	23	.3
AUG										
18...	53	74	19	78	2.1	9.3	210	200	18	.4
SEP										
22...	59	81	21	91	2.3	10	230	230	20	.5

PLATTE RIVER BASIN

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS- SOLVED (MG/L AS SI02) (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, TOTAL (MG/L) (00500)	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 21...	39	594	618	.81	2410	--	2.5	2.6	--	.150
NOV 19...	42	632	658	.86	2050	731	3.1	3.1	.080	.100
DEC 16...	42	630	637	.86	1920	753	3.3	3.3	.060	.080
JAN 13...	41	659	681	.90	1820	707	3.4	3.3	.140	.140
FEB 10...	44	710	720	.97	914	789	3.4	3.4	.110	.110
MAR 17...	39	634	659	.86	1430	652	3.1	3.1	.060	.070
APR 14...	39	--	626	.85	1300	753	2.6	2.6	--	.110
MAY 12...	35	643	645	.87	1380	800	2.3	2.3	.090	.080
JUN 16...	30	603	600	.82	1110	884	1.5	1.5	.080	.080
JUL 21...	30	603	620	.82	1430	1180	3.7	2.7	.150	.150
AUG 18...	30	555	562	.75	1870	1200	1.5	1.5	.060	.060
SEP 22...	36	604	635	.82	1600	760	1.8	1.7	<.060	<.060

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,NH4 + ORG. TOTAL (MG/L AS N) (00624)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 21...	--	1.2	--	.00	1.3	--	3.9	.160	.010	11
NOV 19...	1.2	1.1	1.30	.10	1.2	4.4	4.3	.090	.060	19
DEC 16...	1.0	.83	1.10	.19	.91	4.4	4.2	.080	.080	14
JAN 13...	1.8	1.2	1.90	.60	1.3	5.3	4.6	.140	.070	22
FEB 10...	.80	.80	.91	.00	.91	4.3	4.3	.140	.110	19
MAR 17...	.82	.67	.88	.14	.74	4.0	3.8	.110	.070	7.9
APR 14...	--	1.8	2.90	1.0	1.9	5.5	4.5	.110	.060	5.6
MAY 12...	1.8	.56	1.90	1.3	.64	4.2	3.0	.230	.110	7.1
JUN 16...	2.5	.31	2.60	2.2	.39	4.1	1.9	.420	.030	6.8
JUL 21...	2.7	1.3	2.80	1.4	1.4	6.5	4.1	.510	.090	14
AUG 18...	2.5	.94	2.60	1.6	1.0	4.1	2.5	.330	.050	16
SEP 22...	1.2	.59	1.20	.50	.70	3.0	2.4	.090	.030	6.9

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR) (01031)
NOV 19...	1045	7	0	8	0	0	100	0	--	<1	20	0
FEB 10...	1230	7	2	5	100	0	100	5	0	6	--	--
MAY 12...	1100	7	0	8	200	100	100	0	0	0	20	0
AUG 18...	1205	9	1	8	300	200	100	0	0	0	40	30

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 19,80 1045	MAR 17,81 1015	MAY 12,81 1100	JUN 16,81 1105
TOTAL CELLS/ML	710	3300	7900	30000
DIVERSITY: DIVISION	1.6	0.5	1.3	1.0
..CLASS	1.6	0.5	1.3	1.0
..ORDER	2.8	2.6	2.0	1.9
...FAMILY	3.1	2.9	2.6	2.7
....GENUS	3.2	3.6	2.9	3.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
...ACHNANTHALES								
....ACHNANTHACEAE								
.....ACHNANTHES	--	-	160	5	--	-	460	2
.....COCCONEIS	--	-	80	2	--	-	300	1
.....RHODICOSPHEA	--	-	--	-	50	1	--	-
..BACILLARIALES								
...NITZSCHIA	90	13	720#	22	950	12	3300	11
...NITZSCHIA								
...EPITHEMIALES								
....EPITHEMIAEAE								
.....DENTICULA	13	2	--	-	--	-	--	-
.....EUPODISCALES								
.....COSCINODISCACEAE								
.....CYCLOTELLA	26	4	160	5	900	11	4700#	16
.....MELOSIRA	--	-	260	8	400	5	--	-
.....STEPHANODISCUS	26	4	--	-	350	4	--	-
..FRAGILARIALES								
...FRAGILARIAEAE								
.....ASTERIONELLA	--	-	620#	19	--	-	--	-
.....DIATOMA	--	-	120	4	--	-	150	1
.....FRAGILARIA	--	-	140	4	50	1	--	-
.....SYNEDRA	13	2	60	2	50	1	--	-
..NAVICULALES								
...CYMBELLACEAE								
....AMPHORA	--	-	40	1	50	1	150	1
....CYMBELLA	26	4	60	2	--	-	300	1
...GOMPHONEMACEAE								
....GOMPHONEMA	--	-	180	5	--	-	150	1
...NAVICULACEAE								
....CALONEIS	--	-	--	-	--	-	--	-
....NAVICULA	190#	27	320	10	300	4	1200	4
....NEIDIUM	--	-	20	1	--	-	--	-
..SURIPELLALES								
...SURIPELLACEAE								
....SURIPELLA	13	2	100	3	--	-	150	1
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHLOROCOCCACEAE								
.....SCHROEDERIA	--	-	--	-	--	-	1100	4
...DICTYOSPHAERIACEAE								
....DICTYOSPHAERIUM	--	-	--	-	500	6	--	-
...MICRACTINIACEAE								
....MICRACTINIUM	130#	18	--	-	3300#	41	3300	11
...NOCTYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	50	1	760	3
....CHODATELLA	--	-	--	-	--	-	300	1
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	160	5	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	4900#	16
....CRUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESMUS	52	7	--	-	450	6	7300#	25
...TETRASTRUM	--	-	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	13	2	20	1	50	1	760	3
...PHACOTACEAE								
....PHACOTUS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	26	4	20	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 19,80 1045		MAR 17,81 1015		MAY 12,81 1100		JUN 16,81 1105	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	26	4	--	-	400	5	--	-
..NOSTOCALES								
...HAMMATOIDEACEAE								
...RAPHIDIOPSIS	--	-	--	-	--	-	--	-
...NOSTOCACEAE								
....APHANIZOMENON	--	-	--	-	--	-	--	-
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	64	9	40	1	50	1	150	1
....TRACHELOMONAS	--	-	--	-	50	1	150	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUL 21,81 1030	AUG 18,81 1205	SEP 22,81 1205
TOTAL CELLS/ML	62000	37000	4200
DIVERSITY: DIVISION	1.4	0.9	1.5
.CLASS	1.4	0.9	1.5
.ORDER	2.2	1.7	2.4
...FAMILY	2.3	1.9	2.7
....GENUS	2.5	2.0	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
.BACILLARIOPHYCEAE						
..ACHNANTHALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	420	1	70	2
....COCconeIS	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	*	0	--	-
..BACILLARIALES						
...NITZSCHIAEAE						
....NITZSCHIA	6000	10	2500	7	280	7
..EPITHEMIALES						
...EPITHEMIAEAE						
....DENTICULA	--	-	--	-	--	-
...EUPODISCALES						
....COSCINODISCAEAE						
...CYCLOTELLA	1600	3	1000	3	350	8
...MELOSIRA	720	1	830	2	420	10
...STEPHANODISCUS	--	-	--	-	--	-
..FRAGILARIALES						
...FRAGILARIAEAE						
....ASTERIONELLA	--	-	--	-	--	-
....DIATOMA	--	-	*	0	70	2
....FRAGILARIA	6200	10	1400	4	--	-
....SYNEDRA	--	-	--	-	--	-
..NAVICULALES						
...CYMBELLACEAE						
....AMPHORA	540	1	*	0	--	-
....CYMBELLA	--	-	--	-	--	-
...GOMPHONEMACEAE						
....GOMPHONEMA	540	1	*	0	--	-
...NAVICULACEAE						
....CALONEIS	--	-	*	0	--	-
....NAVICULA	3100	5	1700	5	210	5
....NEIDIUM	--	-	--	-	--	-
..SURIPELLALES						
...SURIPELLACEAE						
....SURIPELLA	720	1	*	0	--	-
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHLOROCOCCACEAE						
....SCHROEDERIA	--	-	--	-	--	-
...DICTYOSPHAERIAEAE						
....DICTYOSPHAERIUM	--	-	--	-	--	-
...MICRACTINIACEAE						
....MICRACTINIUM	*	0	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	720	1	*	0	--	-
....CHODATELLA	*	0	--	-	--	-
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	--	-	140	3
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	--	-
....CRUCIGENIA	720	1	--	-	--	-
....SCENEDESMUS	6000	10	330	1	1200#	28
...TETRASTRUM	720	1	--	-	280	7
...VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	420	1	350	8
...PHACOTACEAE						
....PHACOTUS	--	-	--	-	140	3
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUL 21,81 1030		AUG 18,81 1205		SEP 22,81 1205	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCOCCALES						
...CHROCOCCACEAE						
....AGMENELLUM	1400	2	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-
..NOSTOCALES						
...HAMMATOIDEACEAE						
....RAPHIDIOPSIS	--	-	1200	3	--	-
...NOSTOCACEAE						
....APHANIZOMENON	--	-	25000#	68	--	-
..OSCILLATORIALES						
...OSCILLATORIAEAE						
....OSCILLATORIA	33000#	53	1300	4	700#	17
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	852	917	919	910	1000	838	920	852	1030	1010	835	895
2	855	928	907	918	1010	859	805	809	971	840	809	859
3	848	934	906	918	995	890	775	821	970	840	859	855
4	897	929	900	889	959	892	880	856	1020	830	851	878
5	873	934	848	918	967	875	815	809	1020	815	889	939
6	855	935	847	928	953	878	758	813	1030	816	848	859
7	904	934	868	906	942	860	795	897	994	845	835	881
8	893	941	849	916	965	863	818	879	1010	820	887	880
9	908	934	856	905	980	828	839	891	1020	840	889	879
10	902	937	838	892	1040	850	820	903	1020	792	859	880
11	925	919	898	807	1280	884	780	878	1020	850	887	855
12	932	928	899	909	905	887	823	882	958	830	882	878
13	935	929	899	907	992	848	840	848	1040	820	869	835
14	946	927	900	907	870	830	847	871	1040	812	869	880
15	932	922	904	869	857	871	860	900	960	790	842	888
16	935	916	905	855	875	819	880	888	1080	833	859	872
17	908	918	900	809	850	885	857	815	1060	841	880	860
18	938	929	883	847	897	885	755	815	1030	869	873	903
19	935	933	892	918	911	880	800	855	1040	821	882	909
20	945	932	869	925	911	802	800	879	1060	825	881	891
21	932	928	965	885	930	845	860	897	1090	850	882	902
22	942	929	895	928	934	848	845	918	1070	872	848	894
23	955	935	900	918	941	869	900	918	1040	875	831	895
24	955	922	906	921	951	875	850	917	1050	820	879	894
25	954	921	911	933	880	875	830	918	1030	820	861	889
26	911	929	909	928	890	869	899	918	1020	850	881	881
27	955	932	894	933	929	870	845	863	1000	782	887	887
28	956	941	899	1020	922	869	830	853	1020	824	890	891
29	942	932	909	945	---	820	833	853	1010	862	891	889
30	944	929	929	1050	---	870	868	841	1000	880	891	900
31	956	---	932	1010	---	853	---	841	---	880	870	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	10.0	1.5	5.0	.0	5.0	9.0	12.0	15.0	21.0	19.0	16.0
2	12.5	10.0	2.0	3.0	1.0	7.0	12.0	12.0	15.0	21.0	21.0	17.0
3	12.0	8.0	2.0	5.0	2.0	7.0	9.0	10.0	15.0	20.0	20.0	15.0
4	12.0	9.0	2.5	3.0	1.0	5.0	12.0	10.0	15.0	20.0	20.0	13.0
5	12.0	8.0	2.0	3.0	1.0	3.0	11.0	12.0	15.0	23.0	18.0	16.0
6	13.0	8.0	1.0	4.0	.0	5.0	11.0	8.0	15.0	23.0	18.0	14.0
7	13.0	9.0	1.0	3.0	.0	3.0	15.0	8.0	15.0	20.0	18.0	16.5
8	13.0	9.0	1.0	3.0	2.0	7.0	10.0	8.0	17.0	20.0	18.0	12.0
9	13.0	9.0	.0	2.0	.0	8.0	9.0	12.0	17.0	21.0	20.0	12.0
10	10.0	7.0	.0	.0	.0	5.0	14.0	12.0	15.0	25.0	18.0	14.0
11	12.0	8.0	.0	.0	.0	6.0	12.0	10.0	15.0	28.0	18.0	16.0
12	12.0	7.0	4.0	.0	.0	7.0	14.0	8.5	17.0	25.0	20.0	16.0
13	13.0	6.0	3.0	.0	1.0	7.0	9.0	8.0	17.0	25.0	18.0	19.0
14	12.0	5.0	3.0	.0	1.0	8.0	11.0	14.0	15.0	20.0	20.0	19.0
15	12.0	4.0	3.0	.0	4.0	11.0	12.0	13.0	11.0	21.0	20.0	13.0
16	10.0	4.0	9.0	.0	3.0	12.0	15.0	12.0	13.0	20.0	18.0	13.0
17	6.0	.0	5.0	.0	2.0	11.0	17.0	7.0	18.0	20.0	20.0	16.0
18	6.0	3.0	3.0	1.0	4.0	5.0	17.0	7.0	20.0	23.0	20.0	17.0
19	8.0	1.0	.0	3.0	6.0	8.0	15.0	12.0	20.0	20.0	20.0	13.0
20	10.0	6.0	.0	2.0	8.0	8.0	10.0	10.0	20.0	20.0	18.0	19.0
21	10.0	6.0	1.0	.0	7.0	6.0	10.0	12.0	25.0	21.0	18.0	15.0
22	10.0	3.0	.0	3.0	6.0	5.0	10.0	17.0	25.0	18.0	18.0	16.0
23	6.0	3.0	3.0	5.0	6.0	4.0	15.0	12.0	23.0	22.0	18.0	18.0
24	8.0	1.0	3.0	5.0	6.0	4.0	15.0	14.0	24.0	24.0	18.0	14.0
25	5.0	1.0	3.0	4.0	6.0	6.0	20.0	15.0	24.0	24.0	19.0	14.0
26	6.0	4.0	3.0	3.0	10.0	8.0	20.0	15.0	26.0	16.0	19.0	11.0
27	4.0	4.0	7.0	2.0	9.0	12.0	20.0	19.0	24.0	16.0	20.0	12.0
28	3.0	5.0	4.0	2.0	5.0	10.0	17.0	17.0	19.0	18.0	17.0	12.0
29	4.0	2.0	4.0	.0	---	10.0	12.0	15.0	14.0	25.0	17.0	11.0
30	5.0	2.0	5.0	.0	---	10.0	17.0	17.0	15.0	20.0	17.0	11.0
31	7.0	---	6.0	.0	---	9.0	---	15.0	---	18.0	17.0	---

PLATTE RIVER BASIN

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
OCT							
21...	1220	1500	10.5	374	1510	14	15
NOV							
19...	1045	1200	1.5	310	1000	--	--
DEC							
16...	1030	1130	5.5	220	671	--	--
JAN							
13...	1030	1020	1.0	192	529	--	--
FEB							
10...	1230	477	.5	145	187	--	--
MAR							
17...	1015	837	8.0	1240	2800	--	--
APR							
14...	1030	771	11.5	474	987	--	--
MAY							
12...	1100	793	14.0	166	355	--	--
JUN							
16...	1105	683	18.5	244	450	--	--
JUL							
21...	1030	880	24.0	648	1540	44	57
AUG							
18...	1205	1250	22.0	802	2710	34	46
SEP							
22...	1205	979	17.5	214	566	--	--

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)
OCT						
21...	22	66	79	91	100	--
NOV						
19...	--	7	11	17	36	100
DEC						
16...	--	34	52	86	98	100
JAN						
13...	--	49	72	92	99	100
FEB						
10...	--	35	49	54	72	100
MAR						
17...	--	9	12	15	56	100
APR						
14...	--	17	31	33	90	100
MAY						
12...	--	78	87	95	100	--
JUN						
16...	--	84	92	99	100	--
JUL						
21...	78	93	97	100	--	--
AUG						
18...	72	96	98	99	100	--
SEP						
22...	--	81	91	98	100	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. FALL DIAM. % FINER THAN 16.0 MM (80172)
NOV											
19...	1045	1200	5	0	7	31	73	88	96	99	100
MAY											
12...	1100	793	5	0	9	33	71	91	98	100	--
AUG											
18...	1205	1250	5	0	6	36	73	90	98	100	--

PLATTE RIVER BASIN

105

06687000 BLUE CREEK NEAR LEWELLEN, NE

LOCATION.--Lat 41°20'07", long 102°10'21", in NE1/4 sec.30, T.16 N., R.42 W., Garden County, Hydrologic Unit 10180009, on right bank 130 ft (40 m) downstream from county highway bridge, 0.5 mi (0.8 km) downstream from bridge on U.S. Highway 26, 0.8 mi (1.3 km) upstream from mouth, and 1.5 mi (2.4 km) west of Lewellen.

DRAINAGE AREA.--1,190 mi² (3,082 km²), revised, approximately, of which about 80 mi² (207 km²) 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 (1,008.900 m) National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Apr. 10, 1958.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--51 years, 69.4 ft³/s (1.965 m³/s), 50,280 acre-ft/yr (62.0 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 720 ft³/s (20.4 m³/s) May 20, 1938, gage height, 6.46 ft (1.969 m), present datum, from rating curve extended above 500 ft³/s (14.2 m³/s); maximum gage height, 6.93 ft (2.112 m), 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, 197 ft³/s (5.58 m³/s) Oct. 16, gage height, 4.34 ft (1.323 m); maximum gage height, 6.12 ft (1.865 m) Feb. 3, backwater from ice; no flow, July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	95	92	96	76	93	88	87	81	.13	26	10
2	19	95	76	89	76	96	84	85	72	6.3	25	9.4
3	19	95	84	92	70	96	89	92	70	20	19	8.8
4	20	92	96	92	84	96	88	104	71	18	5.2	8.8
5	22	95	95	90	100	93	86	102	79	17	5.9	9.4
6	24	95	90	90	100	93	86	101	69	12	8.5	12
7	42	93	89	89	90	92	88	119	69	1.0	6.9	16
8	45	95	88	88	88	95	99	117	68	.38	5.2	20
9	46	93	89	89	80	97	93	101	68	.21	4.7	22
10	48	95	86	88	70	96	93	95	63	.14	15	24
11	54	93	90	89	80	97	89	96	61	.06	16	28
12	64	93	93	88	90	95	93	112	61	.02	14	40
13	69	90	92	88	100	103	89	103	56	.01	3.9	46
14	69	92	101	88	110	102	88	97	55	.00	1.9	48
15	74	95	102	89	110	100	86	94	46	.01	1.1	51
16	142	90	98	89	95	103	85	94	54	.03	3.5	54
17	97	89	101	86	97	103	87	107	49	.02	27	41
18	85	89	118	86	96	103	88	155	44	1.4	39	39
19	84	89	163	90	96	106	93	140	36	3.0	43	40
20	84	89	88	89	96	103	111	107	30	.17	40	39
21	86	89	102	86	95	100	105	99	23	.14	37	38
22	88	89	100	89	90	102	96	98	11	.33	38	27
23	88	92	92	92	92	97	92	93	5.0	3.3	40	25
24	86	90	94	93	93	95	90	93	3.8	1.2	44	19
25	89	89	104	92	95	90	88	92	1.2	14	49	10
26	89	90	94	89	93	88	86	92	.30	97	49	5.2
27	88	89	91	88	92	88	88	101	.20	72	39	12
28	88	90	88	89	93	89	90	98	.03	65	40	13
29	90	93	100	90	---	120	86	90	.04	46	36	11
30	93	96	113	90	---	109	85	82	.10	28	19	11
31	93	---	91	80	---	93	---	80	---	28	10	---
TOTAL	2100	2759	3000	2763	2547	3033	2709	3126	1246.67	434.85	711.8	737.6
MEAN	67.7	92.0	96.8	89.1	91.0	97.8	90.3	101	41.6	14.0	23.0	24.6
MAX	142	96	163	96	110	120	111	155	81	97	49	54
MIN	15	89	76	80	70	88	84	80	.03	.00	1.1	5.2
AC-FT	4170	5470	5950	5480	5050	6020	5370	6200	2470	863	1410	1460
CAL YR 1980	TOTAL	24219.91	MEAN	66.2	MAX	163	MIN	.07	AC-FT	48040		
WTR YR 1981	TOTAL	25167.92	MEAN	69.0	MAX	163	MIN	.00	AC-FT	49920		

PLATTE RIVER BASIN

06687500 NORTH PLATTE RIVER AT LEWELLEN, NE

LOCATION.--Lat 41°18'37", long 102°09'00", in SE1/4NW1/4 sec.33, T.16 N., R.42 W., Garden County, Hydrologic Unit 10180009, on right bank 28 ft (9 m) upstream from county highway bridge, 1 mi (2 km) south of Lewellen, and approximately 1.5 mi (2.4 km) upstream from high-water line of Lake McConaughy.

DRAINAGE AREA.--28,600 mi² (74,100 km²), approximately, of which about 25,400 mi² (65,800 km²) 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 3,290.16 ft (1,002.841 m) National Geodetic Vertical Datum of 1929. July to September 1931, nonrecording gage near present site at different datum. December 1940 to Sept. 19, 1973, water-stage recorders on two channels at site 0.9 mi (1.4 km) downstream at datum approximately 6 ft (1.8 m) lower.

REMARKS.--Records good except those for winter period, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s (382 m³/s) June 4, 1971; minimum daily, 44 ft³/s (1.25 m³/s) July 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,120 ft³/s (60.0 m³/s) July 28, gage height, 5.93 ft (1.807 m); maximum gage height, 7.25 ft (2.210 m) sometime during period Dec. 19-22, backwater from ice; minimum daily discharge, 132 ft³/s (3.74 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	1570	1370	1230	940	1040	960	788	546	170	1250	774
2	1760	1590	1310	1270	1060	1030	958	774	546	324	1130	846
3	1640	1550	1200	1270	1180	1030	974	846	498	350	1030	910
4	1610	1460	1250	1250	1200	1060	1010	926	498	380	926	942
5	1610	1370	1250	1210	1240	1080	942	878	510	430	878	958
6	1590	1460	1270	1170	1200	1130	894	878	498	410	816	1040
7	1570	1480	1350	1120	1220	1150	894	958	534	350	746	1130
8	1570	1500	1300	1010	1200	1120	1040	958	510	290	704	1190
9	1590	1500	1250	1030	1100	1080	1030	942	594	212	718	1210
10	1460	1370	1250	1040	1000	1080	1030	910	690	164	878	1150
11	1460	1310	1250	1060	900	1080	990	862	774	151	878	1100
12	1460	1290	1310	1100	800	1030	1030	1030	774	132	830	1040
13	1480	1370	1310	1120	700	1010	974	974	732	138	862	1010
14	1500	1350	1330	1080	900	974	942	846	774	158	878	1030
15	1520	1370	1330	1040	1000	990	894	718	718	265	846	1060
16	1810	1350	1290	1060	1080	942	878	732	690	558	1130	1100
17	1730	1350	1200	1040	1200	942	816	910	690	788	1330	1060
18	1660	1330	1200	958	1300	974	774	1290	666	746	1310	1060
19	1610	1330	1100	1100	1360	1010	816	1210	606	704	1370	1080
20	1570	1330	1000	1100	1150	1040	1230	974	546	760	1250	1080
21	1640	1370	1000	1080	1100	1100	1170	894	534	894	1170	958
22	1610	1460	1350	1150	1060	1130	1060	862	380	862	1040	958
23	1590	1390	1700	1120	1060	1130	974	830	333	788	1030	1010
24	1640	1440	1500	1130	1060	1130	942	788	350	788	878	942
25	1690	1440	1300	1130	1060	1060	926	760	299	1100	894	942
26	1610	1370	1250	1130	1080	974	878	690	242	1570	910	1030
27	1460	1310	1250	1080	1040	990	862	678	242	1880	878	1100
28	1460	1310	1250	1030	1030	980	862	642	235	2090	816	1210
29	1500	1330	1230	1020	---	980	830	606	184	1990	816	1330
30	1480	1370	1250	960	---	970	788	582	151	1590	802	1370
31	1520	---	1230	940	---	970	---	498	---	1370	788	---
TOTAL	49130	42020	39430	34028	30220	32206	28368	26234	15344	22402	29782	31620
MEAN	1585	1401	1272	1098	1079	1039	946	846	511	723	961	1054
MAX	1810	1590	1700	1270	1360	1150	1230	1290	774	2090	1370	1370
MIN	1460	1290	1000	940	700	942	774	498	151	132	704	774
AC-FT	97450	83350	78210	67490	59940	63880	56270	52040	30430	44430	59070	62720
CAL YR 1980	TOTAL	587702	MEAN	1606	MAX	4340	MIN	410	AC-FT	1166000		
WTR YR 1981	TOTAL	380784	MEAN	1043	MAX	2090	MIN	132	AC-FT	755300		

PLATTE RIVER BASIN

107

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 (7.2 km) west of Keystone.

DRAINAGE AREA.--29,300 mi² (75,900 km²), approximately, of which about 25,800 mi² (66,800 km²) 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 (2.40 km³) between elevations 3,130.0 ft (954.02 m), sill of outlet gates, and 3,270.0 ft (996.70 m), top of morning-glory spillway gates. Elevation of crest of morning-glory spillway is 3,254.0 ft (991.82 m). 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 (2.37 km³) July 12-16, 1971, elevation, 3,269.1 ft (996.42 m); minimum observed since operation of reservoir began, 32,860 acre-ft (40.5 hm³) Sept. 29, 1941, elevation, 3,153.4 ft (961.16 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,679,000 acre-ft (2.07 km³) May 29 to June 4, June 14-18, elevation, 3,261.2 ft (994.01 m); minimum observed, 1,408,000 acre-ft (1.74 km³) Oct. 1, elevation, 3,251.4 ft (991.03 m).

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	3,251.4	1,408,000	-
Oct.	31	3,252.7	1,443,000	+35,000
Nov.	30	3,253.7	1,469,000	+26,000
Dec.	31	3,254.9	1,501,000	+32,000
CAL YR 1980	.....	-	-	-25,000
Jan.	31	3,256.2	1,537,000	+36,000
Feb.	28	3,257.2	1,565,000	+28,000
Mar.	31	3,258.8	1,610,000	+45,000
Apr.	30	3,260.0	1,644,000	+34,000
May	31	3,261.2	1,679,000	+35,000
June	30	3,259.3	1,624,000	-55,000
July	31	3,253.7	1,469,000	-155,000
Aug.	31	3,253.1	1,453,000	-16,000
Sept.	30	3,252.0	1,424,000	-29,000
WTR YR 1981	.....	-	-	+16,000

PLATTE RIVER BASIN

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 (0.3 km) downstream from diversion dam of Sutherland Reservoir supply canal and 2.5 mi (4.0 km) southwest of Keystone.

DRAINAGE AREA.--29,300 mi² (75,900 km²), approximately, of which about 25,800 mi² (66,800 km²) 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 (946.584 m) 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.--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 (0.3 km) upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s (575 m³/s) June 30, 1917, from graph based on daily gage readings; no flow for many days in 1975-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,800 ft³/s (79.3 m³/s) July 15, gage height, 6.01 ft (1.832 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.17	108	28	1700	63	340
2	2.1	.38	.00	.00	.00	.00	.00	128	86	1810	95	345
3	2.7	3.6	.00	.00	.00	.00	.00	131	89	1370	195	345
4	.17	.04	.00	.00	.00	.00	.00	131	99	1200	298	345
5	.00	.00	.00	.00	.00	.00	.00	131	113	1330	260	340
6	.00	.24	.00	.00	.00	.00	.00	131	113	1520	73	303
7	.00	.82	.00	.00	.00	.00	.00	131	115	1680	7.5	270
8	.10	4.2	.00	.00	.00	.00	.00	118	115	1860	6.6	274
9	.00	.00	1.1	.00	.00	.00	.00	99	158	1930	66	274
10	.38	.00	1.0	.00	.00	.00	.00	97	192	2160	195	274
11	.03	.00	3.1	.00	.00	.00	.00	97	192	2240	428	274
12	.00	.00	.67	.00	.00	.00	.00	97	192	2140	733	279
13	.00	.00	.00	1.1	.00	.00	.00	95	195	2220	810	279
14	.00	.00	.56	1.0	.00	.08	.00	95	195	2330	635	279
15	1.9	.00	13	.33	.00	1.2	.00	95	167	2350	547	243
16	55	.00	7.5	.00	.47	1.4	.00	95	30	2290	503	206
17	43	.00	.66	.00	1.0	1.0	.25	95	.42	1910	324	214
18	2.4	.00	.33	.00	.83	.83	1.0	50	.00	1550	134	218
19	6.6	.00	.00	.00	.67	.67	.67	.11	.00	1310	199	218
20	.40	.00	.00	.00	.83	.33	.67	.00	281	1480	256	206
21	.00	.00	.00	.00	.67	.00	.17	.23	517	1740	303	158
22	.00	.23	.00	.00	.50	.00	.67	.04	586	1570	356	118
23	5.2	.00	1.1	.00	.33	.00	.22	.11	904	1340	391	115
24	.23	.00	.33	.00	.33	.00	.00	.00	1270	1360	373	110
25	.00	.00	.00	1.8	.67	.00	.00	.00	1450	1330	379	108
26	.00	.02	.00	1.2	.67	.67	.00	.00	1510	862	403	134
27	.00	1.0	.00	.50	.83	1.2	23	.00	1490	230	409	118
28	.00	4.8	.00	.00	.22	.83	29	.00	1700	41	403	120
29	.00	.10	.00	.00	---	2.1	91	.00	1750	35	403	120
30	.00	.00	.00	.00	---	.83	95	.00	1520	30	403	115
31	.00	---	.00	.00	---	27	---	.00	---	40	379	---
TOTAL	120.21	15.43	29.35	5.93	8.02	38.14	241.82	1924.49	15057.42	44958	10030.1	6742
MEAN	3.88	.51	.95	.19	.29	1.23	8.06	62.1	502	1450	324	225
MAX	55	4.8	13	1.8	1.0	27	95	131	1750	2350	810	345
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	30	6.6	108
AC-FT	238	31	58	12	16	76	480	3820	29870	89170	19890	13370
CAL YR 1980	TOTAL	188598.79	MEAN	515	MAX	2650	MIN	.00	AC-FT	374100		
WTR YR 1981	TOTAL	79170.91	MEAN	217	MAX	2350	MIN	.00	AC-FT	157000		

PLATTE RIVER BASIN

109

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 (24 m) downstream from bridge on county road, 2.5 mi (4.0 km) upstream from Birdwood Creek, and 3.5 mi (5.6 km) north of Sutherland.

DRAINAGE AREA.--29,800 mi² (77,200 km²), approximately, of which about 26,120 mi² (67,700 km²) 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. Altitude of gage is 2,920 ft (890 m), 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 (24 m) upstream at present datum.

REMARKS.--Records good except those above 1,000 ft³/s (28.3 m³/s) and those for winter period, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s (575 m³/s) June 29, 1917, from discharge graph based on daily gage readings, from rating curve extended above 16,000 ft³/s (453 m³/s); no flow July 24-28, 30, 31, 1931, Aug. 7, 1934, July 20-28, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,640 ft³/s (74.8 m³/s) July 17, gage height, 3.74 ft (1.140 m); minimum daily, 28 ft³/s (0.79 m³/s) Apr. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	126	118	123	80	110	110	37	44	1240	205	114
2	115	123	110	123	80	137	60	37	41	1380	256	74
3	105	123	125	123	80	123	50	40	49	1430	191	102
4	105	126	130	123	80	162	60	59	48	1090	132	116
5	112	123	130	123	90	143	58	68	47	930	311	117
6	112	120	137	123	110	128	60	59	48	1040	304	155
7	112	118	128	120	130	134	60	66	82	1130	191	137
8	110	118	126	120	130	128	60	100	97	1210	118	107
9	110	118	131	120	130	131	58	100	95	1330	112	99
10	107	118	130	123	110	128	50	80	66	1440	108	96
11	110	120	130	123	125	120	39	72	67	1600	102	97
12	115	123	131	123	125	115	39	107	63	1710	102	100
13	115	123	126	128	130	112	39	93	62	1680	332	103
14	118	128	126	126	140	115	39	80	288	1700	364	109
15	118	128	123	123	145	115	39	76	298	1820	291	120
16	134	126	131	118	145	115	39	84	263	2030	352	109
17	149	118	128	115	145	110	39	155	165	2480	387	95
18	180	118	123	118	143	105	39	450	112	1990	222	129
19	143	118	115	128	134	105	39	346	97	1540	85	157
20	137	118	123	118	128	105	48	155	74	1270	50	159
21	126	118	112	112	128	112	60	107	206	1340	46	160
22	118	118	131	115	128	112	58	115	381	1420	46	143
23	115	118	137	115	126	107	44	93	452	1270	88	114
24	118	118	128	115	123	102	40	80	748	1180	124	101
25	115	118	120	118	120	102	36	64	1030	1280	102	97
26	115	118	134	115	118	102	32	55	1220	1640	100	107
27	118	118	123	115	115	100	28	105	1300	1020	111	98
28	120	120	123	118	107	128	28	137	1300	553	116	92
29	123	120	120	110	---	251	29	84	1380	341	123	90
30	126	120	118	100	---	186	31	64	1360	294	128	99
31	126	---	120	90	---	128	---	52	---	251	129	---
TOTAL	3767	3619	3887	3664	3345	3871	1411	3220	11483	40629	5328	3396
MEAN	122	121	125	118	119	125	47.0	104	383	1311	172	113
MAX	180	128	137	128	145	251	110	450	1380	2480	387	160
MIN	105	118	110	90	80	100	28	37	41	251	46	74
AC-PT	7470	7180	7710	7270	6630	7680	2800	6390	22780	80590	10570	6740

CAL YR 1980 TOTAL 188469 MEAN 515 MAX 2180 MIN 65 AC-FT 373800
WTR YR 1981 TOTAL 87620 MEAN 240 MAX 2480 MIN 28 AC-FT 173800

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 (18 m) downstream from bridge on county road, 1 mi (2 km) upstream from mouth, and 5 mi (8 km) northwest of Hershers.

DRAINAGE AREA.--940 mi² (2,435 km²), approximately, of which about 80 mi² (207 km²) 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. Altitude of gage is 2,920 ft (890 m), 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 (15 m) upstream at present datum.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--50 years, 152 ft³/s (4.305 m³/s), 110,100 acre-ft/yr (0.136 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) Apr. 1, 1949, gage height, 4.35 ft (1.326 m), from rating curve extended above 680 ft³/s (19.3 m³/s); maximum gage height, 5.12 ft (1.561 m) Dec. 15, 1940, backwater from ice; minimum daily discharge, 61 ft³/s (1.73 m³/s) Jan. 19, 1935, Apr. 7, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 298 ft³/s (8.44 m³/s) July 26, gage height, 1.52 ft (0.463 m); maximum gage height, 2.76 ft (0.841 m) Feb. 13, backwater from ice; minimum daily discharge, 107 ft³/s (3.03 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

CAL YR 1980	TOTAL	49374	MEAN	135	MAX	186	MIN	91	AC-FT	97930
WTR YR 1981	TOTAL	51005	MEAN	140	MAX	225	MIN	107	AC-FT	101200

PLATTE RIVER BASIN

111

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 (46 m) downstream from bridge on U.S. Highway 83, 0.5 mi (0.8 km) north of city of North Platte, and 4.5 mi (7.2 km) upstream from confluence with South Platte River.

DRAINAGE AREA.--30,900 mi² (80,000 km²), approximately, of which about 26,300 mi² (68,100 km²) 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 (851.044 m) 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.--Records good except those for winter period, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 29,600 ft³/s (838 m³/s) June 11, 1909, discharge measurement; minimum daily, 20 ft³/s (0.57 m³/s) Sept. 20, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,560 ft³/s (72.5 m³/s) July 18, gage height, 5.43 ft (1.655 m); minimum daily, 200 ft³/s (5.66 m³/s) Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	356	344	369	344	240	309	356	242	320	1280	527	332
2	320	356	350	332	220	320	320	228	277	1340	617	315
3	309	332	340	332	230	320	320	252	272	1500	536	315
4	287	344	340	338	250	356	356	287	282	1290	464	332
5	277	356	350	344	270	369	326	298	272	1010	609	338
6	266	381	350	338	250	362	304	282	242	951	734	362
7	272	401	350	344	250	362	293	298	304	1070	581	394
8	272	394	350	338	240	362	304	309	344	1140	472	381
9	277	394	350	338	240	362	304	287	320	1310	408	362
10	272	388	350	338	230	350	293	277	304	1360	350	344
11	266	381	350	326	220	350	277	266	282	1470	428	369
12	266	375	340	332	200	326	272	332	282	1630	394	338
13	277	375	320	332	250	309	252	309	282	1650	443	350
14	272	362	315	320	300	320	247	282	381	1660	671	362
15	287	362	315	315	310	320	242	266	518	1740	626	375
16	326	344	331	326	330	326	242	266	464	1840	617	381
17	326	344	326	320	340	315	242	401	381	2220	861	369
18	332	350	320	320	350	315	237	986	298	2360	725	369
19	326	375	315	326	369	298	256	1100	272	1950	450	369
20	315	369	300	309	350	315	282	752	252	1600	350	375
21	315	369	300	309	338	338	315	554	266	1450	320	356
22	309	375	310	298	338	326	332	518	450	1610	332	350
23	309	362	310	304	332	320	298	464	502	1640	369	332
24	320	356	320	298	320	309	272	388	671	1500	408	320
25	350	356	320	293	309	304	256	369	969	1550	344	315
26	362	356	320	287	304	309	242	350	1190	2080	315	338
27	356	356	330	298	304	320	228	428	1340	2050	326	362
28	356	362	330	309	304	375	212	518	1380	1240	315	338
29	362	356	332	300	---	519	210	436	1410	852	338	332
30	362	356	338	280	---	464	228	381	1480	662	350	320
31	350	---	338	260	---	394	---	338	---	554	344	---
TOTAL	9652	10931	10279	9848	7988	10644	8318	12464	16007	45559	14624	10495
MEAN	311	364	332	318	285	343	277	402	534	1470	472	350
MAX	362	401	369	344	369	519	356	1100	1480	2360	861	394
MIN	266	332	300	260	200	298	210	228	242	554	315	315
AC-FT	19140	21680	20390	19530	15840	21110	16500	24720	31750	90370	29010	20820
CAL YR 1980	TOTAL	267491	MEAN 731	MAX 2310	MIN 220	AC-FT 530600						
WTR YR 1981	TOTAL	166809	MEAN 457	MAX 2360	MIN 200	AC-FT 330900						

PLATTE RIVER BASIN

06762500 LODGEPOLE CREEK AT BUSHNELL, NE

LOCATION.--Lat 41°13'43", long 103°48'03", in sec.33, T.15 N., R.57 W., Kimball County, Hydrologic Unit 10190016, on right bank 1.5 mi (2.4 km) east of Bushnell and 1.5 mi (2.4 km) upstream from Oliver Reservoir.

DRAINAGE AREA.--1,361 mi² (3,525 km²).

PERIOD OF RECORD.--October 1931 to current year. Records for March to September 1931 at site 1.5 mi (2.4 km) 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 4,812.3 ft (1,466.79 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 26, 1938, nonrecording gage at present site and datum.

REMARKS.--Records good. 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 (51.0 km²) above station.

AVERAGE DISCHARGE.--50 years, 11.0 ft³/s (0.312 m³/s), 7,970 acre-ft/yr (9.83 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s (467 m³/s) Sept. 15, 1950, gage height, 9.98 ft (3.042 m), from rating curve extended above 2,700 ft³/s (76.5 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 10.06 ft (3.066 m) July 2, 1981, from highwater mark; minimum daily discharge, 0.09 ft³/s (0.003 m³/s) July 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,390 ft³/s (266 m³/s) July 2, gage height, 10.06 ft (3.066 m), from highwater mark, from rating curve extended above 700 ft³/s (19.8 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.75 ft³/s (0.021 m³/s) June 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	4.1	4.7	4.5	5.5	5.4	5.2	3.8	6.7	10	7.1	3.2
2	2.2	4.2	4.8	4.5	5.1	5.4	5.4	3.9	6.6	1000	6.2	2.0
3	2.2	4.2	5.4	4.5	5.1	5.5	5.9	4.3	5.7	300	4.7	2.2
4	2.9	4.3	5.2	4.5	4.9	5.5	5.8	5.6	6.5	150	15	3.2
5	2.9	4.3	5.1	4.5	5.1	5.3	5.6	5.3	5.1	50	19	3.7
6	2.8	4.7	5.0	4.7	5.3	5.3	5.8	4.9	5.7	11	28	3.7
7	2.8	4.6	5.0	5.0	5.6	5.4	6.2	5.9	5.8	9.0	20	3.7
8	2.8	4.4	4.6	5.3	5.3	5.4	6.1	5.2	5.6	6.5	21	3.7
9	2.7	4.2	4.4	5.0	5.3	5.4	6.0	5.1	5.4	5.9	18	3.2
10	2.7	4.3	4.5	5.0	5.0	5.4	5.9	5.7	5.0	5.9	10	2.5
11	2.8	4.5	4.6	5.0	4.5	5.3	6.0	5.8	6.1	3.2	8.3	3.7
12	3.2	4.6	4.7	5.0	3.7	5.4	5.6	6.1	6.5	3.2	7.1	2.9
13	3.5	5.0	4.6	5.6	4.7	5.3	5.6	6.7	6.8	5.9	7.1	2.9
14	3.5	5.1	4.5	5.3	5.2	5.3	5.4	6.1	7.0	4.5	6.5	2.9
15	3.9	5.1	4.7	5.0	5.8	5.3	5.4	5.6	7.1	2.9	5.9	3.2
16	4.1	4.7	4.7	5.0	6.0	5.3	5.3	6.2	7.2	2.5	5.6	2.9
17	3.8	4.6	4.8	4.7	5.7	5.9	5.3	7.9	5.9	2.7	11	3.2
18	3.7	4.8	4.7	5.3	5.7	5.9	5.5	8.0	5.4	33	9.0	3.2
19	3.8	5.0	4.1	5.6	5.5	5.9	5.8	7.1	4.9	23	8.6	3.2
20	3.6	4.9	4.6	5.5	5.6	5.9	6.3	5.9	4.4	9.3	6.2	2.7
21	3.7	5.1	4.6	5.3	5.4	6.6	6.2	6.1	4.4	6.2	5.0	3.4
22	3.7	5.0	4.7	5.5	5.4	5.9	5.4	5.6	4.0	5.6	5.0	3.2
23	3.7	5.2	4.5	5.6	5.3	5.9	4.7	4.7	2.5	4.7	8.0	3.2
24	3.7	5.0	3.9	5.7	5.4	5.9	4.7	4.9	2.2	4.7	3.9	3.4
25	3.8	5.2	4.5	5.6	5.5	5.9	4.3	5.0	1.6	6.8	3.2	3.7
26	3.7	5.1	4.5	5.6	5.3	5.6	4.3	5.9	1.2	24	2.7	3.4
27	3.8	4.6	4.3	5.9	5.3	5.6	4.3	8.2	1.2	17	2.0	3.9
28	3.9	5.4	4.5	6.2	5.3	5.9	4.3	6.0	.75	11	2.7	4.2
29	4.0	5.1	4.5	5.9	---	5.9	4.3	5.4	.75	8.6	3.4	3.4
30	3.9	5.1	4.4	6.0	---	5.3	3.9	4.7	.75	7.7	3.9	2.9
31	4.0	---	4.5	5.6	---	5.3	---	5.2	---	8.3	3.4	---
TOTAL	104.0	142.4	143.6	162.4	147.5	173.3	160.5	176.8	138.75	1743.1	267.5	96.6
MEAN	3.35	4.75	4.63	5.24	5.27	5.59	5.35	5.70	4.63	56.2	8.63	3.22
MAX	4.1	5.4	5.4	6.2	6.0	6.6	6.3	8.2	7.2	1000	28	4.2
MIN	2.2	4.1	3.9	4.5	3.7	5.3	3.9	3.8	.75	2.5	2.0	2.0
AC-FT	206	282	285	322	293	344	318	351	275	3460	531	192

CAL YR 1980 TOTAL 1734.55 MEAN 4.74 MAX 93 MIN .10 AC-FT 3440
WTE YR 1981 TOTAL 3456.45 MEAN 9.47 MAX 1000 MIN .75 AC-FT 6860

PLATTE RIVER BASIN

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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 no. 4 (left channel) 215 ft (66 m) downstream from bridge, and on right bank of channel no. 2, 800 ft (244 m) downstream from bridge on U.S. Highway 385, 0.9 mi (1.4 km) southeast of Julesburg, 3.0 mi (4.8 km) upstream from Colorado-Nebraska State line, and 8 mi (13 km) downstream from Lodgepole Creek.

DRAINAGE AREA.--23,138 mi² (59,927 km²).

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-08, 1915-16, and as "at Ovid" 1922-24.

REVISED RECORDS.--WSP 1310: 1902, 1906-07, 1948(P). WSP 1440: 1903-04. WSP 1730: Drainage area.

GAGE.--Two water-stage recorders. Datum of gages is 3,446.76 ft (1,050.572 m) National Geodetic Vertical Datum of 1929. See WSP 1710 or 1730 for history of changes prior to Oct. 14, 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 (90 m) downstream at present datum. Channel no. 4: Oct. 1, 1956, to Dec. 10, 1958, at site 135 ft (41.1 m) downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft (240 m) upstream at same datum.

REMARKS.--Records good except those for winter period, 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 (4,860 km²) 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.--79 years, 491 ft³/s (13.91 m³/s), 355,700 acre-ft/yr (0.439 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s (1,060 m³/s) June 20, 1965, gage height, 10.44 ft (3.182 m), from floodmarks in gage well; no flow Aug. 18-20, 1902, July 25 to Aug 7, 1903.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,900 ft³/s (53.8 m³/s) June 5, gage height, 5.14 ft (1.567 m); minimum daily, 16 ft³/s (0.45 m³/s) Sept. 13, 14, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	103	490	596	516	296	433	150	468	41	48	17
2	105	104	474	661	485	291	439	140	776	38	41	21
3	98	104	469	680	500	290	512	133	1150	34	35	23
4	100	104	493	689	460	325	578	143	1380	30	31	24
5	113	103	496	706	500	326	590	137	1720	28	29	23
6	117	103	499	708	520	318	567	149	1450	28	30	22
7	124	106	510	712	470	326	602	191	1610	31	27	23
8	123	113	526	714	430	316	620	202	1790	31	24	18
9	120	117	542	711	250	335	609	210	1780	32	28	21
10	120	160	533	708	190	356	571	209	1510	29	59	21
11	118	215	495	700	195	380	560	212	1290	28	31	22
12	119	256	471	715	250	417	561	233	1210	25	32	19
13	121	285	460	720	350	457	499	246	1020	26	32	16
14	121	296	453	698	420	481	362	287	828	26	29	16
15	115	305	458	697	450	491	294	298	590	25	58	21
16	115	312	454	739	500	463	271	304	481	25	68	19
17	115	321	446	787	531	434	223	362	394	23	98	18
18	113	338	431	811	530	399	195	592	306	20	63	17
19	110	364	398	766	492	329	198	780	227	17	73	16
20	109	395	392	769	458	268	257	694	182	17	98	16
21	107	413	393	777	398	228	275	631	138	19	87	21
22	104	429	450	813	360	203	302	607	108	23	64	27
23	102	449	475	789	341	184	352	558	86	22	49	27
24	98	459	508	766	324	173	378	526	72	22	39	31
25	97	472	546	712	313	170	349	506	66	56	33	29
26	99	473	515	656	304	163	329	500	59	61	29	28
27	99	471	508	613	300	157	315	490	55	135	30	27
28	100	476	499	583	300	182	273	454	48	189	27	26
29	102	481	492	563	---	359	226	390	45	153	25	28
30	104	490	494	564	---	475	181	434	43	117	24	32
31	106	---	497	575	---	465	---	445	---	69	19	---
TOTAL	3410	8817	14867	21698	11137	10057	11921	11213	20882	1420	1360	669
MEAN	110	294	480	700	398	324	397	362	696	45.8	43.9	22.3
MAX	124	490	546	813	531	491	620	780	1790	189	98	32
MIN	97	103	392	563	190	157	181	133	43	17	19	16
AC-FT	6760	17490	29490	43040	22090	19950	23650	22240	41420	2820	2700	1330
CAL YR 1980	TOTAL	667581	MEAN	1824	MAX	12800	MIN	30	AC-FT	1324000		
WTF YR 1981	TOTAL	117451	MEAN	322	MAX	1790	MIN	16	AC-FT	233000		

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, at bridge on access road between U.S. Highway 30 and Interstate 80, about 0.5 mi (0.8 km) southeast of Roscoe.

PERIOD OF RECORD.--July 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
OCT 22...	1115	70	--	8.2	10.0	9.5	11	K610	71	630	160
NOV 18...	1030	234	2000	8.6	2.0	12.3	24	260	300	700	180
DEC 17...	1100	421	1900	8.8	4.5	11.3	35	420	410	730	190
JAN 14...	1045	682	1880	7.9	1.5	12.5	27	380	380	700	180
FEB 11...	1230	281	2100	7.9	.5	10.3	2	930	3800	810	210
MAR 18...	1045	446	1920	8.3	4.5	11.9	24	90	660	700	180
APR 15...	1045	374	1950	8.2	11.0	10.3	27	K30	260	740	190
MAY 13...	1120	260	1890	8.4	11.0	10.4	18	1400	2600	670	170
JUN 17...	1200	617	1540	8.4	20.5	11.9	52	730	540	570	140
JUL 22...	1115	24	1580	8.4	22.5	9.0	36	1400	360	540	140
AUG 19...	1130	46	1620	8.2	24.5	8.0	41	K1800	520	580	150
SEP 23...	1220	6.3	1390	8.9	24.0	12.5	77	K70	450	480	120

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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 22...	56	680	82	1400	.63	.060	.77	.83	1.5	.120	5.4
NOV 18...	62	740	87	1530	1.8	.220	.70	.92	2.7	.220	9.3
DEC 17...	62	710	85	1580	3.0	.170	.75	.92	3.9	.210	14
JAN 14...	62	840	81	1770	3.9	.190	1.6	1.80	5.7	.410	7.7
FEB 11...	69	800	90	1680	3.5	.270	1.0	1.30	4.8	.190	11
MAR 18...	62	700	79	1600	2.7	.020	1.8	1.80	4.5	.280	6.6
APR 15...	65	710	83	1620	2.8	.110	1.4	1.50	4.3	.270	9.5
MAY 13...	60	730	87	1540	1.0	.150	1.2	1.30	2.3	.200	13
JUN 17...	54	640	75	1450	.03	.170	1.9	2.10	2.1	.700	11
JUL 22...	47	610	72	1240	.23	.110	.80	.91	1.1	.180	4.1
AUG 19...	49	570	70	1280	.80	.200	.90	1.10	1.9	.310	6.0
SEP 23...	43	540	67	1120	.38	.180	1.2	1.40	1.8	.330	5.4

PLATTE RIVER BASIN

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 18...	1030	470	180	3.0	17	230	.8	21	1430
FEB 11...	1230	530	200	3.1	14	280	.4	8.7	1580
MAR 18...	1045	--	--	--	--	--	--	--	--
MAY 13...	1120	470	180	3.0	14	200	.7	15	1380
AUG 19...	1130	400	150	2.7	13	180	.7	21	1140

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 18...	1.9	903	1.8	.120	4	100	340	0	10
FEB 11...	2.2	1200	3.5	.180	--	--	320	--	--
MAR 18...	--	--	2.7	--	--	--	--	--	--
MAY 13...	1.9	969	1.0	.170	4	100	290	0	20
AUG 19...	1.6	140	.76	.220	--	--	280	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PR) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	9	<10	2	20	.0	4	0	10
FEB 11...	--	30	--	20	--	--	--	--
MAR 18...	--	--	--	--	--	--	--	--
MAY 13...	8	40	2	10	.8	3	0	10
AUG 19...	--	80	--	30	--	--	--	--

PLATTE RIVER BASIN

06765500 SOUTH PLATTE RIVER AT NORTH PLATTE, NE

LOCATION (REVISED).--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 (15 m) downstream from bridge on U.S. Highway 83, 0.5 mi (0.8 km) north of intersection of U.S. Highway 83 and Interstate 80 south of North Platte, and 4.5 mi (7.2 km) upstream from confluence with North Platte River.

DRAINAGE AREA.--24,300 mi² (62,900 km²), 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 (849.700 m) 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 (15 m) upstream at same datum. Mar. 30, 1973, to Aug. 12, 1981, at site 0.5 mi (0.8 km) upstream at same datum.

REMARKS.--Records good except those for winter period or no gage height 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. South Platte canal diverts around station; diversion began Nov. 13, 1946.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 37,100 ft³/s (1,050 m³/s) June 3, 1935, gage height, 14.02 ft (4.273 m), present datum; no flow at times in summers of most years prior to 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 500 ft³/s (14.2 m³/s) July 26, gage height, 6.56 ft (1.999 m); maximum gage height, 6.75 ft (2.057 m) Feb. 12, backwater from ice; minimum daily discharge, 90 ft³/s (2.55 m³/s) Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	121	123	121	100	134	137	164	168	174	257	165
2	160	129	118	121	90	137	137	157	160	170	275	153
3	145	129	125	121	125	136	141	156	164	154	270	156
4	145	128	133	120	130	147	152	169	160	135	249	162
5	139	131	135	125	130	147	145	161	160	134	254	165
6	132	131	125	124	135	137	139	156	160	131	249	168
7	126	132	125	125	135	139	137	166	225	130	259	150
8	126	129	130	128	120	140	138	172	311	128	284	148
9	126	130	120	124	120	141	141	161	309	130	280	156
10	112	134	116	123	100	143	135	152	385	123	309	150
11	115	132	118	123	130	141	132	148	458	118	270	145
12	121	134	121	120	140	147	132	177	445	112	270	139
13	121	132	121	129	140	141	134	170	336	115	262	150
14	121	132	123	125	140	134	142	161	294	112	254	145
15	129	132	126	125	150	131	152	158	266	115	239	145
16	142	129	126	130	160	128	142	161	244	121	243	142
17	123	129	126	135	176	124	142	182	218	270	247	153
18	123	129	126	140	160	118	138	279	205	254	254	145
19	123	128	116	145	152	114	130	366	186	234	247	159
20	123	126	118	144	149	116	137	297	169	230	247	148
21	123	128	118	140	143	120	158	271	186	216	221	142
22	123	129	120	140	142	121	188	244	184	208	200	139
23	118	129	121	144	139	124	178	215	183	192	207	142
24	118	129	123	146	139	123	161	198	177	208	200	139
25	118	131	123	150	138	126	158	193	174	230	193	142
26	118	132	121	144	137	130	152	181	168	445	183	145
27	118	135	126	135	136	132	152	190	171	385	180	126
28	118	132	126	130	136	143	159	189	170	342	180	126
29	107	129	121	110	---	161	159	185	182	304	187	132
30	112	129	121	116	---	150	166	182	178	271	190	148
31	121	---	121	110	---	139	---	176	---	256	183	---
TOTAL	3927	3900	3812	4013	3792	4164	4414	5937	6796	6147	7343	4425
MEAN	127	130	123	129	135	134	147	192	227	198	237	148
MAX	181	135	135	150	176	161	188	366	458	445	309	168
MIN	107	121	116	110	90	114	130	148	160	112	180	126
AC-FT	7790	7740	7560	7960	7520	8260	8760	11780	13480	12190	14560	8780

CAL YR 1980 TOTAL 526266 MEAN 1438 MAX 12200 MIN 107 AC-FT 1044000
WTR YR 1981 TOTAL 58670 MEAN 161 MAX 458 MIN 90 AC-FT 116400

PLATTE RIVER BASIN

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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 (0.8 km) and 2.5 mi (4.0 km), respectively, south of Brady and 18 mi (29 km) downstream from confluence of North Platte and South Platte Rivers.

DRAINAGE AREA.--56,200 mi² (145,600 km²), approximately, of which about 51,400 mi² (133,100 km²) 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 (804.425 m) and on south channel, 2,641.66 ft (805.178 m) 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 (0.3 m) higher.

REMARKS.--Records good except those for winter period, 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. Tri-County main supply canal, capacity, about 2,000 ft³/s (56.6 m³/s), diverts 18 mi (29 km) above station; diversion started Nov. 26, 1940. River flows in two channels for which separate records are computed; figures given herein represent combined discharge.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft³/s (527 m³/s) May 14, 1973; no flow Aug. 22-24, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,750 ft³/s (77.9 m³/s) July 27; minimum daily, 70 ft³/s (1.98 m³/s) Feb. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	101	99	118	86	155	178	135	154	723	302	116
2	138	101	100	119	80	158	160	128	141	642	345	110
3	138	103	92	115	70	160	157	139	139	861	310	115
4	136	103	111	115	110	200	167	145	138	886	283	125
5	171	103	113	130	154	197	169	142	133	556	254	115
6	190	103	111	124	180	176	161	141	126	407	242	113
7	193	102	102	115	164	157	152	152	144	331	226	127
8	189	103	100	121	152	149	150	168	131	416	211	112
9	183	106	100	122	142	143	148	165	117	651	198	124
10	182	105	105	120	134	143	143	152	110	962	194	143
11	182	107	114	114	110	138	136	145	111	1230	183	133
12	183	107	120	108	116	139	134	162	109	1290	176	130
13	188	107	122	125	126	139	133	170	109	1300	176	113
14	199	107	126	119	136	141	130	172	119	1360	205	102
15	209	111	129	119	150	138	126	165	119	1400	237	99
16	230	112	125	103	170	135	126	164	116	1520	192	94
17	150	109	121	102	200	131	128	211	109	1870	245	98
18	110	110	120	100	188	125	132	415	107	2300	425	92
19	102	108	93	115	178	125	139	718	102	2040	230	92
20	101	108	86	129	175	123	150	599	98	1500	206	90
21	105	112	86	133	171	131	161	379	127	1180	184	90
22	99	111	96	160	167	130	183	303	113	1180	180	91
23	96	107	112	158	161	125	182	253	107	1010	310	91
24	96	105	100	138	159	125	171	219	105	1100	294	94
25	96	109	104	130	157	128	151	201	104	1050	240	95
26	96	107	113	130	158	127	140	189	315	1780	268	96
27	103	105	119	132	161	128	128	190	501	2650	178	95
28	107	105	122	132	158	165	126	191	631	1810	150	98
29	103	103	120	111	---	232	127	189	772	850	162	128
30	99	104	124	96	---	240	133	169	753	504	131	145
31	101	---	121	87	---	208	---	162	---	390	118	---
TOTAL	4413	3184	3406	3740	4113	4711	4421	6833	5960	35749	7055	3266
MEAN	142	106	110	121	147	152	147	220	199	1153	228	109
MAX	230	112	129	160	200	240	183	718	772	2650	425	145
MIN	96	101	86	87	70	123	126	128	98	331	118	90
AC-FT	8750	6320	6760	7420	8160	9340	8770	13550	11820	70910	13990	6480
CAL YR 1980	TOTAL	686519	MEAN	1876	MAX	14100	MIN	86	AC-FT	1362000		
WTR YR 1981	TOTAL	86851	MEAN	238	MAX	2650	MIN	70	AC-FT	172300		

PLATTE RIVER BASIN

06766500 PLATTE RIVER NEAR COZAD, NE

LOCATION.--North Channel gage: Lat 40°50'08", long 99°59'13" in S1/2 sec.18, T.10 N., R.23 W., Dawson County, Hydrologic Unit 10200101, on left bank 30 ft (9 m) upstream from highway bridge, 1.5 mi (2.4 km) south of Cozad. South Channel gage: Lat 40°49'47", long 99°59'18" in S1/2 sec.18, T.10 N., R.23 W., Dawson County, on right bank on upstream side (revised) of highway bridge, 1.5 mi (2.4 km) south of Cozad.

DRAINAGE AREA.--56,500 mi² (146,300 km²), approximately, of which about 51,700 mi² (133,900 km²) 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 (753.792 m) and on north channel, 2,475.72 ft (754.599 m) 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 (0.305 m) higher and May 11, 1976, to June 16, 1977, at present datum, both at downstream side of highway bridge 30 ft (9 m) downstream. South channel gage: May 10, 1966, to July 17, 1980, at downstream side of highway bridge at present datum.

REMARKS.--Records fair except those for winter period, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) May 29, 1973; no flow at times in 1937-40.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,590 ft³/s (73.3 m³/s) July 28; minimum daily, 14 ft³/s (0.40 m³/s) June 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	157	166	206	132	244	248	40	45	73	261	165
2	152	157	90	194	112	242	282	46	37	38	283	286
3	143	157	116	190	137	242	239	49	29	463	177	262
4	148	157	150	175	159	280	224	39	20	525	114	249
5	143	157	191	180	173	298	213	31	16	367	98	243
6	171	157	183	194	193	289	170	31	15	220	51	235
7	199	157	166	188	201	282	146	33	20	146	36	247
8	219	157	141	188	185	270	118	40	16	56	23	243
9	219	157	136	192	173	265	96	66	18	24	19	237
10	211	158	145	194	163	244	90	54	23	24	22	214
11	214	153	183	194	153	232	89	42	22	43	20	197
12	229	158	216	188	168	217	84	86	30	30	38	185
13	246	158	211	192	177	200	80	94	25	22	96	177
14	242	156	211	199	199	214	76	71	17	26	151	165
15	254	153	212	194	211	210	72	58	18	35	130	163
16	280	156	212	172	234	193	70	61	21	40	104	155
17	289	156	203	136	286	192	66	146	17	144	78	140
18	235	156	183	142	308	178	63	357	15	400	56	141
19	193	158	164	203	282	202	60	472	14	626	27	140
20	178	156	145	215	265	192	56	572	18	533	19	133
21	170	158	133	207	256	176	60	513	49	219	21	128
22	164	165	163	198	249	184	70	396	22	100	26	138
23	152	166	187	216	246	194	50	310	21	74	40	138
24	147	159	144	228	243	201	34	229	22	134	38	140
25	143	157	150	228	246	169	34	155	19	156	45	146
26	134	157	182	214	245	166	35	116	51	715	28	161
27	142	159	225	202	243	156	36	125	56	1880	26	166
28	144	166	251	202	241	186	34	106	27	2450	33	162
29	149	171	231	196	---	296	36	88	109	1540	24	158
30	156	176	223	175	---	315	38	59	144	862	63	165
31	156	---	220	174	---	260	---	50	---	420	94	---
TOTAL	5784	4765	5533	5976	5880	6989	2969	4535	956	12385	2241	5479
MEAN	187	159	178	193	210	225	99.0	146	31.9	400	72.3	183
MAX	289	176	251	228	308	315	282	572	144	2450	283	286
MIN	134	153	90	136	112	156	34	31	14	22	19	128
AC-FT	11470	9450	10970	11850	11660	13860	5890	9000	1900	24570	4450	10870
CAL YR 1980	TOTAL	600861	MEAN	1642	MAX	13000	MIN 45	AC-FT	1192000			
WTR YR 1981	TOTAL	63492	MEAN	174	MAX	2450	MIN 14	AC-FT	125900			

PLATTE RIVER BASIN

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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 (183 m) downstream from county highway bridge, 4 mi (6 km) south of Overton and 4 mi (6 km) downstream from Plum Creek.

DRAINAGE AREA.--57,700 mi² (149,400 km²), approximately, of which about 52,900 mi² (137,000 km²) 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 2,298.83 ft (700.683 m) National Geodetic Vertical Datum of 1929. July 1914, to October 1917, nonrecording gages at site 8 mi (13 km) downstream at different datum. June 1918, to Sept. 12, 1928, nonrecording gage at site 600 ft (180 m) upstream (south channel only) at datum 3.0 ft (0.91 m) 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 (180 m) upstream (south channel only) at datum 1.0 ft (0.30 m) higher. Oct. 1, 1968, to Feb. 3, 1976, water-stage recorder on south channel at site 600 ft (180 m) upstream at datum 1.0 ft (0.30 m) higher, and Feb. 4, to June 2, 1976 (south channel gage discontinued), at present datum. Oct. 1, 1968, to July 10, 1974, north channel gage at site 600 ft (180 m) upstream at datum 1.0 ft (0.30 m) higher and July 11, 1974, to June 1, 1976, at same datum.

REMARKS.--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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s (1,060 m³/s) June 5, 1935, gage height, 6.25 ft (1.905 m) south channel; maximum gage height, 6.43 ft (1.960 m) May 15, 1973, north channel, datum then in use; no flow at times in 1919, 1922, 1925, 1927-28, 1930-41.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,730 ft³/s (106 m³/s) July 28, gage height, 2.98 ft (0.908 m); minimum daily, 106 ft³/s (3.00 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	998	657	1250	1320	1300	1500	1140	384	487	354	1300	245
2	1170	631	1160	1340	1250	1420	1190	357	401	398	1370	301
3	1160	644	1160	1320	1250	1570	923	401	267	757	1600	404
4	1080	644	1190	1160	1200	1640	838	435	233	1620	1480	449
5	952	657	765	1200	1170	1790	836	434	243	1390	1090	526
6	710	697	1400	1250	1030	1870	848	344	222	1020	1290	581
7	696	710	1300	1200	1140	1770	783	260	232	652	1500	639
8	807	779	1200	1150	1200	1770	751	269	231	458	1390	720
9	737	779	1100	1110	1200	1720	797	268	206	377	1370	884
10	696	765	1110	1160	1200	1720	757	286	227	282	879	1170
11	657	779	1060	1190	1150	1680	753	300	367	234	436	956
12	683	765	1080	1190	1250	1410	799	266	455	204	293	993
13	670	765	1270	1170	1410	1370	835	256	560	185	268	833
14	670	765	1360	1200	1320	1300	806	253	629	112	268	808
15	696	793	1440	1170	1370	1190	696	239	644	106	293	682
16	696	893	1440	1410	1390	1090	661	179	686	119	268	693
17	696	893	1340	1360	1620	982	595	233	603	230	252	633
18	710	967	1290	1420	1790	967	589	965	487	477	244	645
19	710	879	1220	1620	1930	893	591	1970	186	1100	244	631
20	696	1160	1000	1680	1850	937	569	1990	159	1280	218	587
21	683	1040	1000	1680	1720	1030	566	1690	221	1060	196	553
22	807	1270	940	1700	1720	1030	563	1480	200	569	181	690
23	952	1300	952	1720	1770	1140	525	1120	189	514	189	839
24	1160	1370	1170	1550	1620	1090	636	886	165	408	330	927
25	1080	1370	1060	1530	1460	982	524	726	162	356	369	1060
26	937	1240	967	1440	1500	923	465	671	211	1120	371	1020
27	864	1220	1120	1530	1410	893	609	740	297	2400	354	1100
28	751	1240	1190	1550	1510	967	461	807	296	3460	306	1120
29	670	1110	1160	1510	---	1010	509	675	240	3640	320	1470
30	697	1030	1140	1400	---	1120	384	805	260	3110	273	1480
31	683	---	1250	1400	---	1120	---	513	---	1970	224	---
TOTAL	25174	27812	36084	42630	39730	39894	20999	20202	9766	29962	19166	23639
MEAN	812	927	1164	1375	1419	1287	700	652	326	967	618	788
MAX	1170	1370	1440	1720	1930	1870	1190	1990	686	3640	1600	1480
MIN	657	631	765	1110	1030	893	384	179	159	106	181	245
AC-FT	49930	55170	71570	84560	78800	79130	41650	40070	19370	59430	38020	46890
CAL YR 1980	TOTAL	990852	MEAN	2707	MAX	14000	MIN	130	AC-FT	1965000		
WTR YR 1981	TOTAL	335058	MEAN	918	MAX	3640	MIN	106	AC-FT	664600		

PLATTE RIVER BASIN

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.

INSTRUMENTATION.--Temperature recorder from Apr. 5, 1967 to Aug. 2, 1976; Mar. 21, 1978 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,480 micromhos May 15, 1966 (south chan.); minimum daily,

214 micromhos 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, 1,100 micromhos Feb. 18 (south chan.); minimum daily, 542 micromhos May 28 (south chan.).

WATER TEMPERATURES: Maximum daily, 34.5°C June 28, July 15; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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										
09...	0830	240	860	8.0	14.0	8.4	15	260	700	280
NOV										
06...	0845	280	880	8.0	9.0	10.0	--	K69	K100	290
DEC										
04...	0930	330	920	8.0	.0	13.1	9	1100	800	340
JAN										
08...	1015	300	850	8.0	.0	13.1	26	200	240	300
FEB										
05...	1000	400	960	7.8	.0	12.3	6	1300	1900	350
MAR										
03...	1115	950	840	7.9	6.0	11.1	25	56	3200	300
APR										
02...	0930	570	830	7.9	11.0	10.5	19	250	1200	310
MAY										
06...	1245	255	950	8.0	15.0	10.3	48	K94	170	340
JUN										
02...	1100	250	940	8.0	20.0	8.6	27	360	410	350
JUL										
08...	0900	330	930	8.1	22.5	8.6	35	510	340	320
AUG										
05...	1000	310	900	8.0	23.0	7.8	27	220	180	330
SEP										
03...	1000	230	910	8.1	18.0	8.8	70	600	1100	290

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 LAR (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT									
09...	--	73	23	--	--	--	--	200	33
NOV									
06...	82	79	23	76	1.9	13	210	210	34
DEC									
04...	--	94	26	--	--	--	--	200	31
JAN									
08...	89	82	23	68	1.7	10	210	190	27
FEB									
05...	99	95	27	82	1.9	13	250	250	33
MAR									
03...	89	82	23	68	1.7	13	210	210	26
APR									
02...	--	87	23	--	--	--	--	200	25
MAY									
06...	110	92	27	85	2.0	15	230	250	34
JUN									
02...	110	97	27	85	2.0	22	240	250	32
JUL									
08...	130	86	26	79	1.9	16	190	250	33
AUG									
05...	--	90	26	--	--	--	--	240	30
SEP									
03...	--	78	24	--	--	--	--	240	26

PLATTE RIVER BASIN

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06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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, TOTAL (MG/L) (00500)	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 09...	--	--	--	--	--	1310	.64	--	.040
NOV 06...	.6	34	600	.82	454	623	.89	.84	.030
DEC 04...	--	--	--	--	--	665	1.6	--	.050
JAN 08...	.5	38	572	.78	463	594	1.5	1.5	.200
FEB 05...	.5	42	703	.96	759	699	2.2	2.2	.340
MAR 03...	.4	35	591	.80	1520	358	1.7	1.7	.080
APR 02...	--	--	--	--	--	666	1.4	--	.090
MAY 06...	.5	32	674	.92	464	715	1.5	1.5	.110
JUN 02...	.5	34	700	.95	472	727	1.6	1.6	.070
JUL 08...	.5	36	648	.89	584	751	.72	.75	.070
AUG 05...	--	--	--	--	--	579	1.0	--	.210
SEP 03...	.5	--	--	--	--	679	1.2	--	4.090

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 09...	1.1	1.10	1.7	.200	--	--	--	--	12
NOV 06...	.69	.72	1.6	.250	.210	150	20	10	16
DEC 04...	1.1	1.10	2.7	.160	--	--	--	--	4.0
JAN 08...	1.9	2.10	3.6	.160	.140	100	10	20	12
FEB 05...	.86	1.20	3.4	.190	.190	110	20	20	13
MAR 03...	1.3	1.40	3.1	.230	.190	70	10	10	12
APR 02...	1.1	1.20	2.6	.150	--	--	--	--	11
MAY 06...	.88	.99	2.5	.200	.160	130	10	20	4.8
JUN 02...	.71	.78	2.4	.210	.170	110	10	--	5.1
JUL 08...	1.6	1.70	2.4	.250	.110	130	10	9	5.5
AUG 05...	.73	.94	1.9	.170	--	--	--	--	4.6
SEP 03...	--	2.10	3.3	.270	--	--	--	--	6.2

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 06...	0845	4	90	<1	0	2	2	.2	2	0	3
FEB 05...	1000	5	100	<1	0	2	4	.1	3	0	9
MAY 06...	1245	5	90	<1	0	1	5	.0	2	0	7
JUL 08...	0900	7	200	<1	10	3	0	.4	2	0	8

PLATTE RIVER BASIN

06767998 PLATTE RIVER NEAR OVERTON, NE (NORTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	875	884	859	855	978	828	800	921	1020	847	899	969
2	828	885	857	851	959	828	819	945	1020	924	894	938
3	883	886	869	850	985	828	817	948	1040	892	910	939
4	882	886	865	843	1000	769	821	908	1010	812	934	948
5	895	894	859	869	939	768	810	949	1020	812	958	933
6	889	895	829	860	923	800	806	959	1020	850	949	930
7	885	873	834	841	902	818	859	959	875	912	961	900
8	885	879	888	851	998	826	819	921	999	959	950	911
9	879	875	878	850	995	823	885	904	1020	987	971	916
10	885	873	879	838	941	837	896	927	1040	999	961	915
11	885	882	872	837	995	850	890	930	1020	1010	985	933
12	889	884	848	835	1000	828	871	930	1020	1010	994	933
13	881	869	842	852	949	822	870	930	1040	1000	971	924
14	875	868	818	855	902	825	863	910	1050	990	930	940
15	882	873	832	845	849	830	902	933	1050	993	968	950
16	851	873	833	851	783	838	885	953	1040	975	985	948
17	850	878	838	915	770	830	940	732	1060	869	991	949
18	851	861	875	878	790	829	958	755	1060	835	1010	951
19	878	868	871	860	789	830	863	851	1060	840	1030	949
20	889	861	932	846	839	800	839	845	1060	832	1040	950
21	898	849	914	845	845	830	872	822	988	862	1040	951
22	895	869	915	844	890	804	839	862	995	925	1070	950
23	909	823	818	855	873	823	895	882	1030	939	990	930
24	909	868	899	846	869	815	943	900	1050	928	1010	939
25	882	874	918	835	847	818	947	919	1050	940	999	902
26	875	838	917	847	850	820	950	938	975	917	1020	929
27	871	881	786	849	955	830	947	890	880	638	1040	902
28	869	861	785	863	848	818	935	892	930	705	1050	911
29	865	865	813	879	---	756	935	943	980	750	1040	916
30	885	868	855	985	---	755	950	891	759	815	1010	911
31	893	---	857	978	---	779	---	968	---	835	1020	---

06767999 PLATTE RIVER NEAR OVERTON, NE (SOUTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	831	833	768	842	950	964	930	949	980	865	934	911
2	873	815	765	847	949	999	940	972	1020	947	950	902
3	832	815	769	849	950	999	940	971	1040	955	939	920
4	832	801	766	851	954	995	939	967	1020	885	950	880
5	834	828	828	869	946	1000	930	961	964	882	950	882
6	848	835	764	868	955	995	931	970	979	900	943	854
7	845	819	765	868	989	1000	930	971	1030	950	940	860
8	841	832	794	871	1030	988	922	962	900	920	922	891
9	837	814	778	870	1040	987	922	940	935	919	950	891
10	855	818	781	877	1020	985	922	961	1020	910	950	900
11	848	841	781	875	1040	990	919	967	1020	852	995	880
12	859	832	768	874	1040	992	920	941	1000	906	1000	880
13	855	805	795	899	1030	970	910	951	999	920	976	877
14	864	832	778	888	1060	968	914	940	1010	859	940	881
15	865	834	777	885	1070	980	920	945	1020	812	930	866
16	837	801	787	891	1080	980	925	950	1020	852	920	877
17	849	818	798	893	1080	972	927	939	1030	839	930	878
18	837	788	808	898	1100	955	929	929	1020	910	950	878
19	849	838	805	912	1080	964	900	956	1020	890	930	881
20	859	792	818	918	1080	952	904	929	1020	890	925	872
21	861	788	804	922	1080	950	904	921	852	933	999	880
22	841	814	800	935	1070	960	900	945	1010	960	960	861
23	853	875	858	945	1070	960	903	948	981	962	917	869
24	855	788	841	939	1050	945	904	950	985	930	860	877
25	831	825	828	941	1030	950	915	949	958	920	889	861
26	859	788	829	948	1010	949	904	988	941	578	900	898
27	838	823	815	956	1030	955	900	867	981	791	889	861
28	838	792	815	964	1000	939	902	542	948	858	908	885
29	841	801	831	938	---	940	900	841	905	862	899	880
30	831	805	838	975	---	945	900	1000	950	872	861	870
31	827	---	835	988	---	940	---	880	---	845	910	---

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	15.0	8.5	3.0	6.0	.0	4.5	.5	.0	.0	9.0	4.5
2	17.0	13.5	9.0	4.5	1.0	.0	3.5	.0	.5	.0	9.5	5.0
3	18.0	14.0	10.0	7.0	2.0	.0	1.5	.0	1.0	.0	7.0	5.5
4	18.5	13.5	9.0	6.5	3.0	.5	1.0	.0	1.0	.0	5.5	3.5
5	18.5	14.0	10.5	7.5	3.5	1.0	1.0	.0	1.0	.0	6.5	2.0
6	20.0	14.5	13.0	9.5	1.5	1.0	3.5	.0	1.0	.5	7.0	4.0
7	20.0	15.0	14.0	11.5	.5	.5	3.5	.5	1.0	.0	6.5	3.5
8	20.5	14.5	14.5	10.0	1.0	.0	3.5	.0	.5	.0	6.5	3.5
9	20.0	15.0	12.0	7.0	1.0	.0	1.0	.0	.5	.0	8.0	4.0
10	17.0	14.0	10.5	6.0	1.0	.0	1.5	.0	.0	.0	8.5	4.5
11	16.0	10.5	10.0	6.5	4.0	.5	2.0	.0	1.0	.0	9.5	5.5
12	15.5	10.5	10.5	6.5	5.5	1.5	3.0	.5	.0	.0	11.5	6.0
13	16.5	11.5	9.0	5.0	5.0	1.5	4.0	.5	.5	.0	11.0	9.5
14	17.0	12.0	5.5	4.5	4.5	1.0	4.5	.5	1.0	.0	11.0	6.5
15	15.0	12.0	6.0	3.5	6.5	2.0	2.0	.5	1.0	.5	11.0	7.0
16	16.0	14.0	5.5	1.0	8.5	5.5	1.0	.0	2.0	.5	11.0	6.5
17	13.5	10.0	6.0	1.0	8.0	5.0	1.5	.0	5.5	.5	12.0	7.0
18	13.0	8.5	6.5	.5	5.5	.0	1.5	.5	7.0	4.0	9.0	4.0
19	14.5	9.0	6.0	1.5	.5	.0	3.5	.5	9.0	3.5	11.0	4.5
20	16.0	10.5	6.5	1.5	.0	.0	3.5	.5	9.5	5.0	8.5	5.5
21	16.5	11.0	6.0	4.0	.5	.0	3.0	.0	6.5	4.5	6.0	3.0
22	16.0	10.5	6.5	1.5	.5	.0	4.0	.0	6.0	3.0	11.5	3.0
23	13.5	8.5	6.0	3.5	.5	.0	5.5	1.0	9.0	2.0	14.5	6.0
24	11.0	5.5	6.0	3.0	.0	.0	6.5	3.0	10.5	4.0	14.5	8.5
25	11.0	5.5	5.5	.5	.5	.0	6.5	3.0	10.5	5.5	16.0	8.5
26	8.0	5.0	3.5	2.0	1.5	.5	5.0	1.0	6.5	5.5	16.0	9.5
27	5.5	2.0	4.0	.0	1.0	.5	4.0	.5	10.0	6.5	18.0	12.0
28	4.5	1.5	5.0	.0	1.0	.5	4.0	.0	9.5	4.5	14.0	11.5
29	4.0	1.5	5.5	1.0	4.5	1.0	.5	.0	---	---	11.5	9.0
30	6.5	1.5	8.0	3.5	5.5	4.0	.5	.0	---	---	15.0	7.0
31	8.0	2.5	---	---	6.5	3.5	.5	.0	---	---	14.0	9.5
MONTH	20.5	1.5	14.5	.0	8.5	.0	6.5	.0	10.5	.0	18.0	2.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.0	8.0	24.5	15.0	26.0	17.0	30.0	20.5	28.5	23.0	25.0	19.0
2	18.5	9.5	25.5	11.5	29.5	18.5	26.0	22.0	29.0	23.5	24.5	18.5
3	18.5	9.5	18.0	14.5	26.5	17.0	25.0	20.5	30.0	22.0	22.0	19.5
4	13.0	8.0	20.0	13.0	30.0	18.0	28.5	20.5	29.5	23.5	24.0	20.0
5	14.0	6.5	23.5	11.0	29.0	24.0	30.5	23.0	31.0	25.5	25.0	20.0
6	16.5	6.5	16.5	12.0	30.5	18.5	30.5	24.0	29.5	23.0	23.0	19.0
7	18.5	10.0	12.0	9.5	31.5	19.5	30.0	23.0	28.0	20.5	24.0	18.5
8	17.0	10.0	22.0	15.0	31.0	21.0	28.5	22.0	28.5	20.5	25.0	18.5
9	19.0	9.5	15.5	9.0	32.0	20.5	30.5	24.0	25.5	21.0	25.5	19.0
10	22.0	14.5	20.5	6.5	31.0	19.5	31.5	24.5	29.0	20.5	25.5	19.5
11	19.5	12.0	20.0	10.5	30.5	19.0	33.5	22.0	30.0	19.5	25.5	21.5
12	23.5	11.5	23.5	11.0	29.5	23.5	34.0	23.0	27.0	19.5	26.0	18.0
13	17.0	9.0	16.5	10.0	33.5	20.0	33.5	22.0	25.5	21.5	27.0	18.5
14	18.0	6.5	20.5	8.5	25.0	20.5	32.0	23.5	29.5	22.0	24.5	19.5
15	15.0	8.0	19.0	13.0	23.5	16.5	34.5	23.5	30.5	24.0	22.0	18.5
16	21.5	10.0	13.0	11.5	18.0	14.0	34.0	24.0	26.0	21.5	20.0	15.5
17	23.0	14.5	13.0	11.0	29.5	15.5	30.5	26.0	27.0	19.5	20.0	14.0
18	18.5	13.0	11.0	10.0	21.0	16.0	30.0	23.5	27.0	20.0	21.0	17.0
19	16.0	12.0	16.5	9.0	27.0	21.5	31.5	24.5	28.5	20.0	23.5	15.5
20	13.0	10.0	18.5	13.0	29.5	18.5	32.0	24.0	29.0	20.0	24.0	16.0
21	19.5	9.5	18.0	13.0	28.5	19.5	29.0	24.5	28.5	21.5	22.0	15.5
22	19.0	12.0	22.0	18.5	30.0	18.5	29.0	22.0	24.0	18.5	20.5	15.5
23	22.0	11.0	22.0	16.5	33.0	19.5	32.0	22.0	29.0	19.0	24.0	16.5
24	24.5	14.5	23.5	14.5	30.5	20.5	26.0	23.5	28.5	19.5	21.0	18.5
25	26.0	13.5	26.5	16.0	31.5	18.5	30.0	22.0	31.0	20.5	23.0	18.5
26	27.0	16.0	20.0	17.0	31.5	23.0	22.0	19.5	26.0	22.0	22.0	16.0
27	28.5	15.5	22.0	16.0	33.5	20.0	21.0	18.5	25.5	18.0	21.0	15.5
28	25.0	15.0	25.5	18.0	34.5	23.0	20.5	19.0	26.0	20.0	21.0	16.5
29	25.0	15.0	26.5	20.5	30.5	22.0	22.0	19.5	28.0	20.0	24.5	18.0
30	17.0	14.0	26.5	16.5	27.0	20.5	26.5	21.0	29.5	22.0	20.5	17.0
31	---	---	27.0	16.0	---	---	27.5	22.0	24.5	20.5	---	---
MONTH	28.5	6.5	27.0	6.5	34.5	14.0	34.5	18.5	31.0	18.0	27.0	14.0

PLATTE RIVER BASIN

06770000 PLATTE RIVER NEAR ODESSA, NE

LOCATION.--Lat 40°39'55", long 99°15'20", in SW1/4NW1/4 sec.16, T.8 N., R.17 W., Buffalo-Phelps County line, Hydrologic Unit 10200101, near right bank on downstream side of pier of highway bridge, 2.5 mi (4.0 km) south of Odessa and 5 mi (8 km) downstream from Elm Creek.

DRAINAGE AREA.--58,100 mi² (150,500 km²), approximately, of which about 53,300 mi² (138,000 km²) 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 2,197.07 ft (669.667 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1938, nonrecording gage and Oct. 7, 1938, to Sept. 30, 1942, water-stage recorder, at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft³/s (643 m³/s) June 24, 1947, gage height, 5.52 ft (1.682 m); maximum gage height, 5.89 ft (1.795 m) Mar. 5, 1952, backwater from ice; no flow for periods in each year prior to 1947 and in 1953-57, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,840 ft³/s (109 m³/s) July 29, gage height, 3.00 ft (0.914 m); maximum gage height, 3.74 ft (1.140 m) Feb. 10, backwater from ice; minimum daily discharge, 26 ft³/s (0.74 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	358	1070	1500	1200	1510	806	220	366	54	1380	48
2	650	330	1130	1440	1160	1490	854	190	282	190	1300	66
3	709	315	1180	1390	1100	1490	762	190	200	306	1470	138
4	680	325	1240	1350	1060	1720	790	162	122	608	1410	190
5	595	330	1140	1420	1060	1670	790	162	98	1410	1190	220
6	358	320	1010	1420	1160	1720	706	138	90	966	1050	318
7	290	346	1350	1440	1250	1600	664	98	78	608	1260	366
8	295	376	1300	1550	1300	1470	552	90	60	306	1240	378
9	340	358	1250	1530	1250	1380	524	98	60	190	1220	378
10	305	346	1230	1370	1100	1360	486	106	54	90	1150	538
11	315	352	1080	1390	1000	1470	498	90	54	66	692	566
12	330	364	1100	1440	1100	1190	524	84	78	54	366	524
13	325	364	1140	1370	1100	1150	566	78	138	42	270	486
14	330	382	1270	1360	1100	1030	538	78	342	36	210	438
15	330	407	1260	1400	1200	1030	552	72	330	26	210	450
16	382	470	1290	1340	1350	934	402	122	594	30	200	426
17	376	494	1270	1320	1450	918	318	402	622	48	180	414
18	370	494	1200	1400	1510	1060	330	552	474	494	162	378
19	376	568	1060	1400	1810	1050	462	1360	162	934	122	318
20	370	650	1000	1400	1880	966	450	1740	42	1150	106	282
21	518	740	1000	1360	1810	966	426	1650	122	982	90	260
22	442	750	1200	1410	1810	982	622	1380	84	664	78	240
23	526	862	1250	1430	1880	966	438	1010	66	390	98	342
24	631	862	1300	1450	1860	902	414	622	48	426	122	354
25	700	939	1340	1450	1670	870	438	538	36	330	170	486
26	559	1110	1530	1430	1580	854	378	390	36	1010	200	498
27	559	1010	1480	1430	1510	854	318	474	36	1920	162	594
28	502	1050	1500	1380	1540	886	294	664	42	3140	106	664
29	376	986	1350	1350	---	822	260	854	48	3720	78	692
30	376	962	1240	1250	---	790	240	748	42	3200	60	966
31	382	---	1350	1250	---	822	---	510	---	2140	42	---
TOTAL	13794	17220	38110	43420	38800	35922	15402	14872	4806	25530	16394	12018
MEAN	445	574	1229	1401	1386	1159	513	480	160	824	529	401
MAX	709	1110	1530	1550	1880	1720	854	1740	622	3720	1470	966
MIN	290	315	1000	1250	1000	790	240	72	36	26	42	48
AC-FT	27360	34160	75590	86120	76960	71250	30550	29500	9530	50640	32520	23840
CAL YR 1980	TOTAL	957708	MEAN	2617	MAX	13800	MIN	37	AC-FT	1900000		
WTR YR 1981	TOTAL	276288	MEAN	757	MAX	3720	MIN	26	AC-FT	548000		

PLATTE RIVER BASIN

125

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 (6 m) downstream from bridge on U.S. Highway 34, 2 mi (3 km) upstream from Eurlington Northern Inc. bridge, and 5 mi (8 km) southeast of Grand Island.

DRAINAGE AREA.--58,800 mi² (152,300 km²), approximately, of which about 54,000 mi² (139,900 km²) 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 (558.360 m) National Geodetic Vertical Datum of 1929 (Nebraska Department of Highways bench mark). Prior to Oct. 23, 1933, nonrecording gage at bridge 68 ft (20.7 m) downstream and Oct. 23, 1933, to Aug. 19, 1980, water-stage recorder at site 98 ft (29.9 m) downstream, all at same datum.

REMARKS.--Records good except those for winter period, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) June 6, 1935, gage height, 5.99 ft (1.826 m), from rating curve extended above 18,000 ft³/s (510 m³/s); maximum gage height, 6.16 ft (1.878 m) Mar. 27, 1960, backwater from ice; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,690 ft³/s (105 m³/s) July 31, gage height, 3.08 ft (0.939 m); maximum gage height, 4.00 ft (1.219 m) Feb. 10, backwater from ice; minimum daily discharge, 54 ft³/s (1.53 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	611	748	1000	1900	660	1430	1020	576	792	84	2870	299
2	606	674	700	1400	500	1490	1060	571	681	104	2390	275
3	585	507	800	1100	400	1510	1090	523	587	248	1910	279
4	681	467	900	1000	460	1690	1050	477	507	238	2400	294
5	716	442	940	1100	500	1880	1000	435	435	244	1800	290
6	732	493	1000	1060	520	1800	998	445	370	499	1750	309
7	691	507	1100	1160	500	1750	968	464	315	846	1700	460
8	606	493	1060	1100	480	1720	912	504	274	744	1500	467
9	556	507	860	960	450	1590	860	439	235	550	1300	408
10	496	535	880	900	400	1550	846	379	228	404	1350	391
11	480	535	1040	800	350	1500	832	338	217	256	1490	383
12	470	521	1160	960	470	1550	843	326	202	163	1160	465
13	453	521	1100	1160	640	1490	849	306	202	116	989	525
14	451	479	1160	1250	900	1340	819	295	199	92	858	506
15	484	467	1250	1100	1300	1200	831	265	212	77	735	461
16	551	479	1200	900	1600	1140	820	310	223	59	605	455
17	526	507	1160	980	2000	1130	756	458	247	54	524	444
18	503	677	940	1040	2500	1030	659	790	252	57	451	434
19	498	716	720	1120	2700	1030	681	926	268	79	385	420
20	493	804	660	1300	2200	1020	699	993	286	140	309	408
21	518	788	740	1160	1860	1110	716	1580	275	320	225	361
22	510	748	1000	1300	1710	1190	765	1810	238	562	189	343
23	496	748	900	1400	1680	1180	816	1570	213	678	872	364
24	516	834	800	1500	1750	1150	842	1310	185	603	665	414
25	579	967	900	1650	1750	1150	744	1100	168	498	548	498
26	646	1000	1100	1500	1590	1160	682	951	152	553	487	554
27	752	960	1300	1400	1520	1160	642	884	125	646	450	589
28	758	922	1500	1200	1440	1290	576	940	96	999	436	629
29	816	940	1700	900	---	1300	576	942	91	1920	437	667
30	748	1030	2000	800	---	1120	560	957	87	3350	379	661
31	748	---	2100	840	---	1050	---	871	---	3510	332	---
TOTAL	18276	20016	33670	35940	32630	41700	24512	22735	8362	18693	31496	13053
MEAN	590	667	1086	1159	1173	1345	817	733	279	603	1016	435
MAX	816	1030	2100	1900	2700	1880	1090	1810	792	3510	2870	667
MIN	451	442	660	800	350	1020	560	265	87	54	189	275
AC-FT	36250	39700	66780	71290	65120	82710	48620	45090	16590	37080	62470	25890
CAL YR 1980	TOTAL	947234	MEAN	2588	MAX	12600	MIN	28	AC-FT	1879000		
WIR YR 1981	TOTAL	301283	MEAN	825	MAX	3510	MIN	54	AC-FT	597600		

PLATTE RIVER BASIN

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to September 1980.

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 micromhos Feb. 3, 1980; minimum daily, 575 micromhos 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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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										
16...	1020	544	808	8.4	15.0	9.8	19	1200	2800	260
NOV										
13...	1040	518	845	8.2	6.0	11.7	23	K620	360	240
DEC										
10...	1130	999	870	8.1	.5	14.2	24	60	170	260
JAN										
08...	1100	1140	877	7.9	.5	15.1	20	K10	100	290
FEB										
04...	0950	387	1100	8.1	.5	13.1	13	K8	K38	370
MAR										
05...	1010	1980	894	8.0	2.0	13.2	8	K29	310	320
APR										
29...	1030	570	954	8.3	19.5	9.8	--	111	K180	310
MAY										
28...	1055	959	855	8.1	20.0	9.3	40	420	1500	290
JUN										
24...	1020	190	906	8.5	27.0	8.6	26	440	380	290
JUL										
23...	1010	689	790	8.5	26.0	10.1	35	K8400	2400	240
AUG										
19...	1000	394	902	8.4	22.5	8.7	54	430	70	280
SEP										
16...	1010	447	893	8.2	16.0	10.0	58	K380	160	290

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									
16...	--	69	22	--	--	--	--	200	25
NOV									
13...	54	63	21	83	2.3	11	190	220	25
DEC									
10...	60	68	22	81	2.2	11	200	220	27
JAN									
08...	100	77	24	87	2.2	10	190	240	26
FEB									
04...	140	98	31	110	2.5	12	230	330	38
MAR									
05...	149	85	26	86	2.1	9.6	170	300	32
APR									
29...	130	81	27	92	2.3	13	180	280	32
MAY									
28...	110	77	24	77	2.0	5.1	180	230	26
JUN									
24...	140	72	26	86	2.2	16	150	290	38
JUL									
23...	100	60	23	87	2.4	13	140	260	31
AUG									
19...	98	70	25	88	2.5	15	180	250	39
SEP									
16...	110	73	25	88	2.4	14	180	260	29

PLATTE RIVER BASIN

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	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)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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 16...	--	--	--	--	--	--	.30	--	.020
NOV 13...	.5	22	562	.76	786	606	.53	.53	.060
DEC 10...	.5	25	578	.79	1560	631	.75	.62	.150
JAN 08...	.5	28	610	.83	1880	637	.72	.72	.030
FEB 04...	.5	31	794	1.1	830	809	1.1	1.1	.070
MAR 05...	.5	24	671	.91	3590	763	1.2	1.2	.080
APR 29...	.6	19	654	.89	1010	747	.20	.17	.050
MAY 28...	.5	19	569	.77	1470	700	.56	.43	.070
JUN 24...	.5	21	640	.87	328	689	.02	.01	.080
JUL 23...	.5	19	578	.79	1080	783	.01	.01	.240
AUG 19...	.5	25	621	.84	661	670	4.10	.10	.110
SEP 16...	.5	23	622	.85	751	687	.23	.17	.140

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 16...	.98	1.00	1.3	.180	--	--	--	--	11
NOV 13...	1.1	1.20	1.7	.120	.050	150	20	3	15
DEC 10...	.57	.72	1.5	.090	.070	130	<10	10	8.8
JAN 08...	.83	.86	1.6	.110	.090	130	20	7	5.9
FEB 04...	.81	.88	2.0	.090	.090	140	10	6	14
MAR 05...	1.3	1.40	2.6	.250	.080	130	20	7	9.2
APR 29...	1.1	1.10	1.3	.140	.020	150	10	2	7.8
MAY 28...	1.2	1.30	1.9	.250	.060	120	20	2	5.0
JUN 24...	1.2	1.30	1.3	.140	.010	140	30	6	21
JUL 23...	1.8	2.00	2.0	.290	.020	140	<10	1	8.3
AUG 19...	1.1	1.20	1.2	.190	.030	140	<10	<1	6.1
SEP 16...	1.4	1.50	1.7	.000	.020	140	17	5	13

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 13...	1040	4	80	<1	0	3	2	.1	2	0	7
MAY 28...	1055	5	80	<1	10	3	32	.0	2	0	9

PLATTE RIVER BASIN

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 (1.9 km) south of Alda, 2.2 mi (3.5 km) upstream from old north channel of the Platte River, and 19 mi (31 km) upstream from present mouth.

DRAINAGE AREA.--628 mi² (1,627 km²).

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,897.66 ft (578.407 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records poor. Numerous small pump diversions for irrigation above station.

AVERAGE DISCHARGE.--28 years, 10.2 ft³/s (0.289 m³/s), 7,390 acre-ft/yr (9.11 hm³/yr); median of yearly mean discharges, 6.7 ft³/s (0.190 m³/s), 4,900 acre-ft/yr (6.04 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft³/s (46.2 m³/s) June 16, 1967, gage height, 12.22 ft (3.725 m); no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15 ft³/s (0.42 m³/s), probably occurred Aug. 23, gage height, 4.62 ft (1.408 m), from floodmark, no peak above base of 300 ft³/s (8.50 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.1	2.9
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.29	1.0
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.8	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.2	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.6	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.5	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	28.58	3.90
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.92	.13
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	2.9
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	57	7.7

CAL YR 1980 TOTAL 738.53 MEAN 2.02 MAX 150 MIN .00 AC-FT 1460
WTR YR 1981 TOTAL 32.48 MEAN .089 MAX 7.0 MIN .00 AC-FT 64

PLATTE RIVER BASIN

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06774000 PLATTE RIVER NEAR DUNCAN, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°22'04", long 97°29'40", in SE1/4SW1/4 sec.12, T.16 N., R.2 W., Platte County, Hydrologic Unit 10200103, on left bank 25 ft (8 m) downstream from highway bridge, 1.5 mi (2.4 km) south of Duncan, and 12 mi (19 km) upstream from Loup River.

DRAINAGE AREA.--60,900 mi² (157,700 km²), approximately, of which about 56,100 mi² (145,300 km²) 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. WSF 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 1,478.82 ft (450.744 m) 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 (11 km) downstream at different datums. Oct. 25, 1928, to Feb. 20, 1935, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 44,100 ft³/s (1,250 m³/s) June 23, 1905, gage height, 6.50 ft (1.981 m), 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, 3,890 ft³/s (110 m³/s) Aug. 1, gage height, 2.88 ft (0.878 m); maximum gage height, 3.07 ft (0.936 m) Feb. 19, backwater from ice; minimum daily discharge, 19 ft³/s (0.54 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	590	673	800	2200	900	1830	1950	548	934	45	3470	303
2	554	630	760	1500	600	1720	1810	556	894	45	3640	253
3	519	585	800	1100	500	1820	1690	559	817	50	3020	204
4	497	544	860	1000	540	1940	1570	587	697	53	2380	182
5	471	527	940	1000	600	2140	1580	514	598	125	2970	169
6	505	518	1040	1000	600	2250	1560	433	508	147	2220	153
7	542	490	1200	1100	580	2250	1410	387	435	125	2110	246
8	529	479	1200	1100	570	2230	1230	415	329	279	1830	243
9	497	452	1100	1000	560	2230	1230	407	273	652	1410	318
10	425	428	1100	920	520	2180	1210	392	247	619	1450	306
11	381	446	1200	500	450	2130	1120	359	259	426	1480	249
12	360	465	1400	1000	700	1970	1110	344	240	259	1420	216
13	353	469	1350	1100	900	1900	1060	324	222	138	1410	216
14	331	498	1400	1100	1200	1940	983	330	179	76	1200	235
15	368	497	1500	1000	1600	1780	943	330	188	50	941	252
16	422	472	1470	960	2000	1730	914	364	182	32	724	297
17	395	474	1460	940	2500	1650	847	636	177	19	566	295
18	406	497	1280	1000	3000	1620	811	1090	152	20	469	305
19	417	518	940	1100	3100	1650	776	1430	177	50	393	314
20	417	553	880	1100	3200	1600	801	1480	193	93	350	294
21	410	589	1000	1060	3060	1630	909	1330	228	70	301	269
22	413	621	1300	1120	2420	1790	996	1550	228	101	249	279
23	425	620	1100	1300	2230	1910	982	1890	222	228	331	265
24	423	671	1000	1600	2210	1940	924	1770	152	480	606	559
25	401	737	1300	1900	2180	1970	911	1550	134	567	1570	511
26	423	805	1500	2000	2220	1940	808	1320	108	609	915	404
27	519	853	1700	1950	2120	1990	697	1160	162	652	630	387
28	621	884	1900	1800	1890	2220	637	1050	86	708	525	405
29	694	905	2100	1400	---	2940	615	934	76	780	444	450
30	708	905	2300	1100	---	2710	566	948	61	1120	397	454
31	708	---	2400	1200	---	2270	---	934	---	2560	364	---
TOTAL	14724	17805	40280	38550	42950	61870	32650	25921	9158	11178	39785	9033
MEAN	475	594	1299	1244	1534	1996	1088	836	305	361	1283	301
MAX	708	905	2400	2200	3200	2940	1950	1890	934	2560	3640	559
MIN	331	428	760	500	450	1600	566	324	61	19	249	153
AC-FT	29210	35320	79900	76460	85190	122700	64760	51410	18160	22170	78910	17920
CAL YR 1980 TOTAL	1015338	MEAN	2774	MAX	14200	MIN	12	AC-FT	2014000			
WTR YR 1981 TOTAL	343904	MEAN	942	MAX	3640	MIN	19	AC-FT	682100			

PLATTE RIVER BASIN

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 current year.

WATER TEMPERATURES: November 1977 to current year.

REMARKS.--Daily water temperatures have not been published owing to questionable reliability of observations for most of the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,100 micromhos Feb. 12, 1981; minimum daily, 290 micromhos Mar. 21, 1978.

WATER TEMPERATURES: Maximum, 33.0°C July 10, 11, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,100 micromhos Feb. 12; minimum daily, 376 micromhos Aug. 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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 CAC03) (00900)
OCT										
23...	1045	421	855	8.3	10.0	1.3	10.6	K100	180	260
NOV										
20...	0845	546	884	7.8	1.0	28	14.1	2000	290	260
DEC										
18...	1045	1310	770	8.2	1.0	41	12.8	K300	K140	240
JAN										
06...	1500	996	822	8.1	1.0	7.3	13.1	K7	K30	290
FEB										
04...	1500	540	1000	8.4	.0	1.2	12.7	K7	K17	360
MAR										
04...	1600	1970	850	8.2	5.0	23	12.6	K23	K53	310
APR										
01...	0940	1970	890	8.2	10.0	18	11.0	88	120	300
MAY										
07...	1415	379	1000	8.6	16.5	5.5	10.7	K10	K72	300
JUN										
03...	1130	844	832	8.5	22.0	31	11.0	K50	240	250
JUL										
01...	0920	44	970	7.9	22.0	2.1	7.8	--	150	300
AUG										
26...	1430	943	788	8.5	25.9	15	7.9	370	280	230
SEP										
24...	1430	711	692	8.2	18.5	33	9.7	K2100	2300	190

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

DATE	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)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT										
23...	85	68	23	85	2.3	12	180	230	31	.5
NOV										
20...	70	68	22	83	2.2	11	190	210	30	.5
DEC										
18...	95	65	20	70	1.9	10	150	210	27	.4
JAN										
06...	100	75	25	92	2.4	11	190	260	31	.5
FEB										
04...	141	97	29	99	2.3	12	220	290	36	.6
MAR										
04...	130	83	26	86	2.1	8.9	180	270	32	.4
APR										
01...	120	80	25	86	2.2	11	180	280	32	.6
MAY										
07...	110	79	26	91	2.3	12	190	270	34	.6
JUN										
03...	110	62	24	83	2.3	13	140	250	34	.5
JUL										
01...	120	76	27	99	2.5	14	180	290	42	.5
AUG										
26...	71	58	21	76	2.4	12	160	200	33	.3
SEP										
24...	82	47	18	65	2.2	9.7	110	190	27	.4

PLATTE RIVER BASIN

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06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	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)	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT 23...	23	581	582	.79	660	.21	.22	.040	.040	1.1
NOV 20...	22	584	563	.79	861	.53	.53	.070	.080	1.1
DEC 18...	23	528	519	.72	1870	.68	.68	.010	.000	1.5
JAN 06...	27	638	639	.87	1720	.76	.74	.160	.140	.94
FEB 04...	29	739	730	1.0	1080	1.1	1.1	.190	.150	.81
MAR 04...	24	654	644	.89	3480	1.3	1.3	.100	.100	1.4
APR 01...	22	667	649	.91	3550	.89	.91	.070	.070	1.1
MAY 07...	19	563	646	.77	576	.13	.10	.030	.030	.97
JUN 03...	15	574	566	.78	1310	.00	.00	.080	.060	1.8
JUL 01...	25	680	682	.92	80.8	.07	.05	.060	.060	.88
AUG 26...	20	512	517	.70	1300	.15	.13	.180	.180	1.0
SEP 24...	15	460	438	.63	883	.00	.02	.050	.030	2.2

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 23...	.55	1.10	.51	.59	1.3	.81	.220	.090	10
NOV 20...	.61	1.20	.51	.69	1.7	1.2	.160	.080	7.5
DEC 18...	.72	1.50	.78	.72	2.2	1.4	.230	.090	12
JAN 06...	.53	1.10	.43	.67	1.9	1.4	.080	.100	13
FEB 04...	.35	1.00	.50	.50	2.1	1.6	.120	.110	11
MAR 04...	1.1	1.50	.30	1.2	2.8	2.5	.210	.120	18
APR 01...	.93	1.20	.20	1.0	2.1	1.9	.170	.080	13
MAY 07...	.87	1.00	.10	.90	1.1	1.0	.110	.130	7.3
JUN 03...	.53	1.90	1.3	.59	1.9	.59	.340	.030	17
JUL 01...	.62	.94	.26	.68	1.0	.73	.090	.070	4.0
AUG 26...	.32	1.20	.70	.50	1.4	.63	.220	.010	10
SEP 24...	.78	2.20	1.4	.81	2.2	.83	.200	.030	13

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	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, SUS- PENDE RECOV. (UG/L AS CR) (01031)
NOV 20...	0845	5	0	5	100	10	90	3	<1	0	0
FEB 04...	1500	6	2	4	100	0	100	0	<1	10	10
MAY 07...	1415	6	2	4	100	20	80	0	<1	20	10
AUG 26...	1430	6	2	4	100	30	70	0	<1	0	0

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)
NOV 20...	0	1	<3	3	1	2	1000	--	<10	7	3
FEB 04...	0	0	<3	5	0	6	310	--	<10	8	6
MAY 07...	10	0	<3	5	3	2	280	270	10	3	3
AUG 26...	0	2	<3	8	5	3	1100	--	<10	10	7

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
NOV 20...	4	180	170	8	.1	.1	.0	6	1	5	2
FEB 04...	2	60	40	20	.1	.1	.0	5	5	0	3
MAY 07...	0	40	40	3	.2	.2	.0	3	2	1	2
AUG 26...	3	210	210	2	.2	.2	.0	6	4	2	1

DATE	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG) (01076)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
NOV 20...	0	2	0	0	0	30	30	3	6.9	2.2
FEB 04...	0	3	0	0	0	30	0	30	4.5	--
MAY 07...	0	2	0	0	0	10	7	3	5.7	--
AUG 26...	0	1	0	0	0	10	--	<3	1.1	.7

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 20,80 0845	MAR 4,81 1600	MAY 7,81 1415	JUN 3,81 1130
TOTAL CELLS/ML	30000	14000	21000	190000
DIVERSITY: DIVISION	1.4	1.4	1.3	1.3
..CLASS	1.4	1.4	1.3	1.3
...ORDER	2.5	2.7	2.2	2.3
...FAMILY	2.6	3.2	2.6	2.8
....GENUS	2.7	4.0	3.1	3.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
...BACILLARIALES								
....NITZSCHIAEAE								
.....NITZSCHIA	4300	14	930	7	4500#	21	16000	8
...EPITHEMIALES								
....EPITHEMIAEAE								
.....EPITHEMIA	--	-	--	-	--	-	--	-
....RHOPALODIA	--	-	--	-	--	-	--	-
...EUPODISCALES								
....COSCINODISCAEAE								
.....CYCLOTELLA	10000#	33	1300	9	--	-	23000	12
....MELOSIRA	--	-	1300	9	830	4	7000	4
...STEPHANODISCUS	600	2	--	-	6300#	30	--	-
..FRAGILARIALES								
...FRAGILARIAEAE								
....ASTERIONELLA	--	-	1300	9	--	-	--	-
....DIATOMA	*	0	*	0	--	-	--	-
....FRAGILARIA	--	-	1200	9	710	3	46000#	24
....SYNEDRA	--	-	--	-	--	-	--	-
..NAVICULALES								
...CYMBELLACEAE								
....AMPHORA	300	1	*	0	--	-	--	-
....CYMBELLA	--	-	*	0	--	-	--	-
...GOMPHONEMACEAE								
....GOMPHONEMA	740	2	350	2	--	-	--	-
...NAVICULACEAE								
....NAVICULA	--	-	350	2	--	-	3900	2
..SURIRELLALES								
...SURIRELLACEAE								
....CYMATOPLEURA	--	-	*	0	--	-	--	-
....SURIRELLA	300	1	180	1	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHLOROCOCCACEAE								
.....SCHROEDERIA	--	-	--	-	--	-	1600	1
....TETRAEDRON	--	-	120	1	--	-	--	-
...COCCOMYXACEAE								
....ELAKATOTHRIX	--	-	--	-	--	-	--	-
...DICTYOSPHAERIAEAE								
....DICTYOSPHAERIUM	--	-	180	1	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	2100	10	8600	5
...OOCYSTACEAE								
....ANKISTRODESMUS	*	0	180	1	120	1	4700	2
....CHODATELLA	--	-	--	-	--	-	1600	1
....FRANCEIA	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	*	0	1500	11	480	2	--	-
....NEPHROCYTIUM	--	-	--	-	--	-	1600	1
...OOCYSTIS	--	-	--	-	240	1	3100	2
....SELENASTRUM	--	-	230	2	120	1	1600	1
....TREUBARIA	*	0	--	-	--	-	*	0
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	1900	9	6200	3
....COELASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	230	2	--	-	--	-
....GLOEOACTINIUM	--	-	2000	14	--	-	--	-
...SCENEDESMUS	2400	8	580	4	830	4	42000#	22
....TETRASTRUM	--	-	--	-	480	2	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	450	1	700	5	950	4	6200	3
CHRYSTOPHYTA								
..XANTHOPHYCEAE								
...MISCHOCOCCALES								
....SCIADACEAE								
....OPHIOCYTIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 20,80 0845		MAR 4,81 1600		MAY 7,81 1415		JUN 3,81 1130	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....AGMENELLUM	--	-	--	-	--	-	--	-
.....ANACYSTIS	6700#	22	530	4	1500	7	16000	8
...NOSTOCALES								
....NOSTOCACEAE								
.....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIALES								
....OSCILLATORIA	3700	12	700	5	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
.....EUGLENA	--	-	--	-	120	1	--	-
....TRACHELOMONAS	--	-	*	0	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...DINOKONTAE								
....PERIDINIACEAE								
.....PERIDINIUM	--	-	*	0	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUL 1,81 0920	AUG 26,81 1430	SEP 24,81 1430
TOTAL CELLS/ML	26000	140000	63000
DIVERSITY: DIVISION	1.2	1.5	1.3
..CLASS	1.2	1.5	1.3
...ORDER	1.6	1.5	1.6
...FAMILY	2.6	2.3	2.5
....GENUS	3.1	3.1	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
..BACILLARIOPHYCEAE						
...BACILLARIALES						
....NITZSCHIA						
....NITZSCHIA	290	1	900	1	1200	2
...EPITHEMIALES						
....EPITHEMIALES						
....EPITHEMIA	--	-	*	0	--	-
....RHOPALODIA	--	-	--	-	*	0
...EUPODISCALES						
....COSCINODISCACEAE						
....CYCLOTELLA	3200	12	13000	9	15000#	24
....MELOSIRA	2100	8	2100	1	--	-
....STEPHANODISCUS	--	-	--	-	--	-
..FRAGILARIALES						
...FRAGILARIALES						
....ASTERIONELLA	--	-	--	-	--	-
....DIATOMA	--	-	--	-	--	-
....FRAGILARIA	1800	7	--	-	--	-
....SYNEDRA	--	-	*	0	--	-
..NAVICULALES						
...CYMBELLACEAE						
....AMPHORA	--	-	--	-	900	1
....CYMBELLA	--	-	--	-	--	-
...GOMPHONEMACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	--	-	1200	2
..SURIRELLALES						
...SURIRELLACEAE						
....CYMATOPLEURA	--	-	--	-	--	-
....SURIRELLA	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHLOROCOCCACEAE						
....SCHROEDERIA	--	-	--	-	--	-
....TETRAEDRON	*	0	--	-	900	1
...COCCOMYXACEAE						
....ELAKATOTHRIX	--	-	--	-	600	1
...DICTYOSPHAERIACEAE						
....DICTYOSPHAERIUM	--	-	9000	6	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	2100	8	9600	7	2400	4
...MICRACTINIACEAE						
....GOLENKINIA	--	-	*	0	900	1
....MICRACTINIUM	7600#	29	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	630	2	3900	3	4500	7
....CHODATELLA	--	-	--	-	600	1
....FRANCEIA	--	-	*	0	--	-
....KIRCHNERIELLA	--	-	--	-	--	-
....NEPHROCYTIUM	--	-	--	-	--	-
....OOCYSTIS	*	0	900	1	--	-
....SELENASTRUM	--	-	2700	2	--	-
....TREUBARIA	*	0	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	1400	5	6000	4	1200	2
....COELASTRUM	--	-	2400	2	--	-
....CRUCIGENIA	--	-	4800	3	--	-
....GLOEOACTINIUM	--	-	5400	4	--	-
....SCENEDESMUS	3900#	15	17000	12	26000#	42
....TETRASTRUM	680	3	3600	3	1200	2
...VOLVOCALES						
....CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	400	2	--	-	--	-
CHRYSTOPHYTA						
..XANTHOPHYCEAE						
...MISCHOCOCCALES						
....SCIADACEAE						
....OPHIOCYTIUM	--	-	*	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUL 1,81 0920		AUG 26,81 1430		SEP 24,81 1430	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOMONADACEAE						
.....CRYPTOMONAS	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
.....AGMENELLUM	--	-	59000#	41	--	-
....ANACYSTIS	1600	6	--	-	--	-
...NOSTOCALES						
....NOSTOCACEAE						
.....ANABAENA	--	-	--	-	2700	4
...OSCILLATORIALES						
....OSCILLATORIACEAE						
.....OSCILLATORIA	--	-	--	-	3000	5
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
.....EUGLENA	--	-	--	-	--	-
....TRACHELOMONAS	--	-	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...DINOKONTAE						
....PERIDINIACEAE						
.....PERIDINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

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06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	915	861	858	701	920	990	830	937	900	960	860	961
2	916	865	868	906	1010	889	866	944	891	974	861	901
3	909	1010	862	918	1020	905	843	951	940	985	854	902
4	905	1000	865	917	1000	900	863	951	935	996	860	910
5	895	905	778	918	1010	860	858	979	940	972	376	830
6	905	909	775	807	1020	970	940	976	941	980	531	939
7	905	919	774	907	1020	895	933	980	930	960	661	878
8	898	918	772	900	1030	970	940	979	944	975	939	952
9	905	915	779	908	1050	960	932	996	1010	973	930	894
10	907	919	778	907	1070	959	938	989	1020	988	900	920
11	905	915	778	918	1080	958	950	1000	1010	998	902	828
12	915	898	778	928	1100	958	918	989	1010	1000	921	961
13	905	895	781	904	1080	960	910	988	1010	915	916	950
14	895	927	778	905	1070	823	912	983	970	995	860	939
15	885	899	777	919	810	820	915	979	970	927	869	951
16	893	898	775	908	861	969	915	930	1000	897	855	951
17	898	894	778	905	861	960	908	733	1030	890	900	958
18	855	895	781	908	830	962	865	728	1040	890	899	958
19	856	899	786	910	1020	969	858	745	1040	913	939	952
20	842	899	808	911	820	957	910	866	1020	895	920	951
21	862	894	800	908	870	833	860	877	1020	995	930	949
22	864	898	799	908	866	962	912	859	1020	930	870	956
23	865	889	805	919	1020	891	860	927	1040	890	920	951
24	864	884	808	859	1010	908	910	838	1050	912	917	750
25	865	885	800	905	1000	825	920	892	1020	915	918	958
26	869	885	803	932	1030	823	940	893	1020	902	788	957
27	866	889	805	930	1010	823	940	892	980	790	930	917
28	862	889	809	925	1020	819	920	865	977	850	911	920
29	865	879	807	929	---	822	945	845	975	842	941	920
30	865	885	819	925	---	824	942	847	980	783	950	920
31	863	---	819	939	---	822	---	857	---	820	990	---

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 .002 MM (70337)	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)
OCT 23...	1045	421	10.0	91	103	--	--	76	81	95	98	100
NOV 20...	0845	546	1.0	198	292	--	--	87	89	99	100	--
DEC 18...	1045	1310	1.0	186	658	56	57	87	89	94	100	--
JAN 06...	1500	996	1.0	46	124	--	--	63	86	95	100	--
FEB 04...	1500	540	.0	69	101	--	--	68	92	100	--	--
MAR 04...	1600	1970	5.0	118	628	--	--	43	50	75	93	100
APR 01...	0940	1970	10.0	78	415	--	--	44	46	70	100	--
MAY 07...	1415	379	16.5	98	100	--	--	88	97	100	--	--
JUN 03...	1130	844	22.0	172	392	--	--	83	88	96	100	--
AUG 26...	1430	943	25.9	86	219	--	--	96	97	100	--	--
SEP 24...	1430	711	18.5	176	338	--	--	69	89	100	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)
OCT 23...	1045	421	10	0	5	31	71	83	94	100
NOV 20...	0845	546	7	0	2	19	64	84	97	100
DEC 18...	1045	1310	5	0	5	25	77	94	99	100
JAN 06...	1500	996	4	0	15	49	83	92	98	--
FEB 04...	1500	540	5	0	7	35	79	90	97	100
APR 01...	0940	1970	3	0	2	12	55	80	97	--
MAY 07...	1415	379	8	0	8	39	70	84	95	100
AUG 26...	1430	943	7	0	16	47	75	89	98	--

PLATTE RIVER BASIN

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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 (2 km) upstream from Dismal River.

DRAINAGE AREA.--1,850 mi² (4,790 km²), approximately, of which about 80 mi² (210 km²) 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 (794.656 m) 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 (0.3 km) upstream at datum 0.03 ft (0.009 m) higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--36 years, 400 ft³/s (11.33 m³/s), 289,800 acre-ft/yr (0.357 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) Apr. 20, 1971, gage height, 2.50 ft (0.762 m); maximum gage height, 7.02 ft (2.140 m) Mar. 31, 1949, backwater from ice, site and datum then in use; minimum daily discharge, 100 ft³/s (2.83 m³/s) Dec. 5, 6, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 679 ft³/s (19.2 m³/s) May 18, gage height, 1.95 ft (0.594 m); maximum gage height, 5.06 ft (1.542 m) Feb. 9, ice jam; minimum daily discharge, 300 ft³/s (8.50 m³/s) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	381	390	400	466	340	421	425	417	427	378	430	395
2	382	395	350	445	330	409	428	421	424	411	474	384
3	377	402	370	420	350	418	457	433	415	437	418	378
4	369	388	390	400	360	408	447	447	415	394	406	382
5	371	389	420	420	390	398	427	429	412	392	451	374
6	374	397	410	430	420	395	422	421	407	385	423	385
7	373	406	390	440	400	410	433	457	403	378	406	387
8	374	412	380	430	380	411	452	469	397	377	407	376
9	381	404	370	420	350	401	440	442	399	374	407	365
10	384	397	410	370	320	408	429	423	412	364	400	367
11	369	408	418	390	300	393	435	424	403	368	394	371
12	374	408	442	400	330	400	453	442	404	366	386	371
13	380	426	458	416	380	402	453	441	409	365	386	369
14	385	417	450	418	430	406	444	435	519	363	390	373
15	400	421	446	403	450	411	432	424	438	360	406	385
16	459	416	450	370	500	391	433	446	412	374	442	387
17	431	407	463	360	470	395	434	501	398	403	423	374
18	399	409	450	390	419	408	434	623	399	399	409	372
19	389	407	430	401	444	383	449	535	397	424	399	368
20	392	421	400	422	462	389	457	491	391	414	389	377
21	388	416	450	427	487	390	460	511	397	397	381	373
22	392	421	490	406	478	374	460	531	396	391	376	376
23	413	427	450	398	463	386	442	505	388	442	380	369
24	377	412	430	415	468	395	433	477	385	452	378	372
25	372	381	410	452	462	401	432	452	378	443	445	380
26	388	395	434	424	467	395	426	453	378	477	406	426
27	402	410	461	408	447	402	425	452	398	460	378	394
28	380	425	468	421	424	474	419	446	393	431	374	390
29	378	416	464	400	---	540	432	443	390	416	373	391
30	383	436	468	380	---	449	429	431	376	404	372	399
31	388	---	464	360	---	444	---	428	---	413	383	---
TOTAL	12005	12259	13286	12702	11521	12707	13142	14250	12160	12452	12492	11410
MEAN	387	409	429	410	411	410	438	460	405	402	403	380
MAX	459	436	490	466	500	540	460	623	519	477	474	426
MIN	369	381	350	360	300	374	419	417	376	360	372	365
AC-FT	23810	24320	26350	25190	22850	25200	26070	28260	24120	24700	24780	22630
CAL YR 1980	TOTAL	152095	MEAN	416	MAX	699	MIN	240	AC-FT	301700		
WTR YR 1981	TOTAL	150386	MEAN	412	MAX	623	MIN	300	AC-FT	298300		

PLATTE RIVER BASIN

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 (4,700 tonnes) Mar. 31, 1952; minimum daily, 21 tons (19 tonnes) Jan. 23, 1952.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 30.5°C July 11, 12; minimum 0.5°C on many days during winter period.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	13.5	11.0	6.5	5.5	.5	5.0	2.0	1.5	1.5	9.0	4.5
2	14.5	11.0	10.0	6.5	.5	.5	5.0	1.0	1.5	1.5	9.5	5.0
3	15.5	9.0	10.0	6.5	.5	.5	4.0	1.0	1.5	1.5	8.0	6.0
4	18.0	10.5	9.0	4.5	4.0	.5	3.0	1.0	1.5	1.5	8.0	5.5
5	17.0	12.0	11.5	7.0	4.0	1.5	4.5	.5	1.5	1.0	9.5	3.5
6	19.0	12.0	11.0	8.0	1.5	.5	4.0	2.0	1.0	1.0	7.0	4.0
7	19.0	13.5	12.0	8.0	1.0	.5	4.0	.5	1.0	1.0	8.5	3.0
8	18.5	12.0	11.5	8.5	1.0	.5	4.5	.5	1.0	1.0	8.5	3.5
9	18.5	13.0	10.0	6.0	.5	.5	3.5	1.5	1.0	1.0	10.0	4.0
10	13.5	10.0	8.5	5.5	2.0	.5	4.0	.5	1.5	1.5	10.0	5.0
11	14.0	8.0	7.0	6.0	5.5	2.0	3.5	.5	1.5	1.5	12.0	4.5
12	13.5	8.0	9.5	7.0	6.0	3.5	4.0	.5	1.5	1.5	13.5	6.5
13	15.0	10.5	8.5	4.0	5.5	3.5	4.5	2.0	1.5	1.5	13.5	6.5
14	14.5	10.0	4.5	3.5	5.0	2.0	4.0	1.0	1.5	1.5	13.0	6.5
15	11.5	9.0	5.5	3.0	6.5	3.5	3.0	1.0	1.5	1.5	12.0	7.0
16	10.5	8.5	5.0	2.0	8.5	6.0	1.0	.5	2.0	1.5	13.5	6.0
17	8.5	6.0	5.5	2.0	9.0	5.5	1.0	.5	9.0	2.0	11.5	6.0
18	10.5	6.0	6.0	2.0	6.5	.5	3.0	.5	10.0	5.5	9.5	3.5
19	13.0	7.0	6.5	3.0	.5	.5	5.0	1.5	10.0	5.5	11.0	4.0
20	14.0	8.5	5.5	3.0	.5	.5	4.5	1.5	11.0	6.0	8.5	5.5
21	14.0	9.0	6.0	2.0	.5	.5	5.0	1.0	8.5	5.5	6.5	5.0
22	13.5	9.5	6.5	3.0	.5	.5	6.5	1.5	8.0	3.5	12.0	5.0
23	10.5	4.0	5.5	3.5	1.0	.5	8.0	3.5	9.5	3.5	13.5	7.0
24	8.0	2.0	4.5	3.0	.5	.5	8.0	4.5	11.5	5.0	14.0	8.5
25	8.5	3.5	4.5	1.0	.5	.5	6.5	3.5	11.0	6.0	14.5	8.5
26	6.0	3.0	4.0	2.0	3.5	.5	4.0	1.0	8.5	6.0	14.5	9.0
27	4.0	2.0	4.0	1.0	8.0	3.5	5.5	1.5	10.0	6.0	15.0	9.0
28	6.0	1.0	5.5	2.0	8.0	6.0	4.5	1.5	9.5	4.0	14.0	10.0
29	8.5	3.5	5.0	1.0	6.5	3.5	3.0	1.5	---	---	10.0	8.0
30	9.5	4.5	6.5	4.0	6.0	4.0	1.5	1.5	---	---	14.5	6.5
31	11.0	6.0	---	---	6.5	4.0	1.5	1.5	---	---	11.5	8.5
MONTH	19.0	1.0	12.0	1.0	9.0	.5	8.0	.5	11.5	1.0	15.0	3.0

PLATTE RIVER BASIN

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06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	6.5	19.0	11.0	24.5	17.0	25.0	20.0	25.5	20.5	21.5	18.5
2	15.5	9.0	20.5	12.0	23.5	17.0	22.0	20.5	27.0	19.0	21.5	14.5
3	14.0	7.0	18.0	14.0	24.0	16.0	25.0	19.5	28.0	21.0	20.5	16.5
4	10.5	5.0	15.0	11.5	23.0	18.0	28.5	20.0	28.0	21.0	21.0	14.5
5	12.0	5.5	18.5	10.0	25.5	17.0	28.5	21.0	27.0	19.0	23.5	18.0
6	15.0	6.0	15.0	11.5	24.5	18.0	28.0	21.0	26.5	21.0	20.5	18.0
7	15.0	9.0	11.5	9.5	25.0	18.5	26.5	20.0	23.5	19.0	21.0	14.5
8	13.0	10.0	15.5	9.0	26.0	19.5	23.5	20.0	22.0	18.0	23.0	14.5
9	15.0	8.5	13.5	9.0	23.5	19.5	25.5	16.5	21.0	17.0	22.0	16.0
10	15.5	10.0	16.5	8.0	22.0	16.5	27.0	20.5	24.0	16.5	23.5	16.0
11	14.5	10.0	16.0	10.0	24.0	17.0	30.5	21.0	25.5	18.0	22.0	16.5
12	19.0	11.0	19.0	11.5	24.5	19.5	30.5	23.5	24.0	19.0	22.0	15.5
13	15.5	8.0	15.5	11.5	28.0	20.0	29.0	23.5	24.0	19.5	23.5	17.0
14	14.5	6.0	19.5	9.5	23.5	18.5	30.0	22.0	25.0	19.5	21.0	16.0
15	11.0	6.5	18.5	12.0	19.0	16.0	30.0	23.0	25.0	20.0	18.0	14.5
16	17.0	8.0	15.0	12.0	21.0	13.0	25.5	21.5	23.0	19.0	16.5	11.5
17	19.0	12.0	12.0	11.5	23.5	14.5	29.0	19.5	20.0	17.0	17.0	10.5
18	16.5	12.0	13.0	10.5	20.0	15.5	26.0	22.0	23.0	16.5	19.0	11.5
19	14.5	11.5	18.0	10.0	23.0	14.5	28.5	19.5	24.5	18.0	20.5	13.5
20	11.5	10.0	16.5	11.5	25.0	18.5	29.0	21.0	25.5	19.0	19.5	14.5
21	16.0	10.0	16.5	11.0	25.0	18.5	25.5	20.0	25.0	19.0	19.5	14.0
22	14.0	11.0	19.0	12.0	25.5	18.0	26.5	20.0	21.5	19.0	20.0	14.0
23	16.5	9.0	17.0	14.0	27.0	19.0	28.0	20.5	23.5	18.0	20.5	15.0
24	19.0	11.0	19.0	11.0	27.0	19.5	25.5	20.5	23.5	18.0	20.0	15.5
25	20.5	13.5	22.0	13.5	27.0	19.5	24.0	19.5	24.5	19.0	20.5	16.0
26	21.0	15.5	21.0	16.5	25.0	19.5	20.0	16.0	22.0	19.0	19.0	14.5
27	21.5	15.0	20.5	16.5	29.0	20.0	16.5	15.0	21.0	17.0	18.0	12.0
28	19.5	14.0	22.0	17.0	28.0	23.0	17.0	15.5	22.0	17.0	18.0	12.0
29	18.5	14.5	20.5	16.5	26.5	20.0	23.5	17.0	24.5	17.0	19.5	14.5
30	17.0	13.0	22.0	14.5	25.5	19.5	26.5	20.5	25.5	20.0	17.0	13.0
31	---	---	22.0	15.5	---	---	29.0	21.0	23.5	16.5	---	---
MONTH	21.5	5.0	22.0	8.0	29.0	13.0	30.5	15.0	28.0	16.5	23.5	10.5

PLATTE RIVER BASIN

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 (427 m) downstream from bridge on U.S. Highway 83, 2 mi (3 km) upstream from boundary of Nebraska National Forest (Bessey Division), and 14 mi (23 km) south of Thedford.

DRAINAGE AREA.--960 mi² (2,490 km²), approximately, of which about 30 mi² (78 km²) 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 (853.480 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--15 years, 192 ft³/s (5.437 m³/s), 139,100 acre-ft/yr (0.172 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335 ft³/s (9.49 m³/s) July 28, 1967, gage height, 2.73 ft (0.832 m); maximum gage height, 2.94 ft (0.896 m) Dec. 31, 1968, backwater from ice; minimum daily discharge, 156 ft³/s (4.42 m³/s) Jan. 27, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 270 ft³/s (7.65 m³/s) Aug. 24, gage height, 2.01 ft (0.613 m); minimum daily, 163 ft³/s (4.62 m³/s) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	193	206	190	178	193	201	198	202	197	203	193
2	188	191	195	188	172	193	202	197	202	203	202	195
3	185	195	191	186	164	195	202	199	199	204	194	198
4	186	191	200	190	181	194	196	203	202	200	195	197
5	188	196	205	186	182	194	197	200	199	197	192	200
6	188	197	198	188	183	194	193	197	199	198	188	204
7	192	198	192	183	195	193	199	201	202	195	189	198
8	189	200	191	181	184	195	203	202	201	194	187	198
9	191	200	191	186	172	196	197	196	202	192	186	198
10	189	201	190	188	168	194	201	191	200	194	189	201
11	183	197	194	184	163	190	201	192	201	193	189	199
12	187	202	200	186	176	192	204	200	203	193	186	198
13	189	203	196	187	177	190	204	199	205	194	191	198
14	190	202	195	185	190	198	197	193	221	192	191	198
15	193	200	192	186	201	193	198	195	205	193	191	196
16	205	201	198	184	201	189	201	198	195	200	193	196
17	194	205	199	182	203	192	202	214	196	202	211	192
18	186	201	197	180	197	186	203	245	196	204	201	193
19	188	208	187	190	196	187	201	212	197	203	194	197
20	188	200	175	188	198	192	204	220	196	195	191	198
21	189	203	178	183	199	185	202	213	204	192	191	195
22	191	202	185	183	193	190	204	213	197	195	190	196
23	189	205	194	193	194	190	199	201	196	208	190	200
24	185	201	189	190	197	192	199	197	196	206	204	196
25	185	202	181	186	197	195	202	199	197	211	201	199
26	185	205	190	184	196	193	202	201	206	209	200	222
27	190	206	194	181	195	194	201	201	202	199	195	200
28	186	204	200	186	195	208	201	203	201	194	193	197
29	182	207	191	190	---	221	199	206	202	192	196	198
30	188	204	194	187	---	203	198	205	197	193	196	194
31	191	---	192	183	---	206	---	201	---	191	193	---
TOTAL	5845	6020	5980	5764	5247	6027	6013	6292	6021	6133	6012	5944
MEAN	189	201	193	186	187	194	200	203	201	198	194	198
MAX	205	208	206	193	203	221	204	245	221	211	211	222
MIN	182	191	175	180	163	185	193	191	195	191	186	192
AC-FT	11590	11940	11860	11430	10410	11950	11930	12480	11940	12160	11920	11790
CAL YR 1980	TOTAL	72081	MEAN	197	MAX	242	MIN	162	AC-FT	143000		
WTE YR 1981	TOTAL	71298	MEAN	195	MAX	245	MIN	163	AC-FT	141400		

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI 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)
NOV 25...	1050	207	169	8.1	5.0	11.6	K30	K48	65	.00	21	3.1
JAN 20...	1020	183	171	8.1	5.0	10.9	K15	K36	66	.00	21	3.2
MAR 17...	1050	193	176	7.5	10.0	9.6	K25	78	69	.00	22	3.3
MAY 12...	1000	201	170	7.7	13.0	9.2	200	340	68	.00	22	3.2
JUL 08...	1020	195	180	7.7	19.5	8.3	280	420	74	.00	24	3.3
SEP 02...	0955	196	173	7.7	15.5	8.5	220	390	69	.00	22	3.4

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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAR (MG/L AS CAC03) (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, 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)
NOV 25...	6.7	.4	4.4	80	4.7	.8	.2	57	157	148	.21	87.7
JAN 20...	7.7	.4	4.8	80	6.9	.9	.3	55	149	151	.20	73.6
MAR 17...	7.6	.4	4.7	75	9.0	.7	.3	54	159	149	.22	82.9
MAY 12...	6.8	.4	4.8	84	3.4	.6	.2	56	153	150	.21	83.0
JUL 08...	7.1	.4	4.9	84	2.0	.4	.2	59	156	153	.21	82.1
SEP 02...	6.9	.4	4.8	81	45.0	.8	.4	57	149	149	.20	78.9
DATE	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN, AMMONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)
NOV 25...	.63	.50	.100	.030	.53	.30	.63	.30	.33	1.3	.83	.220
JAN 20...	.59	.59	.050	.050	.65	.54	.70	.11	.59	1.3	1.2	.140
MAR 17...	.44	.43	.020	.030	.91	.25	.93	.65	.28	1.4	.71	.210
MAY 12...	.40	.41	.030	.040	--	.41	--	--	.45	--	.86	.270
JUL 08...	.38	.38	.080	.100	.84	.42	.90	.38	.52	1.3	.91	.180
SEP 02...	.29	.15	.050	.050	.81	.59	.86	.22	.64	1.2	.79	.160

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	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)
NOV 25...	1050	7	2	5	100	50	50	<1	1	<1
MAY 12...	1000	5	0	6	100	50	50	<1	0	<1

PLATTE RIVER BASIN

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHROMIUM, SUS- PENDE RECOV. (UG/L AS CR) (01031)	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOVERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)		
NOV 25...	0	0	2	<3	2	<10	1100	1100	13	8		
MAY 12...	10	10	0	<3	3	<10	1400	1400	20	0		
DATE	LEAD, SUS- PENDE RECOVERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS- SOLVED (UG/L AS LI) (01130)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOVERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELENIUM, TOTAL (UG/L AS SE) (01147)		
NOV 25...	0	10	10	20	<1	.7	.7	.0	<10	0		
MAY 12...	0	2	13	60	<1	.1	.1	.0	<10	0		
DATE	SELENIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	SILVER, SUS- PENDE RECOVERABLE (UG/L AS AG) (01076)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CYANIDE TOTAL (MG/L AS CN) (00720)		
NOV 25...	0	0	0	0	0	120	8.0	20	<3	.00		
MAY 12...	0	0	0	0	0	120	8.0	10	<3	.00		
DATE	TIME	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	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 YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM DIS- SOLVED, EXTRACTION (UG/L) (80020)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
NOV 25...	1050	<1.5	2.0	<2.2	3.0	5.5	2.3	5.1	2.2	.06	.34	5.2

PLATTE RIVER BASIN

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06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	PER- THANE TOTAL (UG/L) (39034)	PER- THANE IN BOTTOM MATERIL (UG/KG) (81886)	PCB, TOTAL (UG/L) (39516)	PCB, IN ROT- TOM MA- TERIAL (UG/KG) (39519)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL (UG/KG) (39251)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, IN ROT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL (UG/L) (39350)	CHLOR- DANE, IN ROT- TOM MA- TERIAL (UG/KG) (39351)	DDD, TOTAL (UG/L) (39360)
NOV 25...	.9	.00	.00	.00	0	.00	.0	.00	.0	.00	.0	.00
DATE	DDD, TOTAL IN ROT- TOM MA- TERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, IN ROT- TOM MA- TERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, IN ROT- TOM MA- TERIAL (UG/KG) (39373)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN TOTAL (UG/L) (39380)	DI- ELDRIN, TOTAL (UG/KG) (39383)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDO- SULFAN, IN ROT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL (UG/L) (39390)	ENDRIN, IN ROT- TOM MA- TERIAL (UG/KG) (39393)
NOV 25...	.0	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00	.0
DATE	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR, IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	METHYL PARA- THION, TOTAL (UG/L) (39600)	
NOV 25...	.00	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00	
DATE	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOXA- PHENE, TOTAL (UG/KG) (39403)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2, 4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL (UG/L) (39755)	MIREX, IN BOT- TOM MA- TERIAL (UG/KG) (39758)	SILVEX, TOTAL (UG/L) (39760)	
NOV 25...	.00	.00	0	.0	.00	.00	.00	.00	.00	.0	.00	

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 (30 m) downstream from bridge on State Highway 2 at southeast corner of Dunning and 1 mi (2 km) upstream from mouth.

DRAINAGE AREA.--2,040 mi² (5,280 km²), approximately, of which about 45 mi² (120 km²) 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 (794.40 m) National Geodetic Vertical Datum of 1929. Mar. 1 to June 30, 1932, nonrecording gage at site 0.2 mi (0.3 km) upstream at datum 0.5 ft (0.15 m) lower. Sept. 13, 1945, to Apr. 19, 1956, nonrecording gage on bridge 100 ft (30 m) upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--36 years (1945-81), 322 ft³/s (9.119 m³/s), 233,300 acre-ft/yr (0.288 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s (33.1 m³/s) Aug. 25, 1977, gage height, 2.06 ft (0.628 m); maximum gage height observed, 5.21 ft (1.588 m) Jan. 19, 1947, backwater from ice; minimum daily discharge, 100 ft³/s (2.83 m³/s) Jan. 25, 1950, Jan. 9, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 627 ft³/s (17.8 m³/s) May 18, gage height, 1.31 ft (0.399 m); maximum gage height, 3.26 ft (0.994 m) Feb. 14, backwater from ice; minimum daily discharge, 230 ft³/s (6.51 m³/s) Feb. 2, 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	309	321	320	336	240	324	330	328	343	298	341	281
2	296	329	270	309	230	326	335	340	341	357	399	286
3	296	320	290	306	250	326	348	356	331	339	335	289
4	315	304	319	292	260	334	325	345	332	328	323	290
5	320	320	341	311	290	310	311	337	350	321	386	292
6	325	336	321	309	310	325	315	346	340	314	320	301
7	325	333	297	306	300	318	322	364	320	302	305	301
8	335	341	280	302	280	314	334	362	310	305	322	290
9	330	325	300	304	260	310	329	345	310	289	310	299
10	310	315	320	309	230	320	328	321	320	297	306	294
11	300	313	349	308	230	321	338	331	310	297	307	297
12	315	330	359	315	260	343	337	351	310	303	303	291
13	320	321	358	321	290	341	328	348	320	293	317	294
14	320	300	355	317	320	343	292	331	380	292	321	292
15	335	310	355	312	330	344	310	341	335	296	316	296
16	392	310	378	287	370	339	313	355	289	318	358	289
17	340	303	372	278	350	352	327	413	290	327	363	296
18	315	310	350	277	360	309	332	572	295	332	360	297
19	320	305	280	309	384	303	342	424	295	331	324	311
20	330	315	270	303	381	321	335	383	300	332	317	320
21	325	315	310	299	360	323	336	396	322	301	307	310
22	340	330	340	316	326	304	350	391	313	301	304	303
23	320	325	302	324	325	331	329	381	305	344	306	309
24	295	320	284	344	340	339	338	344	294	338	308	311
25	305	320	270	343	342	334	337	347	294	357	417	322
26	305	325	280	309	336	337	336	351	305	375	330	385
27	315	315	300	300	331	346	343	363	335	355	306	341
28	290	315	333	289	321	411	338	355	316	331	303	319
29	295	320	319	285	---	438	334	358	304	330	309	331
30	291	335	325	270	---	364	326	350	299	322	310	323
31	302	---	331	250	---	350	---	344	---	317	300	---
TOTAL	9831	9581	9878	9440	8606	10400	9898	11273	9508	9942	10133	9160
MEAN	317	319	319	305	307	335	330	364	317	321	327	305
MAX	392	341	378	344	384	438	350	572	380	375	417	385
MIN	290	300	270	250	230	303	292	321	289	289	300	281
AC-FT	19500	19000	19590	18720	17070	20630	19630	22360	18860	19720	20100	18170
CAL YR 1980	TOTAL	118420	MEAN	324	MAX	466	MIN	210	AC-FT	234900		
WTE YR 1981	TOTAL	117650	MEAN	322	MAX	572	MIN	230	AC-FT	233400		

PLATTE RIVER BASIN

147

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 (24 m) downstream from bridge on State Highway 70 at southwest edge of Arcadia.

DRAINAGE AREA.--5,040 mi² (13,100 km²), approximately, of which about 820 mi² (2,120 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1937 to current year.

REVISED RECORDS.--WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,146.30 ft (654.192 m) 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 (0.375 m) lower.

REMARKS.--Records fair except those for winter period, which are 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 (13 km) above station.

AVERAGE DISCHARGE.--19 years (1962-81), 648 ft³/s (18.35 m³/s), 469,500 acre-ft/yr (0.579 km³/yr) since diversion to Farwell Irrigation District canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 18,500 ft³/s (524 m³/s) June 22, 1947, gage height, 6.24 ft (1.902 m); maximum discharge computed, 9,700 ft³/s (275 m³/s) May 27, 1945, gage height, 5.12 ft (1.561 m); maximum gage height, 6.41 ft (1.954 m) Mar. 27, 1960, backwater from ice; minimum daily discharge, 6.0 ft³/s (0.17 m³/s) July 23, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,210 ft³/s (119 m³/s) Aug. 5, gage height, 4.05 ft (1.234 m); maximum gage height, 4.77 ft (1.454 m) Feb. 16, backwater from ice; minimum daily discharge, 26 ft³/s (0.74 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	992	720	1040	250	950	759	383	445	44	119	583
2	268	930	400	940	140	970	680	337	438	68	328	583
3	278	900	740	840	130	980	618	464	395	275	275	642
4	252	814	940	740	260	1100	680	618	327	122	223	718
5	246	870	1160	660	360	1040	539	419	300	61	2580	655
6	278	915	1140	700	600	945	486	310	301	55	940	788
7	623	915	1040	920	920	840	393	370	302	40	250	892
8	830	915	880	1140	1120	744	413	609	309	37	198	759
9	900	915	780	1100	1350	730	473	617	314	37	268	730
10	952	885	700	1060	800	730	488	596	281	34	392	705
11	910	1020	780	1000	600	729	572	540	262	33	410	692
12	880	1050	940	1100	700	770	599	846	274	32	352	692
13	870	984	1020	1350	800	759	511	860	268	32	360	680
14	960	1040	1160	1040	1000	860	607	860	550	32	419	680
15	968	984	1350	1000	1200	994	391	668	655	33	384	668
16	1360	977	1300	800	1400	960	490	718	344	26	328	668
17	1060	886	1200	600	1600	875	343	1450	202	28	392	668
18	910	938	1000	620	1700	860	412	1940	198	43	442	605
19	850	842	700	740	1650	802	490	1450	136	57	400	618
20	760	856	300	900	1500	774	536	802	112	36	328	618
21	850	842	220	940	1340	860	635	505	103	76	262	642
22	880	885	240	1020	1220	960	723	515	72	88	207	692
23	860	960	280	980	1070	788	680	605	52	57	223	692
24	920	885	250	1060	1030	730	457	605	38	307	352	668
25	830	744	330	1100	1020	759	415	594	32	188	495	642
26	860	800	440	1000	940	846	392	530	40	281	517	846
27	960	870	860	900	980	744	414	539	43	376	519	832
28	1050	856	1060	800	880	1160	420	583	37	320	490	730
29	968	786	1160	700	---	1220	357	518	97	213	452	774
30	968	744	1300	600	---	977	361	489	63	168	442	692
31	1020	---	1160	390	---	744	---	445	---	122	539	---
TOTAL	24585	27000	25550	27780	26560	27200	15334	20785	6990	3321	13886	20854
MEAN	793	900	824	896	949	877	511	670	233	107	448	695
MAX	1360	1050	1350	1350	1700	1220	759	1940	655	376	2580	892
MIN	246	744	220	390	130	729	343	310	32	26	119	583
AC-FT	48760	53550	50680	55100	52680	53950	30410	41230	13860	6590	27540	41360

CAL YR 1980 TOTAL 225421 MEAN 616 MAX 2100 MIN 16 AC-FT 447100
 WTR YR 1981 TOTAL 239845 MEAN 657 MAX 2580 MIN 26 AC-FT 475700

PLATTE RIVER BASIN

06779000 MIDDLE LOUP RIVER AT ARCADIA, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
NOV 05...	1345	1050	196	7.8	13.5	74	.00	24	3.4	6.8	.3
JUN 03...	1430	384	218	8.5	27.0	83	.00	27	3.8	8.4	.4
JUL 29...	1630	213	217	8.2	23.5	90	.00	29	4.3	7.2	.3

DATE	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)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV 05...	5.8	89	6.1	.9	.3	57	160	.22	454	.58
JUN 03...	6.8	92	1.3	1.5	.3	59	165	.22	171	.25
JUL 29...	6.6	100	1.0	1.2	.5	56	167	.23	96.0	.30

FLATTE RIVER BASIN

149

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 (4 m) downstream from bridge on State Highway 2, 0.9 mi (1.4 km) southeast of Sweetwater, and 11.6 mi (18.7 km) upstream from mouth.

DRAINAGE AREA.--707 mi² (1,831 km²), of which 655 mi² (1,696 km²) 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 (613.773 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Minor irrigation developments above station.

AVERAGE DISCHARGE.--35 years, 39.2 ft³/s (1.110 m³/s), 28,400 acre-ft/yr (35.0 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 27,000 ft³/s (765 m³/s) June 22, 1947, gage height, 23.20 ft (7.071 m); maximum discharge computed, 5,600 ft³/s (159 m³/s) June 24, 1968, gage height, 20.07 ft (6.117 m); 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.--Maximum discharge, 247 ft³/s (7.00 m³/s) July 25 at 2200, gage height, 8.89 ft (2.710 m), no peak above base of 550 ft³/s (15.6 m³/s); minimum daily, 1.3 ft³/s (0.037 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	16	14	15	15	17	24	15	20	22	18	13
2	8.3	15	12	12	13	17	22	15	18	9.8	26	12
3	7.1	16	12	13	14	17	19	14	18	16	18	11
4	7.8	16	13	12	15	19	18	16	17	49	20	12
5	7.2	15	13	14	16	19	18	16	17	148	23	13
6	7.4	15	12	14	17	18	17	15	17	60	18	13
7	8.2	15	12	15	16	18	18	20	17	24	40	17
8	7.6	14	13	14	14	18	18	20	16	15	59	18
9	5.5	15	12	13	13	17	19	16	15	12	24	15
10	6.7	15	11	13	12	17	18	15	15	6.5	19	14
11	9.4	14	12	12	14	17	18	17	14	6.0	17	14
12	9.5	14	14	13	16	17	16	18	14	5.3	15	12
13	11	14	13	14	20	18	18	18	13	2.0	15	11
14	12	14	13	14	23	17	17	16	14	1.3	14	11
15	12	14	15	13	25	18	16	17	14	4.5	15	10
16	14	14	16	13	26	18	17	20	18	1.9	17	11
17	15	15	17	12	27	18	18	24	61	1.4	18	10
18	16	13	15	12	26	18	16	31	25	2.0	15	11
19	24	13	12	16	25	18	15	41	18	2.2	14	10
20	18	14	10	15	25	18	17	63	14	6.1	9.8	12
21	15	15	12	14	24	18	18	60	12	9.2	9.4	11
22	13	16	13	15	23	19	21	33	8.9	19	10	10
23	12	15	13	17	21	19	22	25	9.1	15	9.8	9.8
24	12	12	11	18	20	19	20	23	8.5	30	8.4	10
25	12	9.0	13	19	19	19	20	21	7.2	139	14	10
26	11	11	14	20	18	19	22	20	6.6	183	15	11
27	10	12	15	17	18	19	19	20	6.1	56	24	11
28	11	13	16	16	18	19	15	20	4.3	43	34	11
29	12	14	19	15	---	20	16	21	5.1	34	18	12
30	14	16	20	14	---	20	16	20	3.4	24	14	15
31	16	---	18	13	---	21	---	20	---	20	13	---
TOTAL	355.7	424.0	425	447	533	566	548	710	446.2	967.2	584.4	360.8
MEAN	11.5	14.1	13.7	14.4	19.0	18.3	18.3	22.9	14.9	31.2	18.9	12.0
MAX	24	16	20	20	27	21	24	63	61	183	59	18
MIN	5.5	9.0	10	12	12	17	15	14	3.4	1.3	8.4	9.8
AC-FT	706	841	843	887	1060	1120	1090	1410	885	1920	1160	716

CAL YR 1980 TOTAL 6844.13 MEAN 18.7 MAX 100 MIN .14 AC-FT 13580
WTR YR 1981 TOTAL 6367.30 MEAN 17.4 MAX 183 MIN 1.3 AC-FT 12630

PLATTE RIVER BASIN

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
02...	1430	7.3	566	8.1	13.5	9.7	23	1300	3100	290	91
NOV											
26...	1450	17	625	8.0	.5	14.3	34	K15	360	280	88
DEC											
29...	1330	19	592	7.6	.5	12.3	17	K37	240	290	92
JAN											
20...	1230	18	658	7.7	.5	11.5	45	39	200	320	100
FEB											
18...	1140	25	523	7.8	1.5	12.3	17	630	760	240	78
MAR											
25...	1400	19	541	8.5	13.0	15.3	22	K22	96	280	88
APR											
16...	1450	17	582	8.3	18.0	10.9	99	K31	170	310	96
MAY											
14...	1350	15	548	8.1	14.5	9.3	19	K3400	1200	280	89
JUN											
10...	1410	15	587	7.9	23.5	6.5	60	3400	4900	290	92
JUL											
09...	1450	14	482	7.9	25.0	6.8	18	K7300	6700	220	68
AUG											
12...	1400	15	483	7.9	23.5	6.9	57	--	4500	210	67
SEP											
03...	1410	12	518	8.1	18.5	8.0	44	2300	8800	270	83

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
02...	15	21	7.6	492	.79	.030	.89	.92	1.7	.000	23
NOV											
26...	15	23	13	418	.61	.040	.75	.79	1.4	.360	17
DEC											
29...	14	--	13	403	.93	.110	2.3	2.40	3.3	.350	6.6
JAN											
20...	16	28	2.7	446	1.0	.130	.64	.77	1.8	.400	2.4
FEB											
18...	12	25	12	361	1.1	.270	.62	.89	2.0	.510	5.2
MAR											
25...	14	26	11	397	.00	.040	.26	.30	.30	.470	11
APR											
16...	16	24	11	442	.02	.070	1.0	1.10	1.1	.640	15
MAY											
14...	14	24	7.9	573	1.1	.230	2.2	2.40	3.5	.770	11
JUN											
10...	15	19	11	772	1.6	.290	2.6	2.90	4.5	1.90	42
JUL											
09...	11	2.2	9.0	804	2.0	.100	2.7	2.80	4.8	.930	22
AUG											
12...	11	8.0	36	699	1.1	.540	2.1	2.60	3.7	1.10	19
SEP											
03...	14	45.0	7.7	534	.96	.120	1.7	1.80	2.8	.870	12

PLATTE RIVER BASIN

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06783500 MUD CREEK NEAR SWEETWATER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 26...	1450	.00	18	.5	8.9	300	.3	44	393
FEB 18...	1140	4.0	16	.4	9.3	240	.2	40	342
MAY 14...	1350	10	15	.4	12	270	.2	49	378
AUG 12...	1400	33	11	.3	18	180	.2	41	305

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 26...	.53	18.0	.61	.350	5	200	90	<1	0
FEB 18...	.27	13.2	1.1	.450	--	--	40	--	--
MAY 14...	.51	15.3	1.1	.580	6	300	70	<1	0
AUG 12...	.41	12.4	1.1	.690	--	--	70	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 26...	1	20	0	70	.0	2	0	9
FEB 18...	--	20	--	90	--	--	--	--
MAY 14...	5	20	2	50	.1	2	0	70
AUG 12...	--	32	--	2	--	--	--	--

PLATTE RIVER BASIN

06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE

LOCATION (REVISED).--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 (2 m) downstream and 30 ft (9 m) shoreward from right downstream corner of county highway bridge, 0.6 mi (1.0 km) northeast of St. Michael, and 3.4 mi (5.5 km) upstream from Sweet Creek.

DRAINAGE AREA.--2,350 mi² (6,090 km²), approximately, of which about 1,610 mi² (4,170 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WDR NE-74: Drainage area.

GAGE (REVISED).--Water-stage recorder. Datum of gage is 1,921.26 ft (585.600 m) 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 (0.610 m) 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 (180 m) upstream at present datum. Sept. 8, 1960, to June 24, 1968, water-stage recorder at site 100 ft (30 m) 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 (12 m) upstream at present datum. May 20 to July 16, 1981, water-stage recorder at site 70 ft (21 m) upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor. Minor irrigation developments above station.

AVERAGE DISCHARGE.--38 years, 238 ft³/s (6.740 m³/s), 172,400 acre-ft/yr (0.213 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 50,000 ft³/s (1,420 m³/s) June 22, 1947, gage height, 12.0 ft (3.66 m), present datum, from graph based on gage readings; maximum discharge computed, 27,500 ft³/s (779 m³/s) June 24, 1968, gage height, 11.00 ft (3.353 m); no flow Aug. 5-8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 882 ft³/s (25.0 m³/s) July 27, gage height, 5.03 ft (1.533 m); maximum gage height, 5.32 ft (1.622 m) Dec. 13, backwater from ice; minimum daily discharge, 41 ft³/s (1.16 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	131	150	160	76	197	190	145	187	154	271	132
2	80	134	90	145	82	201	180	139	181	133	343	112
3	81	137	100	135	100	201	170	139	176	171	326	98
4	81	136	125	130	110	224	190	153	170	195	295	101
5	85	135	120	116	125	254	200	150	160	416	268	102
6	90	135	112	120	135	236	180	152	151	433	257	107
7	91	135	110	125	150	229	190	147	145	216	237	156
8	90	135	104	140	160	218	180	162	145	123	294	138
9	96	135	100	135	170	213	175	184	134	92	236	129
10	104	135	106	130	155	209	190	171	136	79	180	122
11	114	124	116	120	140	206	190	160	125	66	153	118
12	126	128	122	112	160	207	180	162	122	58	133	94
13	133	136	118	116	170	201	200	164	116	47	163	88
14	140	140	130	125	180	194	180	175	120	45	146	85
15	154	145	140	130	200	189	230	165	135	52	139	84
16	162	148	135	110	225	187	164	172	124	51	144	90
17	154	158	150	100	250	185	157	254	149	47	143	90
18	173	160	145	90	260	178	156	406	201	41	142	95
19	186	157	120	104	250	176	167	629	143	89	133	96
20	204	155	106	110	240	168	171	445	118	126	124	97
21	183	161	120	116	221	175	172	438	113	152	110	94
22	182	150	135	104	259	199	229	389	108	138	101	90
23	130	140	145	100	254	196	241	329	97	137	121	94
24	112	130	130	106	184	198	226	306	85	161	120	95
25	109	140	135	120	201	192	209	290	74	260	141	102
26	109	145	135	116	194	180	197	264	76	634	136	106
27	127	145	140	110	199	180	185	261	70	711	472	109
28	136	145	140	106	204	190	169	273	65	493	385	112
29	141	155	145	100	---	220	158	258	75	428	322	115
30	140	160	150	94	---	210	147	228	72	332	224	111
31	139	---	155	86	---	210	---	200	---	292	160	---
TOTAL	3932	4270	3929	3611	5054	6223	5573	7510	3773	6372	6419	3162
MEAN	127	142	127	116	181	201	186	242	126	206	207	105
MAX	204	161	155	160	260	254	241	629	201	711	472	156
MIN	80	124	90	86	76	168	147	139	65	41	101	84
AC-FT	7800	8470	7790	7160	10020	12340	11050	14900	7480	12640	12730	6270
CAL YR 1980 TOTAL	58320.62			MEAN 159	MAX 560	MIN .00	AC-FT 115700					
WTR YR 1981 TOTAL	59828.00			MEAN 164	MAX 711	MIN 41	AC-FT 118700					

PLATTE RIVER BASIN

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 (612,000 tonnes) June 22, 1947; minimum daily, 6.1 tons (5.5 tonnes) Dec. 30, 31, 1951.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT						
30...	0940	138	365	7.9	3.5	13.4
NOV						
26...	1150	147	394	8.0	.5	14.0
DEC						
24...	1125	126	508	7.6	.5	12.7
JAN						
20...	1025	101	424	7.7	.5	13.3
FEB						
24...	1345	184	379	7.9	9.5	11.5
MAR						
25...	1020	188	383	8.2	12.5	10.8
APR						
16...	1225	165	394	8.3	17.0	11.0
MAY						
14...	1020	177	372	8.2	13.0	10.7
JUN						
10...	1030	139	376	8.4	23.5	9.2
JUL						
09...	1050	95	338	8.8	24.0	10.1
AUG						
12...	1010	132	356	8.4	23.5	8.8
SEP						
30...	1355	112	377	8.4	18.5	9.5

DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS DIS- SOLVED (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)
FEB											
24...	1345	20	180	.00	58	8.6	13	.4	7.8	180	21
AUG											
12...	1010	100	160	.00	51	7.5	10	.4	11	170	3.0

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)
FEB											
24...	4.1	.3	47	272	.37	135	.93	.200	20	40	10
AUG											
12...	3.8	.3	48	237	.32	84.5	.00	.130	40	22	3

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 (8 km) northeast of Loup City.

ELEVATION AND CONTENTS RECORDS

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 (80.4 hm³) between elevations 2,118.5 ft (645.72 m), sill of canal outlet works, and 2,162.3 ft (659.07 m), crest of spillway. Dead and inactive storage, 3,839 acre-ft (4.73 hm³) below elevation 2,118.5 ft (645.72 m). Figures given herein represent total contents. Water 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 (86.6 hm³) June 22, 1975, elevation, 2,162.7 ft (659.19 m); minimum observed since appreciable storage was attained, 9,450 acre-ft (11.7 hm³) Aug. 2, 1980, elevation, 2,127.7 ft (648.52 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 69,360 acre-ft (85.5 hm³) May 18-20, elevation, 2,162.4 ft (659.10 m); minimum observed, 40,120 acre-ft (49.5 hm³) July 22, elevation, 2,150.4 ft (655.44 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	2,154.6	49,190	-
Oct.	31	2,156.5	53,700	+4,510
Nov.	30	2,155.7	51,770	-1,930
Dec.	31	2,155.0	50,110	-1,660
CAL YR 1980		-	-	+6,690
Jan.	31	2,154.4	48,730	-1,380
Feb.	28	2,153.8	47,370	1,360
Mar.	31	2,153.5	46,700	-670
Apr.	30	2,160.1	62,940	+16,240
May	31	2,162.3	69,080	+6,140
June	30	2,160.4	66,530	-2,550
July	31	2,153.9	47,590	-18,940
Aug.	31	2,158.1	57,690	+10,100
Sept.	30	2,157.1	55,170	-2,520
WTR YR 1981		-	-	+5,980

PLATTE RIVER BASIN

06784200 SHERMAN RESERVOIR NEAR LOUP CITY, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
NOV 05...	1430	200	8.0	12.0	78	.00	25	3.7	6.9	.3
JUN 03...	1645	226	8.6	21.0	91	.00	29	4.5	8.4	.4
JUL 29...	1500	197	8.0	22.5	81	.00	26	3.9	7.0	.4

DATE	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)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV 05...	6.9	95	6.2	1.2	.3	49	156	.21	.01
JUN 03...	6.6	110	2.3	1.1	.3	49	168	.23	.05
JUL 29...	6.7	96	1.0	.9	.5	52	156	.21	.12

PLATTE RIVER BASIN

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 (8 m) downstream from bridge on State Highway 11, 2.8 mi (4.5 km) north of Dannebrog, and 10 mi (16 km) upstream from mouth.

DRAINAGE AREA.--66.2 mi² (171.5 km²).

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 (570.083 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records good except those for winter period, which are poor. Low flow includes return water from Farwell Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft³/s (75.9 m³/s) June 14, 1967, gage height, 19.21 ft (5.855 m); no flow May 17-20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 228 ft³/s (6.46 m³/s) July 23, gage height, 9.01 ft (2.746 m); minimum daily, 3.1 ft³/s (0.088 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	6.8	5.6	5.6	4.8	7.0	7.3	4.8	6.9	13	17	13
2	3.1	6.2	5.0	5.2	4.5	6.6	6.5	4.7	6.6	13	81	13
3	3.3	5.9	5.6	4.7	5.3	7.0	6.6	5.0	6.5	28	48	13
4	3.5	5.3	5.5	4.9	5.0	8.2	5.5	6.1	6.2	24	20	13
5	3.7	5.1	6.1	5.2	5.4	8.5	6.8	6.7	6.0	15	56	11
6	3.8	5.1	5.7	5.6	6.0	7.8	5.9	5.4	5.6	14	87	8.8
7	3.5	5.1	5.5	5.7	5.6	7.6	5.6	5.5	5.6	16	25	30
8	3.5	5.2	5.0	5.7	5.2	7.3	5.7	5.0	5.6	16	17	20
9	3.6	5.4	5.3	5.4	4.7	7.0	6.0	4.9	4.7	17	15	12
10	3.3	5.1	4.8	5.2	4.3	6.8	5.8	4.9	5.1	15	15	8.2
11	3.7	5.3	5.4	4.7	3.8	6.7	5.5	4.6	4.7	13	14	8.0
12	3.7	6.3	5.9	5.2	4.5	6.7	5.8	4.6	3.5	14	14	6.6
13	4.2	5.6	6.0	5.6	5.6	6.9	5.4	4.2	4.5	13	16	5.8
14	4.3	5.6	5.7	5.6	6.2	6.7	5.5	4.5	4.5	13	21	6.0
15	4.2	5.4	6.2	5.2	6.6	6.6	5.5	4.9	4.0	15	14	5.9
16	5.1	5.1	7.0	4.7	7.2	6.7	5.6	5.4	4.3	13	13	5.9
17	5.2	5.3	6.7	5.2	8.2	6.3	5.9	12	3.8	15	12	5.9
18	4.5	5.4	6.2	5.6	7.9	6.3	7.1	40	3.4	20	12	5.4
19	4.0	5.0	5.6	5.6	7.2	6.2	6.3	47	3.8	24	11	5.6
20	4.2	5.9	5.2	5.5	6.7	6.0	6.3	15	3.7	21	9.8	5.7
21	4.3	5.4	6.3	5.2	6.8	6.6	6.7	12	3.6	31	8.9	5.3
22	4.2	5.6	6.1	5.4	6.7	7.5	8.3	11	3.6	58	10	4.7
23	4.6	5.6	5.4	5.9	6.6	7.1	9.6	9.9	4.0	173	14	3.3
24	4.8	5.0	5.0	6.3	6.4	6.8	6.9	7.8	4.7	62	17	3.5
25	4.5	5.2	4.8	6.5	6.6	6.9	5.4	6.4	5.8	25	21	4.6
26	4.8	5.4	5.2	5.8	7.0	7.2	5.1	6.4	7.3	27	18	3.8
27	6.3	5.7	5.6	5.6	7.4	6.7	5.7	8.0	10	39	16	3.9
28	6.7	6.1	6.3	5.6	7.3	8.9	4.9	9.8	10	46	13	4.1
29	6.1	6.4	6.2	5.4	---	17	5.1	9.3	10	24	13	4.4
30	6.4	6.2	6.1	5.0	---	11	4.8	7.5	13	20	13	5.3
31	7.1	---	6.3	5.0	---	8.1	---	7.3	---	18	12	---
TOTAL	137.5	166.7	177.3	167.8	169.5	232.7	183.1	290.6	171.0	855	673.7	245.7
MEAN	4.44	5.56	5.72	5.41	6.05	7.51	6.10	9.37	5.70	27.6	21.7	8.19
MAX	7.1	6.8	7.0	6.5	8.2	17	9.6	47	13	173	87	30
MIN	3.1	5.0	4.8	4.7	3.8	6.0	4.8	4.2	3.4	13	8.9	3.3
AC-FT	273	331	352	333	336	462	363	576	339	1700	1340	487

CAL YR 1980 TOTAL 3682.9 MEAN 10.1 MAX 111 MIN 2.0 AC-FT 7310
WTR YR 1981 TOTAL 3470.6 MEAN 9.51 MAX 173 MIN 3.1 AC-FT 6880

FLATTE RIVER BASIN

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06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE

LOCATION (REVISED).--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 (6 m) upstream from bridge on U.S. Highway 281 and 6 mi (10 km) upstream from confluence with North Loup River.

DRAINAGE AREA.--8,090 mi² (21,000 km²), approximately, of which about 3,130 mi² (8,110 km²) 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 (541.511 m) 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 (131 m) upstream at same datum. Mar. 17 to May 31, 1978, nonrecording gage on railroad bridge 30 ft (9 m) upstream at same datum.

REMARKS.--Records fair except those for winter periods, which are poor. Diversions above station for irrigation.

AVERAGE DISCHARGE.--74 years, 1,190 ft³/s (33.70 m³/s), 862,200 acre-ft/yr (1.06 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft³/s (2,040 m³/s) June 23, 1947, gage height, 12.69 ft (3.868 m), site then in use, present datum, from rating curve extended above 55,000 ft³/s (1,560 m³/s); minimum daily since 1929, 23 ft³/s (0.65 m³/s) Aug. 9, 10, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft³/s (351 m³/s) Aug. 6, gage height, 4.69 ft (1.430 m); maximum gage height, 5.29 ft (1.612 m) Dec. 4, ice jam; minimum daily discharge, 58 ft³/s (1.64 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	376	1120	971	1200	350	1200	1050	501	620	269	364	668
2	391	1130	600	1090	200	1220	1000	492	620	282	768	866
3	403	1110	860	1000	290	1250	760	519	630	356	2100	728
4	426	1070	1100	920	400	1280	1070	600	590	573	796	866
5	458	926	1290	800	500	1190	1060	720	555	770	608	944
6	434	954	1400	855	800	1140	700	640	501	546	4210	1010
7	426	926	1160	1170	1100	1150	900	555	465	296	1290	1150
8	458	886	1000	1290	1400	1220	760	564	510	185	620	1300
9	661	861	900	1270	1600	1080	720	680	501	153	620	1050
10	792	1030	840	1180	1300	1070	860	740	483	132	608	976
11	892	1100	900	1110	800	1020	890	720	483	107	656	976
12	1000	1090	1140	1060	900	1030	700	680	456	79	644	896
13	1000	1050	1250	1080	1100	1050	980	1000	412	65	644	866
14	952	1050	1400	1220	1300	1050	720	1150	404	58	680	866
15	984	1020	1510	1160	1600	1110	1000	1100	501	62	668	810
16	1040	1090	1480	960	1850	1150	470	1000	750	87	668	852
17	1590	1120	1420	740	2000	1140	680	1850	640	97	657	824
18	1450	1240	1040	760	2100	1210	500	2550	501	175	714	810
19	1120	1260	840	900	2100	1260	570	2050	438	270	752	754
20	1200	1270	600	1060	2000	1230	780	1100	356	250	695	768
21	1140	1240	260	1120	1700	1210	760	700	324	320	619	796
22	1320	1180	300	1200	1450	1310	860	830	310	400	450	810
23	1250	1150	330	1120	1400	1230	900	820	303	1000	450	880
24	1140	1120	290	1200	1180	1110	800	830	245	920	470	896
25	1110	1050	400	1300	1180	1210	620	830	233	1100	620	912
26	890	921	600	1190	1170	1310	575	770	195	960	796	912
27	1080	928	1040	1090	1220	1370	580	800	175	1300	754	928
28	1100	934	1250	931	1190	1330	580	820	149	1050	1010	1070
29	1020	950	1350	900	---	1630	570	800	149	860	810	928
30	1080	962	1500	800	---	1490	600	770	149	591	768	896
31	1070	---	1350	540	---	1520	---	670	---	429	680	---
TOTAL	28253	31738	30371	32216	34180	37770	23015	27851	12648	13742	26189	27008
MEAN	911	1058	980	1039	1221	1218	767	898	422	443	845	900
MAX	1590	1270	1510	1300	2100	1630	1070	2550	750	1300	4210	1300
MIN	376	861	260	540	200	1020	470	492	149	58	364	668
AC-FT	56040	62950	60240	63900	67800	74920	45650	55240	25090	27260	51950	53570
CAL YR 1980	TOTAL	325641	MEAN	890	MAX	3300	MIN	23	AC-FT	645900		
WTR YR 1981	TOTAL	324981	MEAN	890	MAX	4210	MIN	58	AC-FT	644600		

PLATTE RIVER BASIN

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)						
OCT												
30...	1155	1080	246	7.6	7.0	15.8						
NOV												
05...	1615	928	263	7.8	12.5	--						
24...	1430	1070	254	8.0	2.5	13.2						
DEC												
22...	1425	270	389	7.6	.5	13.0						
JAN												
23...	1030	1020	267	7.6	.5	13.4						
FEB												
25...	1450	1160	258	7.8	9.5	10.9						
MAR												
23...	1450	1210	262	7.9	13.5	9.9						
APR												
14...	1420	656	287	8.1	16.0	9.8						
MAY												
12...	1430	680	282	8.2	17.0	9.8						
JUN												
05...	0800	567	319	8.2	21.0	--						
12...	1430	461	308	8.3	28.0	7.9						
JUL												
07...	1320	382	332	8.3	29.5	7.4						
30...	1615	--	339	8.6	28.0	--						
AUG												
04...	1400	756	319	8.3	31.0	7.9						
SEP												
28...	1120	1070	250	8.0	17.5	9.3						
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)	
NOV												
05...	1615	--	110	.00	34	5.3	8.4	.4	7.5	120	14	
FEB												
25...	1450	15	110	.00	36	5.5	9.2	.4	6.8	120	13	
JUN												
05...	0800	--	140	.00	45	6.9	12	.4	8.3	160	9.9	
JUL												
30...	1615	--	150	.00	46	7.9	11	.4	12	160	5.0	
AUG												
04...	1400	50	130	.00	41	7.3	11	.4	13	140	5.0	
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 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)
NOV												
05...	2.0	.3	52	199	.27	499	.68	--	--	--	--	--
FEB												
25...	2.1	.3	52	201	.27	630	.78	.180	30	20	2	2
JUN												
05...	2.8	.3	53	235	.32	360	.17	--	--	--	--	--
JUL												
30...	14	.5	47	241	.33	--	.42	--	--	--	--	--
AUG												
04...	7.2	.5	41	210	.29	429	.00	.320	40	17	13	13

PLATTE RIVER BASIN

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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 (20 m) downstream from bridge on U.S. Highway 183 and 0.4 mi (0.6 km) north of Taylor.

DRAINAGE AREA.--2,280 mi² (5,910 km²), approximately, of which about 180 mi² (470 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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 (685.254 m) 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 (137 m) upstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. North Loup Public Power and Irrigation District canal began diversion from river in April 1939 at point 5 mi (8 km) above station. Several smaller diversions above station for irrigation.

AVERAGE DISCHARGE.--44 years (1937-81), 458 ft³/s (12.97 m³/s), 331,800 acre-ft/yr (0.409 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,870 ft³/s (81.3 m³/s) May 7, 1977, gage height, 5.98 ft (1.823 m), from floodmark, but may have been greater during ice breakup Mar. 10, 1955; maximum gage height, 9.5 ft (2.90 m) Feb. 25, 1957, ice jam, from floodmarks; minimum daily discharge, 45 ft³/s (1.27 m³/s) July 26, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft³/s (38.8 m³/s) Aug. 5, gage height, 5.26 ft (1.603 m); maximum gage height, 6.47 ft (1.972 m) Dec. 25, ice jam; minimum daily discharge, 61 ft³/s (1.73 m³/s) July 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	448	508	460	450	230	569	553	408	376	248	305	374
2	425	515	270	350	140	568	494	404	359	323	432	370
3	403	511	180	370	210	578	485	463	363	512	390	370
4	403	500	300	400	300	559	455	361	363	598	368	372
5	418	515	560	440	360	534	470	346	359	484	1010	378
6	440	510	620	527	400	526	470	376	338	333	841	429
7	440	523	560	537	450	539	470	396	324	252	531	443
8	425	553	330	521	460	571	470	438	317	204	417	408
9	437	539	350	400	420	553	490	466	334	167	414	402
10	421	515	400	340	370	519	481	426	367	148	406	386
11	398	518	520	350	370	508	499	381	370	110	393	396
12	396	504	574	410	390	536	487	424	355	75	382	380
13	425	517	651	465	430	536	471	409	352	67	408	368
14	432	493	592	460	490	536	430	400	623	61	398	376
15	470	482	522	462	520	553	428	380	624	61	446	377
16	665	476	554	400	540	548	445	400	430	67	500	381
17	608	491	586	380	560	570	451	519	366	80	470	370
18	510	490	524	410	560	547	454	724	333	171	546	380
19	470	482	375	475	500	481	458	756	303	213	459	381
20	462	476	200	539	480	502	449	553	306	151	396	394
21	448	451	220	481	420	510	459	502	312	234	354	406
22	464	463	300	472	508	528	483	565	301	242	353	394
23	486	471	500	466	517	544	483	547	306	189	376	400
24	471	461	450	505	547	562	460	483	306	267	449	410
25	462	429	320	540	583	570	459	426	283	282	426	427
26	460	439	390	450	583	553	439	393	267	313	439	507
27	464	433	480	450	617	570	450	421	258	422	430	487
28	471	443	653	370	601	640	436	447	247	466	407	470
29	474	458	672	330	---	718	425	433	311	457	398	450
30	504	480	532	300	---	728	418	415	282	362	406	452
31	493	---	496	250	---	618	---	398	---	299	397	---
TOTAL	14293	14646	14141	13300	12556	17374	13922	14060	10435	7858	13947	12138
MEAN	461	488	456	429	448	560	464	454	348	253	450	405
MAX	665	553	672	540	617	728	553	756	624	598	1010	507
MIN	396	429	180	250	140	481	418	346	247	61	305	368
AC-FT	28350	29050	28050	26380	24900	34460	27610	27890	20700	15590	27660	24080
CAL YR 1980	TOTAL	166719	MEAN	456	MAX	1160	MIN	100	AC-FT	330700		
WTR YR 1981	TOTAL	158670	MEAN	435	MAX	1010	MIN	61	AC-FT	314700		

PLATTE RIVER BASIN

06786000 NORTH LOUP RIVER AT TAYLOR, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1974 to current year.

WATER TEMPERATURES: July 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 552 micromhos Mar. 2, 1977; minimum daily, 73 micromhos Nov. 16, 1978.

WATER TEMPERATURES: Maximum, 37.0°C July 16, 1981; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 213 micromhos Feb. 2; minimum daily, 127 micromhos Feb. 18.

WATER TEMPERATURES: Maximum, 37.0°C July 16; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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									
21...	1455	447	161	7.5	15.0	--	63	.00	20
NOV									
18...	1100	484	160	7.9	2.5	6	62	.00	20
DEC									
15...	1525	512	151	8.0	7.0	10	56	.00	18
JAN									
15...	1440	462	154	8.1	.5	8	62	.00	20
FEB									
12...	1445	384	174	7.7	.5	0	68	.00	22
MAR									
10...	1450	506	157	8.1	8.5	20	65	.00	21
APR									
09...	1305	488	172	7.7	16.0	12	65	.00	21
MAY									
07...	1450	412	159	7.8	10.0	5	65	.00	21
JUN									
01...	1330	384	178	7.9	24.0	20	71	.00	23
JUL									
29...	1410	498	154	7.8	19.5	10	62	.00	20
AUG									
26...	1420	433	168	8.0	25.5	5	65	.00	21
SEP									
24...	1350	416	160	7.8	20.0	5	63	.00	20

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									
21...	3.1	6.6	.4	6.0	74	9.1	1.9	.4	57
NOV									
18...	3.0	5.6	.3	5.0	71	.4	.9	.3	58
DEC									
15...	2.7	5.7	.3	5.8	67	2.5	1.4	.3	56
JAN									
15...	3.0	6.0	.3	5.0	71	6.1	1.0	.4	58
FEB									
12...	3.2	7.0	.4	5.8	78	3.7	1.0	.3	64
MAR									
10...	3.1	6.9	.4	5.6	69	3.3	.9	.3	56
APR									
09...	3.0	7.4	.4	6.2	71	9.0	.9	.4	54
MAY									
07...	3.1	5.9	.3	5.4	78	.6	.2	.4	52
JUN									
01...	3.2	7.4	.4	6.3	82	.8	6.4	.4	54
JUL									
29...	3.0	5.8	.3	5.4	67	2.0	--	.3	55
AUG									
26...	3.1	6.5	.4	6.3	87	<1.0	1.1	.3	60
SEP									
24...	3.1	6.2	.4	6.3	74	<5.0	.6	.4	59

PLATTE RIVER BASIN

06786000 NORTH LOUP RIVER AT TAYLOR, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 21...	151	.21	182	.54	--	.250	0	40	2
NOV 18...	139	.19	182	.79	.150	.050	80	20	3
DEC 15...	137	.19	189	.90	--	.150	10	20	2
JAN 15...	146	.20	182	.88	.180	.120	20	20	3
FEB 12...	158	.01	164	1.0	.210	.180	10	20	2
MAR 10...	142	.19	194	.79	.190	.150	20	50	4
APR 09...	146	.20	192	.37	.170	.110	0	40	4
MAY 07...	137	.19	152	.27	.180	.140	10	30	4
JUN 01...	151	.21	157	.01	.340	.100	10	40	2
JUL 29...	134	.18	180	.32	.190	.140	10	33	2
AUG 26...	145	.20	170	.40	.180	.110	20	27	1
SEP 24...	145	.20	163	.41	.030	.010	20	20	3

PLATTE RIVER BASIN

06786000 NORTH LOUP RIVER AT TAYLOR, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	164	162	157	183	163	180	161	192	179	158	170
2	171	155	180	160	213	158	170	162	182	160	157	170
3	169	165	193	162	189	157	175	161	182	158	157	180
4	171	160	168	175	189	156	170	157	181	162	169	173
5	178	158	187	162	180	158	169	160	179	163	151	172
6	164	158	171	161	179	157	165	154	181	180	182	170
7	171	158	173	162	173	157	165	156	183	167	166	170
8	162	158	169	162	180	158	169	156	177	170	170	173
9	169	157	172	169	173	157	164	153	176	177	173	171
10	166	160	178	169	184	157	173	154	176	176	172	169
11	168	158	163	167	183	158	161	160	178	184	173	169
12	173	166	152	162	173	160	165	161	175	181	173	171
13	167	182	150	164	154	158	159	152	175	179	174	171
14	164	158	156	162	154	160	168	165	165	183	174	174
15	164	155	153	161	138	155	161	155	162	191	168	170
16	156	155	156	175	138	165	159	159	170	183	171	172
17	157	158	171	175	131	160	154	161	176	183	172	173
18	164	154	157	162	127	157	159	145	178	168	173	172
19	168	157	172	159	135	160	158	150	179	163	170	169
20	167	157	192	158	137	160	161	169	178	169	174	168
21	174	156	192	162	143	165	160	158	181	178	177	170
22	167	153	169	158	163	158	155	161	175	166	180	168
23	171	160	167	160	158	157	155	169	174	168	179	167
24	169	158	198	162	159	157	163	180	178	167	161	170
25	169	157	168	158	158	153	159	171	179	168	176	164
26	169	157	167	162	157	157	163	178	176	170	174	167
27	161	157	148	161	158	158	157	171	175	159	169	166
28	161	158	148	163	163	153	166	171	175	166	171	170
29	164	157	150	173	---	150	161	170	172	159	169	164
30	164	157	147	178	---	163	163	168	178	162	171	170
31	166	---	148	199	---	171	---	175	---	168	172	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	13.0	.0	.0	.0	9.5	15.0	21.0	26.5	29.5	23.0	24.0
2	14.0	8.0	.0	6.0	.0	10.0	17.0	24.0	25.5	22.5	22.5	24.0
3	17.0	12.0	2.0	3.5	.0	8.0	9.5	18.0	27.0	24.0	32.0	21.0
4	19.0	12.0	2.0	4.0	.0	8.0	10.0	19.0	27.0	26.5	30.0	24.5
5	11.5	14.0	.0	5.5	.0	10.0	7.0	18.0	28.0	26.0	29.0	27.5
6	21.0	16.0	.0	3.5	.0	8.0	9.0	16.5	27.0	30.0	29.0	23.0
7	21.0	15.0	.0	5.0	.5	7.0	18.0	12.0	28.5	29.0	23.0	23.0
8	22.0	13.0	4.0	4.5	.5	9.0	16.0	14.5	29.0	25.0	27.0	26.0
9	22.0	8.0	1.0	3.0	.0	8.0	18.0	13.0	25.0	29.0	25.0	26.0
10	15.0	9.5	3.0	.5	.0	10.0	19.0	10.0	26.5	30.0	27.0	26.0
11	12.0	10.0	5.5	.5	3.5	12.0	16.5	17.0	28.0	33.5	28.5	25.0
12	10.0	9.0	6.0	6.0	.5	13.0	14.0	17.0	27.0	34.0	28.0	25.0
13	18.5	5.0	5.5	5.0	2.0	14.0	13.0	13.0	30.0	35.0	28.0	25.0
14	16.5	5.0	5.0	3.0	3.5	12.5	16.5	20.0	23.0	31.0	27.5	24.0
15	12.0	7.0	8.0	.0	3.5	11.0	18.0	19.5	22.0	31.5	28.0	24.0
16	13.0	5.0	10.0	.0	5.0	14.0	21.5	14.0	25.0	37.0	22.5	24.0
17	10.0	5.0	12.0	2.5	5.5	8.0	21.0	12.0	27.0	32.0	27.0	19.0
18	12.0	7.0	2.5	2.0	3.5	8.0	19.0	13.0	22.5	24.0	28.0	22.0
19	15.0	7.5	.0	3.0	9.5	10.0	17.0	19.5	24.0	29.5	28.0	24.0
20	16.0	7.0	.0	3.0	10.0	8.0	18.0	19.0	25.5	32.0	29.0	16.0
21	17.0	7.5	4.0	4.0	8.0	15.5	13.5	19.0	20.0	26.0	28.5	25.0
22	15.0	5.5	3.0	5.5	7.0	13.5	16.0	24.0	28.0	29.5	22.0	21.0
23	7.0	6.0	.0	9.0	9.0	14.0	19.5	20.0	28.5	28.0	23.0	23.0
24	9.0	5.0	.0	9.0	12.0	14.0	22.0	14.5	29.0	21.5	25.0	18.5
25	10.0	4.0	.0	5.0	10.0	16.0	21.5	15.0	30.0	21.0	27.0	22.0
26	5.0	4.0	3.0	7.0	5.5	15.5	18.0	22.0	29.5	19.5	25.5	20.5
27	3.5	1.0	4.0	5.0	10.5	20.0	21.0	21.0	31.0	18.0	23.0	18.0
28	6.0	5.0	5.0	2.0	9.0	13.0	20.0	25.0	31.0	20.5	23.5	22.0
29	8.5	6.0	5.5	.0	---	9.0	18.0	25.5	29.5	22.0	24.5	23.0
30	12.0	4.5	7.0	.0	---	16.0	17.0	21.0	29.0	29.0	22.5	17.5
31	13.0	---	6.0	.0	---	15.5	---	25.0	---	28.0	21.5	---

PLATTE RIVER BASIN

163

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 (13 m) upstream from bridge on U.S. Highway 183, 12.2 mi (19.6 km) north of Taylor.

DRAINAGE AREA.--983 mi² (2,546 km²), 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. Altitude of gage is 2,260 ft (689 m) from topographic map. Prior to June 5, 1978, staff gage or reference point at same site at datum 1.0 ft (0.30 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s (33.1 m³/s) May 4, 1964, gage height, 4.80 ft (1.463 m), from floodmark; minimum daily discharge, 90 ft³/s (2.55 m³/s) Jan. 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 545 ft³/s (15.4 m³/s) Aug. 5, gage height, 2.40 ft (0.732 m), from floodmark; minimum daily, 130 ft³/s (3.68 m³/s) Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	224	215	212	170	226	254	196	203	186	215	202
2	200	224	190	209	130	229	237	196	199	203	257	202
3	199	223	180	209	185	229	226	209	195	236	227	201
4	201	220	211	203	200	234	225	214	193	231	240	202
5	205	221	218	207	213	230	218	208	194	222	439	201
6	205	223	206	214	217	229	217	206	190	201	301	210
7	207	224	195	210	223	230	215	206	187	189	252	222
8	207	224	180	212	220	228	217	214	189	182	240	212
9	208	222	190	212	180	228	213	213	200	176	229	207
10	205	220	193	212	160	229	210	207	199	174	219	204
11	203	221	206	209	170	229	214	203	197	171	213	203
12	207	222	205	211	206	232	212	218	196	172	209	201
13	211	221	207	214	211	229	209	216	196	173	213	202
14	212	217	204	213	221	230	210	213	257	171	213	199
15	217	216	206	215	253	225	205	206	267	171	213	198
16	274	216	215	208	286	225	206	205	250	170	209	202
17	277	216	220	200	265	223	206	234	224	174	209	202
18	248	216	216	190	245	220	207	282	206	178	211	204
19	233	216	190	215	248	216	206	280	201	184	209	205
20	226	218	170	216	253	219	208	268	196	180	206	206
21	224	217	175	214	247	219	211	264	193	195	202	208
22	226	218	185	214	238	224	210	254	190	208	200	205
23	223	218	210	218	234	224	211	240	188	211	204	207
24	218	216	150	222	233	222	208	230	185	219	223	210
25	218	213	140	223	234	223	206	222	182	216	240	213
26	218	213	170	221	231	222	205	227	182	205	225	238
27	224	216	250	215	232	221	202	232	188	210	228	226
28	221	215	229	216	226	237	200	238	185	217	219	225
29	226	215	214	212	---	269	199	231	191	217	213	223
30	229	218	215	205	---	269	197	217	188	215	210	218
31	227	---	215	205	---	272	---	208	---	206	207	---
TOTAL	6799	6563	6170	6556	6131	7142	6364	6957	6011	6063	7095	6258
MEAN	219	219	199	211	219	230	212	224	200	196	229	209
MAX	277	224	250	223	286	272	254	282	267	236	439	238
MIN	199	213	140	190	130	216	197	196	182	170	200	198
AC-FT	13490	13020	12240	13000	12160	14170	12620	13800	11920	12030	14070	12410
CAL YR 1980	TOTAL	81957	MEAN	224	MAX	475	MIN	90	AC-FT	162600		
WTR YR 1981	TOTAL	78109	MEAN	214	MAX	439	MIN	130	AC-FT	154900		

PLATTE RIVER BASIN

06787500 CALANUS 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 210 ft (64 m) downstream from highway bridge, 1.5 mi (2.4 km) upstream from mouth, and 3 mi (5 km) northwest of Burwell.

DRAINAGE AREA.--1,060 mi² (2,750 km²), approximately, of which about 110 mi² (280 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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 (657.295 m) National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 20, 1945, nonrecording gage at site 210 ft (64 m) upstream at present datum. Apr. 21, 1945, to Jan. 28, 1964, water-stage recorder at site 210 ft (64 m) downstream at present datum. Jan. 29, 1964, to Oct. 4, 1977, water-stage recorder at site 40 ft (12 m) downstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--41 years, 300 ft³/s (8.496 m³/s), 217,400 acre-ft/yr (0.268 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s (50.7 m³/s) May 4, 1964, gage height, 4.35 ft (1.326 m); maximum gage height, 5.90 ft (1.798 m) Jan. 26, 1967, backwater from ice; minimum daily discharge, 54 ft³/s (1.53 m³/s) Dec. 5, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 669 ft³/s (18.9 m³/s) Aug. 5, gage height, 4.12 ft (1.256 m); maximum gage height, 4.51 ft (1.375 m) Feb. 12, backwater from ice; minimum daily discharge, 180 ft³/s (5.10 m³/s) Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	302	280	317	210	324	333	255	279	266	306	276
2	259	306	270	316	180	317	326	259	271	306	370	276
3	261	306	260	311	230	324	309	267	261	348	336	275
4	267	302	310	326	280	326	299	280	258	334	316	275
5	276	309	308	346	310	313	293	267	263	325	578	272
6	280	311	303	323	320	311	291	271	265	307	449	277
7	281	314	280	316	330	302	290	271	263	284	331	299
8	276	314	270	316	330	298	288	280	259	267	316	286
9	278	304	280	316	310	295	293	273	268	259	316	282
10	268	303	305	310	270	289	288	270	272	255	306	278
11	267	299	296	300	300	286	294	272	274	251	302	274
12	268	296	309	301	360	285	290	295	273	247	288	271
13	273	294	311	299	370	282	280	288	280	243	293	269
14	272	295	316	302	380	284	276	280	330	243	293	267
15	271	295	312	296	410	286	282	272	336	243	284	261
16	367	292	324	288	450	290	281	273	319	251	280	263
17	341	289	329	280	430	291	271	302	302	259	275	265
18	313	289	324	270	408	293	270	361	276	288	271	269
19	293	295	280	297	397	292	267	359	265	284	275	272
20	283	287	225	302	394	292	265	352	262	271	271	275
21	288	291	230	307	374	293	272	349	262	311	271	283
22	293	299	290	307	369	289	280	355	257	320	271	286
23	293	292	320	314	351	289	275	331	259	316	275	286
24	284	291	250	317	342	285	271	312	258	326	293	285
25	284	284	230	325	335	291	271	302	253	411	316	289
26	288	282	280	316	332	292	271	289	253	331	300	320
27	298	287	350	302	334	294	267	311	259	320	295	320
28	298	290	360	302	321	323	259	316	257	331	293	310
29	298	292	340	298	---	336	255	310	291	336	285	313
30	302	297	335	280	---	344	255	300	272	326	279	304
31	302	---	321	250	---	334	---	290	---	311	276	---
TOTAL	8886	8907	9198	9450	9427	9350	8462	9212	8197	9170	9610	8478
MEAN	287	297	297	305	337	302	282	297	273	296	310	283
MAX	367	314	360	346	450	344	333	361	336	411	578	320
MIN	259	282	225	250	180	282	255	255	253	243	271	261
AC-FT	17630	17670	18240	18740	18700	18550	16780	18270	16260	18190	19060	16820

CAL YR 1980 TOTAL 110198 MEAN 301 MAX 695 MIN 170 AC-FT 218600
WTR YR 1981 TOTAL 108347 MEAN 297 MAX 578 MIN 180 AC-FT 214900

PLATTE RIVER BASIN

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06787500 CALANUS RIVER NEAR BURWELL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1971 to September 1977.

WATER TEMPERATURES: October 1971 to September 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 221 micromhos May 17, 1972; minimum daily, 105 micromhos Aug. 13, 1976.

WATER TEMPERATURES: Maximum, 32.0°C June 30, 1973; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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									
21...	1115	284	142	7.3	12.0	--	51	.00	16
NOV									
19...	1515	298	137	7.9	7.5	3	53	.00	17
DEC									
15...	1100	319	137	7.9	6.5	5	49	.00	16
JAN									
15...	1100	299	133	8.0	2.0	4	53	.00	17
FEB									
12...	1100	358	149	7.7	.5	5	56	.00	18
MAR									
10...	1135	295	134	7.9	7.0	5	53	.00	17
APR									
09...	1020	294	140	7.5	11.5	5	53	.00	17
MAY									
07...	1040	271	136	7.6	11.0	5	56	.00	18
JUN									
01...	1040	293	146	7.6	20.0	20	56	.00	18
JUL									
29...	1600	320	133	7.5	20.0	5	53	.00	17
AUG									
26...	1135	300	137	7.6	22.5	10	51	.00	16
SEP									
25...	0950	295	136	7.6	18.0	5	50	.00	16

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									
21...	2.6	5.9	.4	6.0	70	8.4	2.2	.3	51
NOV									
19...	2.5	5.3	.3	4.6	64	2.1	.7	.3	53
DEC									
15...	2.3	5.4	.3	4.8	65	1.9	2.4	.3	52
JAN									
15...	2.5	5.7	.3	4.3	62	3.7	.7	.3	53
FEB									
12...	2.7	6.7	.4	5.6	66	1.6	1.0	.2	56
MAR									
10...	2.6	6.0	.4	4.5	58	1.4	.7	.2	50
APR									
09...	2.6	6.0	.4	4.6	58	3.4	.6	.2	48
MAY									
07...	2.7	5.5	.3	4.1	65	5.0	.1	.3	47
JUN									
01...	2.6	6.7	.4	4.6	60	1.2	7.4	.2	48
JUL									
29...	2.5	5.5	.3	4.5	58	<1.0	--	.2	51
AUG									
26...	2.6	5.7	.4	5.1	71	2.0	.8	.2	51
SEP									
25...	2.5	5.4	.3	5.2	61	<5.0	1.0	.3	52

PLATTE RIVER BASIN

06787500 CALAMUS RIVER NEAR BURWELL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 21...	137	.19	105	.52	--	.220	4	40	4
NOV 19...	127	.17	102	.72	.150	.150	50	30	3
DEC 15...	128	.17	110	.80	.170	.150	10	20	2
JAN 15...	128	.17	103	.75	.170	.120	10	30	3
FEB 12...	136	.01	3.9	.91	.220	.190	10	40	5
MAR 10...	120	.16	95.6	.64	.190	.160	10	50	6
APR 09...	120	.16	95.3	.51	.200	.160	0	50	4
MAY 07...	123	.17	90.0	.28	.180	.160	10	50	5
JUN 01...	126	.17	99.7	.31	.400	.160	10	50	3
JUL 29...	--	--	--	.38	.210	.170	10	65	3
AUG 26...	128	.17	104	.50	.210	.150	20	54	3
SEP 25...	124	.17	98.8	.43	.060	.010	20	31	5

PLATTE RIVER BASIN

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06788500 NCRTH 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 (46 m) downstream from bridge on State Highway 70 at Ord.

DRAINAGE AREA.--3,750 mi² (9,710 km²), approximately, of which about 700 mi² (1,810 km²) 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 (613.300 m) National Geodetic Vertical Datum of 1929. Nov. 25, 1936, to Sept. 30, 1938, nonrecording gage at site 2 mi (3 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation. Flow includes return water from North Loup irrigation project.

AVERAGE DISCHARGE.--30 years (1937-38, 1952-81), 864 ft³/s (24.47 m³/s), 626,000 acre-ft/yr (0.772 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) June 7, 1962, gage height, 5.52 ft (1.682 m); maximum gage height, 6.56 ft (1.999 m) Jan. 16, 1981, ice jam; minimum daily discharge, 100 ft³/s (2.83 m³/s) Jan. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,110 ft³/s (230 m³/s) Aug. 5, gage height, 5.41 ft (1.649 m); maximum gage height, 6.56 ft (1.999 m) Jan. 16, ice jam; minimum daily discharge, 309 ft³/s (8.75 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	921	882	860	860	460	848	1020	768	816	577	830	718
2	925	859	580	820	400	859	996	780	801	622	990	669
3	898	836	380	760	500	870	920	798	788	1160	1030	669
4	874	840	520	780	620	881	883	893	735	840	1320	698
5	881	864	860	840	720	888	876	740	744	860	5680	706
6	891	880	940	500	800	854	872	731	744	744	1940	720
7	881	899	820	940	880	829	835	777	735	656	1110	835
8	919	914	620	820	840	843	835	791	717	573	830	802
9	932	911	640	720	800	857	848	789	690	488	840	726
10	945	875	700	660	740	874	824	795	699	472	820	709
11	935	884	800	700	720	904	834	754	717	408	830	717
12	908	878	920	800	780	917	860	784	699	374	735	717
13	904	918	940	597	840	917	824	803	699	315	820	717
14	923	919	900	501	900	927	846	785	860	322	860	671
15	953	906	876	780	960	914	828	764	1100	315	820	717
16	1400	898	900	740	1020	914	836	757	957	309	820	735
17	1260	873	944	700	1040	907	839	874	820	315	840	740
18	1040	826	907	820	1020	884	858	1120	765	334	810	732
19	968	872	760	940	960	874	852	1230	727	510	902	716
20	937	886	460	1000	853	856	834	1060	706	495	820	710
21	951	914	350	940	809	858	855	958	690	480	800	715
22	929	938	400	940	784	897	901	990	639	622	753	721
23	938	904	600	960	803	904	846	982	639	630	735	717
24	930	857	740	584	852	911	841	938	639	557	830	735
25	898	821	600	755	871	910	842	870	614	771	957	744
26	886	829	700	677	882	902	828	805	597	870	838	850
27	945	861	900	670	874	926	817	813	597	780	813	830
28	901	866	1060	627	842	1030	772	893	597	860	816	800
29	861	872	1080	612	---	1090	802	905	741	913	815	810
30	864	888	960	494	---	1190	729	852	626	875	797	810
31	890	---	900	479	---	1100	---	835	---	830	771	---
TOTAL	29288	26370	23617	24616	22570	28335	25553	26634	21898	18877	32572	22156
MEAN	945	879	762	794	806	914	852	859	730	609	1051	739
MAX	1400	938	1080	1000	1040	1190	1020	1230	1100	1160	5680	850
MIN	861	821	350	479	400	829	729	731	597	309	735	669
AC-FT	58090	52300	46840	48830	44770	56200	50680	52830	43430	37440	64610	43950
CAL YR 1980	TOTAL	301880	MEAN	825	MAX	1780	MIN	150	AC-FT	598800		
WTR YR 1981	TOTAL	302486	MEAN	829	MAX	5680	MIN	309	AC-FT	600000		

PLATTE RIVER BASIN

06788988 MIRA CREEK NEAR NORTH LOUP, NE 1980

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 (2.3 km) northwest of North Loup.

PERIOD OF RECORD.--October 1979 to September 1980.

GAGE.--Water-stage recorder. Altitude of gage is 1,969 ft (600.2 m), from topographic map.

REMARKS.--Records fair except for period of no gage-height record, October 1 to November 15, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft³/s (0.68 m³/s) Feb. 19, gage height, 2.27 ft (0.692 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.90	.29	.52	.31	.56	3.9	.29	.10	.00	.00	.01
2	.10	1.0	.30	.47	.33	.64	4.2	.26	.12	.00	.00	.00
3	.10	.60	.37	.43	.36	.84	5.8	.25	.11	.00	.00	.00
4	.10	.30	.51	.44	.40	.84	5.5	.27	.08	.00	.00	.00
5	.10	.25	.73	.43	.43	.58	4.4	.28	.07	.00	.00	.00
6	.10	.45	.74	.45	.47	.68	4.2	.24	.06	.00	.00	.00
7	.10	.60	.69	.31	.49	.72	4.2	.21	.04	.00	.00	.00
8	.10	.50	.57	.30	.49	.76	3.9	.21	.03	.00	.00	.00
9	.10	.35	.59	.26	.50	.87	1.9	.22	.04	.00	.00	.01
10	.10	.30	.72	.30	.49	.88	.87	.20	.04	.00	.00	.02
11	.10	.25	.52	.32	.45	.70	.77	.18	.03	.00	.00	.02
12	.10	.20	.44	.29	.44	.71	.70	.18	.03	.00	.00	.02
13	.10	.15	.38	.44	.44	.68	.64	.19	.03	.00	.00	.01
14	.10	.10	.38	.64	.43	.79	.62	.18	.03	.00	.00	.01
15	.10	.06	.44	.88	.42	.84	.60	.18	.04	.00	.00	.01
16	.10	.12	.31	.83	.40	.81	.60	.21	.04	.00	.06	.01
17	.10	.21	.26	.65	.43	.67	.61	.27	.05	.00	.07	.01
18	.10	.25	.37	.60	.53	.61	.63	.28	.05	.00	.03	.01
19	.12	.26	.42	.54	5.5	.75	.56	.27	.04	.00	.01	.01
20	.15	.29	.48	.50	7.9	1.3	.55	.26	.03	.00	.01	.10
21	.11	.53	.49	.52	12	1.2	.54	.24	.02	.00	.00	.09
22	.10	.55	.56	.52	6.2	1.3	.47	.21	.03	.00	.00	.03
23	.10	.67	.80	.50	2.3	1.4	.40	.18	.02	.00	.00	.02
24	.10	.38	.66	.62	3.6	2.5	.40	.15	.02	.00	.00	.02
25	.10	.49	.55	.57	6.2	2.8	.36	.13	.02	.00	.00	.01
26	.10	.57	.51	.40	1.2	2.8	.34	.12	.01	.00	.00	.00
27	.10	.46	.49	.32	1.2	2.8	.32	.11	.01	.00	.00	.00
28	.15	.35	.47	.31	1.0	3.3	.32	.11	.00	.00	.00	.00
29	.20	.28	.51	.31	.61	4.4	.31	.12	.00	.00	.00	.01
30	.50	.28	.53	.31	---	4.4	.30	.11	.01	.00	.00	.02
31	.70	---	.53	.32	---	4.2	---	.09	---	.00	.00	---
TOTAL	4.33	11.70	15.61	14.30	55.52	46.33	48.91	6.20	1.20	.00	.18	.45
MEAN	.14	.39	.50	.46	1.91	1.49	1.63	.20	.040	.000	.006	.015
MAX	.70	1.0	.80	.88	12	4.4	5.8	.29	.12	.00	.07	.10
MIN	.10	.06	.26	.26	.31	.56	.30	.09	.00	.00	.00	.00
AC-FT	8.6	23	31	28	110	92	97	12	2.4	.00	.4	.9

WTR YR 1980 TOTAL 204.73 MEAN .56 MAX 12 MIN .00 AC-FT 406

PLATTE RIVER BASIN

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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 (2.3 km) northwest of North Loup.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,969 ft (600.2 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,460 ft³/s (98.0 m³/s) Aug. 5, 1981, gage height, 10.56 ft (3.219 m), from floodmark, from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of indirect measurement of peak flow; no flow at times in 1980-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,460 ft³/s (98.0 m³/s) Aug. 5, gage height, 10.56 ft (3.219 m), from floodmark, from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of indirect measurement of peak flow; no flow June 7-9, 18, 22-26, 28, July 14-16, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.05	.10	.06	.04	.09	.12	.03	.03	.02	.05	.06
2	.02	.05	.09	.06	.03	.08	.12	.03	.03	1.9	.40	.06
3	.02	.06	.06	.05	.02	.08	.11	.03	.04	.93	.18	.05
4	.01	.07	.07	.05	.03	.09	.09	.07	.03	.15	108	.06
5	.01	.10	.09	.04	.03	.09	.06	.05	.03	.07	1330	.07
6	.01	.11	.08	.05	.04	.08	.05	.04	.01	.06	222	.07
7	.01	.11	.07	.06	.04	.07	.03	.04	.00	.05	58	.10
8	.01	.07	.06	.05	.03	.07	.02	.04	.00	.03	21	.06
9	.02	.05	.05	.06	.02	.06	.03	.03	.00	.03	10	.05
10	.02	.04	.04	.04	.02	.07	.02	.04	.02	.03	5.1	.04
11	.02	.04	.06	.04	.01	.08	.02	.04	.02	.01	2.5	.05
12	.02	.04	.08	.05	.02	.08	.03	.05	.03	.01	1.3	.06
13	.02	.05	.08	.06	.03	.08	.02	.06	.03	.01	1.0	.05
14	.03	.06	.08	.06	.07	.09	.02	.05	.05	.00	.98	.07
15	.03	.06	.10	.05	.10	.08	.03	.06	.06	.00	.23	.08
16	.06	.05	.12	.03	.10	.08	.03	.07	.04	.00	.12	.08
17	.04	.05	.09	.03	.14	.08	.03	.16	.02	.01	.07	.10
18	.04	.05	.07	.04	.15	.08	.03	.22	.00	.01	.07	.09
19	.02	.05	.05	.06	.11	.08	.04	.12	.01	.02	.08	.06
20	.02	.05	.02	.05	.11	.08	.04	.07	.01	.03	.08	.03
21	.02	.05	.03	.05	.11	.11	.04	.06	.01	.11	.08	.04
22	.03	.06	.03	.05	.11	.16	.06	.06	.00	.18	.04	.03
23	.04	.05	.04	.06	.11	.11	.05	.06	.00	.16	.05	.01
24	.04	.06	.03	.07	.10	.10	.03	.06	.00	.11	.69	.01
25	.03	.05	.01	.07	.09	.10	.03	.05	.00	.13	.34	.02
26	.02	.05	.02	.07	.08	.11	.02	.05	.00	.27	.78	.06
27	.05	.06	.04	.07	.14	.10	.03	.06	.01	.09	.93	.03
28	.06	.07	.07	.06	.12	.14	.03	.07	.00	.06	.59	.02
29	.07	.08	.07	.06	---	.19	.03	.07	.07	.06	.22	.02
30	.06	.09	.07	.05	---	.15	.03	.07	.04	.05	.13	.03
31	.06	---	.07	.05	---	.13	---	.05	---	.00	.09	---
TOTAL	.93	1.83	1.94	1.65	2.00	2.99	1.29	1.96	.59	4.59	1765.10	1.56
MEAN	.030	.061	.063	.053	.071	.096	.043	.063	.020	.15	56.9	.052
MAX	.07	.11	.12	.07	.15	.19	.12	.22	.07	1.9	1330	.10
MIN	.01	.04	.01	.03	.01	.06	.02	.03	.00	.00	.04	.01
AC-FT	1.8	3.6	3.8	3.3	4.0	5.9	2.6	3.9	1.2	9.1	3500	3.1
CAL YR 1980	TOTAL	177.79	MEAN	.49	MAX	12	MIN	.00	AC-FT	353		
WTR YR 1981	TOTAL	1786.43	MEAN	4.89	MAX	1330	MIN	.00	AC-FT	3540		

FLATTE RIVER BASIN

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 (94 m) downstream from bridge on U.S. Highway 281, 3 mi (5 km) north of St. Paul, and 4 mi (6 km) upstream from confluence with Middle Loup River.

DRAINAGE AREA.--4,290 mi² (11,100 km²), approximately, of which about 1,240 mi² (3,210 km²) 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 (536.232 m), adjusted, National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Oct. 1, 1954.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by diversions and ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--74 years, 967 ft³/s (27.39 m³/s), 700,600 acre-ft/yr (0.864 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft³/s (2,550 m³/s), estimated, June 6, 1896, gage height, 14.9 ft (4.54 m), from floodmark, datum then in use; minimum daily since 1931, 85 ft³/s (2.41 m³/s) Aug. 8, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,600 ft³/s (527 m³/s) Aug. 5, gage height, 7.38 ft (2.249 m) from floodmark; minimum daily, 245 ft³/s (6.94 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	722	871	943	980	540	1060	1230	709	851	536	877	818
2	746	789	640	920	460	981	1150	714	845	462	1060	819
3	708	858	420	860	540	948	1070	782	798	672	1010	807
4	675	866	400	840	700	1000	1010	913	776	1170	1040	809
5	686	883	880	900	800	983	985	984	738	828	12500	845
6	725	911	960	960	900	996	908	860	685	800	4670	876
7	749	912	860	1000	1000	1000	876	858	666	680	2290	1070
8	769	904	700	920	960	984	865	926	656	593	1290	1120
9	779	901	740	820	900	954	890	942	651	498	956	991
10	785	912	800	760	840	894	938	917	652	425	914	895
11	801	916	860	780	780	893	924	853	690	366	858	864
12	798	925	960	900	880	764	946	826	704	333	806	863
13	792	973	1000	1080	940	766	969	904	706	305	758	867
14	806	1060	980	1000	1000	765	931	953	735	259	872	857
15	807	1040	980	880	1100	813	919	935	886	261	858	723
16	970	1030	1000	820	1200	792	896	988	1140	251	806	786
17	1620	1010	980	780	1300	826	878	1070	909	245	844	752
18	1290	950	954	940	1400	885	832	1420	796	274	884	757
19	1180	869	894	1020	1450	921	830	1500	744	292	840	770
20	1070	823	500	1080	1450	866	825	1540	706	392	922	795
21	1020	839	250	1040	1300	924	794	1310	679	474	848	831
22	1000	869	310	1060	1110	937	891	1200	648	520	770	828
23	1030	869	560	1100	1050	917	916	1160	610	588	737	829
24	986	844	800	1140	1040	940	883	1100	592	640	839	802
25	956	852	640	1160	1070	915	877	1000	550	592	1280	821
26	928	812	800	1100	1050	907	869	892	510	945	1190	857
27	1080	861	1000	800	1070	887	862	853	480	1040	975	935
28	1050	893	1160	720	1060	972	812	842	459	953	929	885
29	928	849	1180	700	---	1230	782	930	532	1010	895	859
30	906	889	1060	640	---	1280	795	934	642	1040	856	866
31	933	---	1000	580	---	1360	---	875	---	951	835	---
TOTAL	28295	26980	25211	28280	27890	29360	27353	30690	21036	18395	45209	25597
MEAN	913	899	813	912	996	947	912	990	701	593	1458	853
MAX	1620	1060	1180	1160	1450	1360	1230	1540	1140	1170	12500	11200
MIN	675	789	250	580	460	764	782	709	459	245	737	723
AC-FT	56120	53510	50010	56090	55320	58240	54250	60870	41720	36490	89670	507

PLATTE RIVER BASIN

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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 micromhos Jan. 18, 1976; minimum daily, 138 micromhos 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 (421,000 tonnes) June 22, 1947; minimum daily, 20 tons (18 tonnes) Aug. 3, 1946, Feb. 22, 1953.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

		DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)				
		OCT										
		30...	1350	917	201	7.7	8.5	12.8				
		NOV										
		24...	1100	906	204	7.5	.5	13.6				
		DEC										
		22...	1050	270	285	7.6	.5	13.3				
		JAN										
		26...	1140	1150	190	7.3	.5	12.9				
		FEB										
		25...	1100	1080	203	7.6	7.0	11.5				
		MAR										
		23...	1050	893	214	7.7	9.5	11.1				
		APR										
		14...	1030	880	203	7.9	11.0	11.1				
		MAY										
		12...	1110	799	196	7.8	13.5	10.1				
		JUN										
		12...	1030	686	207	8.1	23.0	8.2				
		JUL										
		07...	1040	695	195	8.1	26.5	7.9				
		AUG										
		04...	1050	998	207	8.4	28.0	8.5				
		SEP										
		28...	1420	864	205	8.0	20.5	9.2				
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)	
FEB												
25...	1100	10	84	.00	27	4.1	7.7	.4	6.2	91	6.8	
AUG												
04...	1050	30	85	.00	27	4.3	7.7	.4	7.6	100	<5.0	
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)
FEB												
25...	1.6	.3	51	163	.22	475	.85	.150	20	80	2	
AUG												
04...	1.7	.5	51	158	.21	426	.00	.080	20	27	2	

FLATTE RIVER BASIN

06791500 CEDAR RIVER NEAR SPALDING, NE

LOCATION.--Lat 41°42'41", long 98°26'48", in NE1/4NE1/4 sec.15, T.20 N., R.10 W., Greeley County, Hydrologic Unit 10210010, on left bank 15 ft (5 m) downstream from bridge on county road, 0.4 mi (0.6 km) upstream from small tributary, and 4.7 mi (7.6 km) northwest of Spalding.

DRAINAGE AREA.--762 sq mi, approximately, of which about 50 mi² (130 km²) 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 (577.974 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 4, 1961, at two sites 6.5 mi (10.5 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--33 years, 153 ft³/s (4.333 m³/s), 110,800 acre-ft/yr (0.137 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) June 23, 1947, gage height, 7.50 ft (2.286 m), site and datum then in use, from rating curve extended above 640 ft³/s (18.1 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 30 ft³/s (0.85 m³/s) Jan. 30, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.50 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 29	1030	631 17.9	4.92 1.500	Aug. 1	2230	348 9.9	4.34 1.323
July 25	0900	316 8.9	4.23 1.289	Aug. 5	0300	*1150 32.6	5.70 1.737

Minimum discharge, 86 ft³/s (2.44 m³/s) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	152	128	136	108	149	149	123	129	116	218	135
2	111	142	90	130	102	146	137	126	128	116	196	130
3	111	152	110	120	94	144	129	128	122	142	158	100
4	113	135	140	114	116	144	122	147	116	172	190	125
5	116	134	180	122	140	146	122	145	112	169	677	110
6	119	136	157	132	150	144	125	122	112	135	348	116
7	124	134	140	141	130	143	125	130	111	124	292	140
8	124	133	141	130	120	143	125	128	111	110	225	160
9	125	131	130	129	110	142	128	128	108	106	212	140
10	123	128	114	125	100	140	127	126	112	105	183	190
11	119	125	145	114	86	139	126	125	116	103	158	180
12	121	129	150	130	104	143	126	128	119	101	150	150
13	124	132	134	138	125	143	125	130	116	100	145	140
14	128	129	131	134	135	142	123	133	126	96	150	134
15	123	129	135	130	150	145	122	133	133	100	155	137
16	146	128	137	116	175	143	122	136	135	106	147	137
17	179	123	136	106	200	141	125	158	130	106	142	135
18	178	123	130	100	182	139	122	193	124	126	137	139
19	147	123	112	120	175	139	121	222	120	130	137	140
20	137	124	94	140	166	140	123	180	118	126	131	137
21	133	127	110	137	162	140	127	166	116	130	126	132
22	131	132	130	135	156	153	146	160	113	130	125	126
23	130	132	135	136	151	166	144	158	118	128	127	124
24	123	131	116	142	151	165	139	150	112	128	143	130
25	123	131	98	145	150	163	135	145	108	206	178	129
26	123	130	104	142	147	159	128	148	105	186	200	135
27	136	129	130	139	154	152	122	153	103	284	181	138
28	143	129	125	139	152	173	119	153	103	266	166	147
29	173	131	130	135	---	206	119	143	114	255	147	144
30	149	131	139	125	---	190	121	138	114	228	140	141
31	155	---	135	116	---	166	---	134	---	155	140	---
TOTAL	4100	3945	3986	3998	3891	4688	3824	4489	3504	4485	5824	4121
MEAN	132	132	129	129	139	151	127	145	117	145	188	137
MAX	179	152	180	145	200	206	149	222	135	284	677	190
MIN	111	123	90	100	86	139	119	122	103	96	125	100
AC-FT	8130	7820	7910	7930	7720	9300	7580	8900	6950	8900	11550	8170
CAL YR 1980	TOTAL	51822	MEAN	142	MAX	620	MIN	86	AC-FT	102800		
WTR YR 1981	TOTAL	50855	MEAN	139	MAX	677	MIN	86	AC-FT	100900		

06792000 CEDAR RIVER NEAR FULLERTON, NE

LOCATION (REVISED).--Lat 41°23'45"N, long 98°00'15"W, 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 (5 km) northwest of Fullerton and 7.2 mi (11.6 km), upstream from mouth.

DRAINAGE AREA.--1,220 mi² (3,160 km²), approximately, of which about 480 mi² (1,240 km²) 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 (499.381 m) 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 (0.610 m) higher, and Apr. 16, 1971, to Aug. 26, 1980, on downstream side of bridge pier at present datum.

REMARKS.--Records good except those for winter period, 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.--41 years (1940-81), 239 ft³/s (6.768 m³/s), 173,200 acre-ft/yr (0.214 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,700 ft³/s (1,830 m³/s) Aug. 13, 1966, gage height, 16.90 ft (5.151 m), present datum, from high point on surge, from rating curve extended above 6,600 ft³/s (187 m³/s) on basis of flow-over-highway-embankment and contracted-opening measurement of peak flow; minimum daily, 30 ft³/s (0.85 m³/s) July 18, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,210 ft³/s (176 m³/s) Aug. 5 at 1500, gage height, 9.02 ft (2.749 m), no other peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 35 ft³/s (0.99 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	186	170	185	165	199	216	146	176	149	270	192
2	158	183	70	180	155	194	197	146	176	139	569	184
3	151	182	130	170	145	188	180	148	171	160	490	156
4	165	223	150	165	160	198	173	191	157	180	307	178
5	148	190	180	170	180	195	179	183	153	193	4470	162
6	138	176	180	185	200	187	173	179	149	208	1980	165
7	145	175	170	190	190	178	168	141	145	161	631	204
8	138	179	160	180	180	178	168	170	137	111	461	223
9	151	177	160	180	170	177	169	166	137	97	332	200
10	132	172	150	175	160	170	208	164	137	74	280	245
11	145	161	160	165	145	167	177	166	141	66	235	237
12	145	146	170	185	160	166	174	168	147	43	193	212
13	135	144	185	190	180	161	172	172	144	58	183	201
14	138	185	233	185	190	164	169	176	165	35	188	184
15	151	182	208	185	210	164	158	180	165	36	165	180
16	182	177	237	165	240	164	151	191	170	42	151	203
17	191	171	200	155	270	168	159	212	187	43	165	188
18	204	171	178	150	255	172	163	253	161	43	146	181
19	214	174	130	170	255	176	164	276	155	104	136	181
20	192	175	125	190	250	179	164	291	152	190	135	182
21	178	180	150	185	240	175	168	272	147	142	135	184
22	171	185	180	185	209	184	183	233	135	165	135	179
23	180	185	185	185	189	184	178	239	119	174	136	176
24	165	185	170	185	179	189	180	232	96	157	142	176
25	161	180	150	190	180	194	170	216	106	161	168	177
26	165	180	155	190	181	188	162	211	96	348	219	188
27	200	180	180	190	195	184	148	204	92	307	242	193
28	180	180	175	190	204	212	189	202	93	276	232	207
29	169	180	180	190	---	298	161	217	129	315	226	193
30	175	180	190	185	---	274	147	185	155	294	208	197
31	175	---	185	175	---	243	---	179	---	292	207	---
TOTAL	5077	5344	5246	5570	5437	5870	5168	6109	4293	4763	13537	5728
MEAN	164	178	169	180	194	189	172	197	143	154	437	191
MAX	214	223	237	190	270	298	216	291	187	348	4470	245
MIN	132	144	70	150	145	161	147	141	92	35	135	156
AC-FT	10070	10600	10410	11050	10780	11640	10250	12120	8520	9450	26850	11360
CAL YR 1980	TOTAL	72441	MEAN 198	MAX 795	MIN 31	AC-FT 143700						
WTR YR 1981	TOTAL	72142	MEAN 198	MAX 4470	MIN 35	AC-FT 143100						

PLATTE RIVER BASIN

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 current year.

WATER TEMPERATURES: July 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 550 micromhos Jan. 1, 1978; minimum daily, 119 micromhos Nov. 23, 1980.

WATER TEMPERATURES: Maximum, 36.0°C July 7, 1975; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 380 micromhos Jan. 6; minimum daily, 119 micromhos Nov. 23.

WATER TEMPERATURES: Maximum, 33.0°C July 19; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEGUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBAL T UNITS) (00080)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT									
22...	1000	161	260	8.0	9.8	45	110	.00	34
NOV									
19...	0945	172	255	7.8	.0	10	110	.00	34
DEC									
17...	1010	205	242	7.9	.5	5	110	.00	34
JAN									
07...	1030	160	250	8.0	.0	5	120	.00	38
FEB									
05...	1105	181	315	7.9	.0	5	140	.00	44
MAR									
04...	1005	198	245	8.1	4.5	15	120	.00	37
APR									
01...	1505	219	285	7.8	10.5	25	120	.00	37
MAY									
06...	1700	187	287	8.4	15.0	10	130	.00	40
JUN									
02...	1220	179	226	8.5	22.0	20	120	.00	39
30...	1010	156	235	7.9	22.0	50	100	.00	32
AUG									
26...	1040	203	290	8.2	22.5	25	120	.00	39
SEP									
23...	1415	173	269	8.4	20.0	5	110	.00	36

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 CAC03) (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									
22...	5.5	7.4	.3	8.3	120	9.2	3.3	.2	58
NOV									
19...	5.9	7.1	.3	6.3	130	4.6	1.3	.2	--
DEC									
17...	5.4	7.1	.3	5.6	120	9.6	1.4	.2	39
JAN									
07...	6.4	8.0	.3	6.0	130	13	2.5	.2	44
FEB									
05...	7.1	7.9	.3	7.2	160	10	1.5	.3	48
MAR									
04...	5.9	8.2	.3	5.6	130	9.6	1.5	.2	38
APR									
01...	6.1	8.4	.3	7.8	130	2.5	2.4	.3	36
MAY									
06...	6.3	8.3	.3	7.4	140	2.3	1.8	.6	35
JUN									
02...	6.1	8.0	.3	6.4	130	1.3	1.3	.2	35
30...	5.3	7.0	.3	7.0	110	3.3	1.5	.2	34
AUG									
26...	6.6	8.1	.3	7.8	140	<5.0	2.7	.3	39
SEP									
23...	5.8	7.7	.3	6.6	130	<5.0	1.3	.3	39

PLATTE RIVER BASIN

06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 22...	199	.27	86.5	.21	.390	.300	20	20	8
NOV 19...	--	--	--	.00	.160	.150	20	20	20
DEC 17...	176	.24	97.4	.44	.230	.170	10	40	20
JAN 07...	199	.27	86.0	.57	.280	.190	20	30	10
FEB 05...	225	.31	110	.52	.200	.170	10	30	10
MAR 04...	185	.25	98.9	.27	.270	.190	20	50	10
APR 01...	181	.25	107	.55	.330	.210	30	40	10
MAY 06...	186	.25	93.9	.06	.340	.180	20	20	4
JUN 02...	176	.24	85.1	.00	.430	.150	10	30	4
30...	157	.21	66.1	.05	.380	.210	30	40	5
AUG 26...	192	.26	105	.26	.440	.240	20	20	2
SEP 23...	180	.24	84.1	.02	.250	.150	30	14	2

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	288	126	187	297	260	270	270	262	301	247	193	261
2	262	132	174	280	308	277	269	269	286	250	194	290
3	275	172	203	352	350	268	270	268	283	248	238	281
4	266	178	171	308	346	269	268	252	295	247	237	284
5	264	154	162	351	348	267	265	262	280	263	268	274
6	275	202	157	380	319	266	269	261	299	248	199	277
7	264	237	194	288	316	266	273	264	292	244	241	273
8	285	241	162	286	348	269	267	263	261	262	247	271
9	272	239	179	352	313	268	269	262	290	263	237	270
10	268	186	183	298	350	269	265	261	283	262	253	253
11	268	198	319	282	301	273	267	261	283	267	266	253
12	271	167	322	353	300	269	268	258	291	252	273	268
13	281	208	322	311	301	270	268	256	300	257	284	269
14	272	222	321	358	252	269	267	258	289	230	281	277
15	274	199	321	281	246	280	272	255	290	240	291	274
16	272	224	321	354	230	280	289	248	265	198	309	274
17	272	222	319	288	216	279	270	249	270	239	278	278
18	274	252	318	312	216	274	265	248	264	238	288	283
19	241	255	322	293	204	279	275	271	269	240	289	280
20	254	156	323	280	231	275	268	259	270	262	290	282
21	285	144	302	361	257	274	258	250	265	250	291	278
22	279	192	322	314	259	273	260	257	270	251	291	274
23	281	119	332	302	260	273	270	260	271	230	285	277
24	275	136	323	362	257	276	269	252	289	230	285	274
25	278	147	322	361	352	270	270	267	267	234	285	277
26	273	296	321	364	240	285	263	260	283	238	301	269
27	259	171	138	368	265	288	267	255	275	197	277	273
28	255	131	139	362	280	286	258	260	279	217	251	274
29	266	227	214	364	---	286	263	260	251	231	270	268
30	276	154	131	366	---	280	271	272	252	225	259	270
31	272	---	158	362	---	279	---	267	---	210	275	---

PLATTE RIVER BASIN

06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	4.0	1.0	.0	.0	8.0	15.0	24.0	25.0	27.0	26.0	16.0
2	12.0	11.0	.0	.0	.0	9.0	14.0	24.0	27.0	27.0	26.0	24.0
3	18.0	12.0	.0	.0	.0	10.0	15.0	16.0	27.0	26.0	26.0	20.0
4	18.0	10.0	1.0	.0	.0	9.0	10.0	18.0	29.0	25.0	26.0	24.0
5	11.0	11.0	.0	.0	.0	8.0	12.0	19.0	30.0	28.0	26.0	26.0
6	18.0	13.0	1.0	.0	.0	9.0	16.0	18.0	30.0	30.0	25.0	25.0
7	20.0	8.0	1.0	.0	.0	8.0	18.0	19.0	23.0	30.0	25.0	20.0
8	21.0	1.0	.0	.0	1.0	10.0	14.0	17.0	30.0	30.0	22.0	21.0
9	20.0	7.0	1.0	.0	.0	9.0	17.0	13.0	25.0	30.0	26.0	18.0
10	14.0	8.0	2.0	.0	.0	10.0	19.0	16.0	28.0	32.0	21.0	18.0
11	15.0	7.0	1.0	.0	.0	10.0	15.0	19.0	29.0	30.0	28.0	26.0
12	14.0	2.0	1.0	.0	.0	13.0	13.0	16.0	28.0	26.0	23.0	16.0
13	12.0	4.0	2.0	.0	.0	13.0	12.0	12.0	27.0	26.0	24.0	22.0
14	11.0	5.0	1.0	.0	1.0	12.0	16.0	20.0	24.0	26.0	24.0	18.0
15	13.0	4.0	5.0	.0	2.0	8.0	14.0	20.0	22.0	26.0	29.0	15.0
16	11.0	3.0	3.0	.0	.0	10.0	20.0	13.0	26.0	28.0	24.0	22.0
17	10.0	2.0	1.0	.0	3.0	8.0	17.0	11.0	25.0	32.0	29.0	18.0
18	10.0	3.0	.0	.0	3.0	9.0	15.0	10.0	26.0	32.0	28.0	16.0
19	12.0	4.0	.0	.0	2.0	8.0	13.0	11.0	23.0	33.0	22.0	15.0
20	15.0	2.0	.0	.0	5.0	8.0	14.0	20.0	27.0	28.0	22.0	24.0
21	10.0	2.0	.0	.0	5.0	9.0	14.0	18.0	26.0	28.0	22.0	20.0
22	9.0	5.0	.0	.0	6.0	11.0	16.0	23.0	26.0	30.0	24.0	18.0
23	8.0	3.0	.0	.0	8.0	13.0	18.0	23.0	29.0	28.0	24.0	16.0
24	9.0	2.0	.0	.0	10.0	15.0	20.0	15.0	28.0	28.0	26.0	20.0
25	8.0	3.0	.0	.0	7.0	18.0	25.0	23.0	27.0	26.0	22.0	21.0
26	5.0	2.0	.0	.0	8.0	11.0	26.0	23.0	30.0	22.0	25.0	16.0
27	3.0	2.0	.0	.0	9.0	14.0	28.0	23.0	31.0	18.0	22.0	16.0
28	3.0	3.0	.0	.0	10.0	9.0	21.0	25.0	30.0	22.0	20.0	14.0
29	5.0	3.0	.0	.0	---	10.0	22.0	26.0	26.0	28.0	25.0	16.0
30	3.0	5.0	.0	.0	---	15.0	20.0	27.0	30.0	28.0	22.0	16.0
31	10.0	---	.0	.0	---	17.0	---	21.0	---	28.0	24.0	---

PLATTE RIVER BASIN

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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 (3 km) upstream from gaging station and 5.5 mi (8.8 km) southwest of Genoa.

PERIOD OF RECORD.--Water year 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to current year.

WATER TEMPERATURES: October 1972 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 479 micromhos June 1, 1977; minimum daily, 178 micromhos Aug. 16, 1980.

WATER TEMPERATURES: Maximum, 36.5°C July 11, 13, 14, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 371 micromhos Dec. 25; minimum daily, 192 micromhos Aug. 6.

WATER TEMPERATURES: Maximum, 34.0°C July 12, 13; 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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 CAC03) (00900)
OCT										
22...	1300	1820	260	8.3	14.0	5.1	9.7	280	440	100
NOV										
19...	1100	2380	230	7.9	1.0	35	14.6	K40	190	94
DEC										
17...	1200	2730	222	7.9	2.0	50	12.4	K333	K140	83
JAN										
07...	1130	460	--	7.9	1.0	19	12.4	K8	120	120
FEB										
05...	1510	814	320	7.9	.0	8.5	13.1	K3	K23	140
MAR										
04...	1300	2420	230	8.1	4.0	34	12.0	150	100	100
APR										
01...	1255	2790	232	8.0	10.0	35	11.2	870	820	100
MAY										
06...	1435	1840	272	8.3	18.5	22	11.1	K120	K90	110
JUN										
02...	1530	1750	261	8.7	24.0	15	8.8	200	300	110
30...	1230	667	255	8.2	27.5	300	7.6	3700	18000	110
AUG										
25...	1130	1790	217	8.2	21.0	52	8.0	K8700	K18000	99
SEP										
23...	1515	1730	254	8.5	20.0	15	11.0	300	K100	110

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

DATE	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- LINEITY LAB (MG/L AS CAC03) (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)
OCT										
22...	.00	32	5.2	8.4	.4	7.3	110	9.2	2.9	.3
NOV										
19...	.00	30	4.6	7.6	.3	5.9	110	3.0	1.8	.3
DEC										
17...	.00	26	4.5	6.9	.3	5.6	98	8.8	1.8	.3
JAN										
07...	.00	36	6.1	9.4	.4	6.4	120	14	1.5	.3
FEB										
05...	.00	46	7.2	11	.4	7.6	150	13	2.2	.3
MAR										
04...	.00	33	5.2	8.3	.4	5.8	110	11	2.0	.2
APR										
01...	.00	33	5.1	8.5	.4	7.0	110	5.8	2.0	.3
MAY										
06...	.00	35	5.5	9.1	.4	7.2	120	2.6	1.9	.3
JUN										
02...	.00	34	5.4	9.5	.4	7.3	125	1.9	1.9	.3
30...	.00	35	6.3	9.0	.4	8.6	120	2.6	2.3	.3
AUG										
25...	.00	31	5.2	7.6	.3	7.5	120	1.0	2.7	.2
SEP										
23...	.00	34	5.3	8.1	.4	6.8	120	45.0	1.9	.3

PLATTE RIVER BASIN

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	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)	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, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT										
22...	49	186	183	.25	914	.48	.48	.080	.070	1.0
NOV										
19...	50	182	173	.25	1170	.68	.68	.060	.050	1.2
DEC										
17...	36	163	149	.22	1200	.69	.00	.100	.000	.61
JAN										
07...	54	201	204	.27	250	.95	1.0	.110	.140	.59
FEB										
05...	65	239	248	.33	525	1.0	1.1	.180	.180	.48
MAR										
04...	48	191	183	.26	1250	.72	.69	.060	.060	1.0
APR										
01...	46	183	176	.25	1380	.43	.42	.100	.070	.89
MAY										
06...	45	183	179	.25	909	.05	.02	.060	.050	2.7
JUN										
02...	46	201	182	.27	950	.00	.01	.050	.050	1.4
30...	43	195	180	.27	351	.15	.10	.170	.030	2.8
AUG										
25...	44	169	172	.23	817	.12	<.10	.210	.210	1.2
SEP										
23...	51	191	185	.26	892	.07	.07	.060	.060	.82

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
22...	.19	1.10	.84	.26	1.6	.75	.310	.210	5.6
NOV									
19...	.30	1.30	.95	.35	2.0	1.1	.260	.140	6.9
DEC									
17...	.49	.71	.22	.49	1.4	.49	.260	.160	10
JAN									
07...	.57	.70	.00	.71	1.6	1.7	.220	.190	16
FEB									
05...	.28	.66	.20	.46	1.7	1.6	.200	.170	2.6
MAR									
04...	.60	1.10	.44	.66	1.8	1.4	.270	.150	4.4
APR									
01...	.92	.99	.00	.99	1.4	1.4	.310	.190	7.3
MAY									
06...	.41	2.80	2.3	.46	2.9	.48	.320	.110	6.9
JUN									
02...	.52	1.40	.83	.57	1.4	.58	.350	.090	14
30...	.84	3.00	2.1	.87	3.2	.97	.560	.130	20
AUG									
25...	.20	1.40	.99	.41	1.5	--	.330	.070	5.8
SEP									
23...	.43	.88	.39	.49	.95	.57	.240	.110	7.7

PLATTE RIVER BASIN

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06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC	ARSENIC	ARSENIC	BARIUM,	BARIUM,	BARIUM,	CADMIUM	CADMIUM	CHRO-	CHRO-	
		TOTAL (UG/L AS AS) (01002)	SUS- PENDE TOTAL (UG/L AS AS) (01001)	DIS- SOLVED (UG/L AS AS) (01000)	TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	DIS- SOLVED (UG/L AS BA) (01005)	TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	DIS- SOLVED (UG/L AS CD) (01025)	MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR) (01031)	
NOV 19...	1100	8	1	7	200	100	100	2	<1	0	0	
FEB 05...	1510	11	1	10	100	--	--	0	<1	10	10	
MAY 06...	1435	10	1	9	100	0	100	0	<1	20	20	
AUG 25...	1130	9	2	7	100	0	100	2	<1	0	0	
DATE		CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)
NOV 19...	0	3	<3	5	2	3	3100	3100	20	12	8	
FEB 05...	0	0	<3	4	1	3	550	--	<10	8	8	
MAY 06...	0	0	<3	4	2	2	1300	1300	20	3	0	
AUG 25...	0	3	<3	10	7	3	3100	3100	46	11	7	
DATE		LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
NOV 19...	4	120	100	20	.0	.0	.1	8	5	3	1	
FEB 05...	0	20	20	4	.1	.1	.0	3	3	0	1	
MAY 06...	3	100	100	1	.1	.1	.0	3	3	0	1	
AUG 25...	4	190	190	3	.2	.0	1.0	6	4	2	1	
DATE		SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG) (01076)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)	
NOV 19...	0	1	1	1	0	60	50	7	6.5	3.7		
FEB 05...	0	1	0	0	0	50	40	10	1.8	--		
MAY 06...	0	1	0	0	0	40	--	<3	5.2	--		
AUG 25...	0	1	0	0	0	30	--	<3	3.9	.7		

PLATTE RIVER BASIN

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 19,80 1100	MAR 4,81 1300	MAY 6,81 1435	JUN 2,81 1530
TOTAL CELLS/ML	15000	7400	92000	33000
DIVERSITY: DIVISION	1.3	0.5	1.3	1.4
..CLASS	1.3	0.5	1.3	1.4
..ORDER	2.5	2.3	1.9	1.8
...FAMILY	2.7	2.4	2.9	2.7
....GENUS	3.0	2.7	3.4	3.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
...ACHNANTHALES								
....ACHNANTHACEAE								
.....ACHNANTHES	250	2	180	2	--	-	--	-
.....COCCONEIS	310	2	210	3	--	-	--	-
...BACILLARIALES								
....NITZSCHIA	1300	9	770	10	9400	10	2100	6
.....EPITHEMIALES								
....EPITHEMIAEAE								
.....EPITHEMIA	--	-	*	0	--	-	--	-
.....RHOPALODIA	*	0	--	-	--	-	--	-
...EUPODISCALES								
....COSCINODISCAEAE								
.....CYCLOTELLA	690	5	950	13	--	-	3400	10
.....MELOSTRA	--	-	180	2	1200	1	--	-
.....STEPHANODISCUS	--	-	--	-	14000#	15	--	-
...FRAGILARIALES								
....FRAGILARIAEAE								
.....DIATOMA	*	0	--	-	--	-	--	-
....FRAGILARIA	4700#	31	3700#	50	6400	7	--	-
....OPEPHORA	440	3	--	-	--	-	340	1
....SYNEDRA	250	2	110	1	--	-	--	-
...NAVICULALES								
....CYMBELLACEAE								
.....AMPHORA	190	1	--	-	--	-	--	-
.....CYMBELLA	--	-	--	-	--	-	--	-
...GOMPHONEMACEAE								
....GOMPHONEMA	190	1	110	1	--	-	--	-
...NAVICULACEAE								
.....ANOMOEONEIS	120	1	--	-	--	-	--	-
.....CALONEIS	*	0	--	-	--	-	--	-
.....NAVICULA	560	4	350	5	*	0	170	1
...SURIPELLALES								
....SURIPELLACEAE								
.....SURIPELLA	--	-	110	1	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHLOROCOCCACEAE								
.....SCHROEDERIA	--	-	70	1	--	-	--	-
.....TETRAEDRON	--	-	--	-	*	0	--	-
...DICTYOSPHAERIAEAE								
....DICTYOSPHAERIUM	--	-	140	2	8800	10	1200	4
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	3600	4	--	-
...MICRACTINIAEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	*	0	1200	4
...OOCYSTACEAE								
....ANKISTRODESMUS	120	1	--	-	3900	4	2400	7
....CHODATELLA	--	-	--	-	--	-	340	1
....KIRCHNERIELLA	--	-	*	0	--	-	520	2
....NEPHROCYTIUM	--	-	--	-	--	-	690	2
....OOCYSTIS	--	-	--	-	--	-	690	2
...SELENASTRUM								
....SCENEDESMACEAE								
.....ACTINASTRUM	--	-	--	-	19000#	21	2900	9
.....COELASTRUM	--	-	--	-	--	-	--	-
.....CRUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESMUS	1200	8	210	3	8500	9	6700#	20
....TETRASTRUM	--	-	140	2	2400	3	--	-
...VOLVOCALES								
....CHLAMYDOMONADACEAE								
.....CHLAMYDOMONAS	*	0	110	1	1200	1	690	2
...PHACOTACEAE								
....PTEROMONAS	--	-	--	-	--	-	170	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 19,80 1100		MAR 4,81 1300		MAY 6,81 1435		JUN 2,81 1530	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	370	2	--	-	7900	9	6500#	20
...NOSTOCALES								
...NOSTOCACEAE								
....APHANIZOMENON	--	-	--	-	--	-	--	-
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	4000#	27	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....EUGLENA	*	0	--	-	--	-	--	-
....TRACHELOMONAS	--	-	*	0	--	-	170	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUN 30,81 1230	AUG 25,81 1130	SEP 23,81 1515
TOTAL CELLS/ML	130000	170000	58000
DIVERSITY: DIVISION	1.4	0.8	1.1
..CLASS	1.4	0.8	1.1
..ORDER	1.8	1.3	2.1
...FAMILY	2.5	2.4	2.6
....GENUS	3.1	3.0	2.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
..BACILLARIOPHYCEAE						
...ACHNANTHALES						
....ACHNANTHACEAE						
.....ACHNANTHES	--	-	--	-	1100	2
.....COCCONEIS	--	-	--	-	1100	2
...BACILLARIALES						
....NITZSCHIA	7000	5	12000	7	4700	8
....EPITHEMIALES						
.....EPITHEMIA	--	-	--	-	--	-
.....RHOPALODIA	--	-	*	0	--	-
...EUPHODISCALES						
....COSCINODISCACEAE						
.....CYCLOTELLA	24000#	18	9100	5	18000#	31
.....MELOSIRA	11000	8	4900	3	--	-
.....STEPHANODISCUS	--	-	--	-	--	-
...FRAGILARIALES						
....FRAGILARIA	--	-	--	-	1800	3
....OPEPHORA	--	-	--	-	--	-
....SYNEDRA	2500	2	2800	2	1100	2
...NAVICULALES						
....CYMBELLACEAE						
.....AMPHORA	--	-	--	-	--	-
.....CYMBELLA	--	-	--	-	1100	2
....GOMPHONEMACEAE						
.....GOMPHONEMA	--	-	--	-	--	-
....NAVICULACEAE						
.....ANOMOEONEIS	--	-	--	-	--	-
.....CALONEIS	--	-	--	-	--	-
.....NAVICULA	*	0	*	0	2200	4
...SURIRELLALES						
....SURIRELLACEAE						
.....SURIRELLA	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHLOROCOCCACEAE						
.....SCHROEDERIA	--	-	*	0	--	-
.....TETRAEDRON	--	-	*	0	1100	2
...DICTYOSPHAERIALES						
....DICTYOSPHAERIUM	25000#	18	20000	12	1100	2
....HYDRODICTYACEAE						
.....PEDIASTRUM	--	-	--	-	--	-
....MICRACTINIACEAE						
.....GOLENKINIA	--	-	--	-	1100	2
.....MICRACTINIUM	--	-	5600	3	--	-
....OOCYSTACEAE						
.....ANKISTRODESMUS	4500	3	20000	12	1100	2
.....CHODATELLA	--	-	--	-	--	-
.....KIRCHNERIELLA	--	-	1400	1	--	-
.....NEPHROCYTIUM	--	-	--	-	--	-
.....OOCYSTIS	--	-	--	-	--	-
.....SELENASTRUM	--	-	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	14000	10	5600	3	--	-
....COELASTRUM	4000	3	--	-	--	-
....CRUCIGENIA	--	-	2800	2	--	-
....SCENEDESMUS	26000#	19	70000#	42	22000#	38
....TETRASTRUM	--	-	2800	2	--	-
...VOLVOCALES						
....CHLAMYDOMONADACEAE						
.....CHLAMYDOMONAS	*	0	2800	2	--	-
....PHACOTACEAE						
.....PTEROMONAS	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUN 30,81 1230		AUG 25,81 1130		SEP 23,81 1515	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	3000	2	4200	3	--	-
...NOSTOCALES						
...NOSTOCACEAE						
....APHANIZOMENON	13000	9	--	-	--	-
...OSCILLATORIALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	1100	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

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 (3 km) downstream from point of diversion and 3.5 mi (5.6 km) 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 (477.396 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1956, at datum 3.0 feet higher.

REMARKS.--Records excellent. 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 (2.4 km) downstream from Loup River. Diversion began Dec. 2, 1936.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,410 ft³/s (96.6 m³/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, 2,900 ft³/s (82.1 m³/s) Feb. 23; minimum daily, 36 ft³/s (1.02 m³/s) Jan. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	2160	1600	1500	595	2530	2650	1570	1750	770	1710	1550
2	1200	2160	80	93	308	2360	2400	1470	1740	808	2020	1540
3	1260	2110	45	49	275	2370	2150	1470	1710	857	2430	1610
4	1270	2160	57	36	482	2510	2110	1630	1640	1120	2360	1520
5	1250	2110	495	78	783	2730	2200	1680	1550	1650	2000	1660
6	1250	2110	54	214	999	2520	2130	1780	1490	1550	2090	1700
7	1240	2090	121	527	1110	2480	1800	1600	1410	1340	2820	2200
8	1230	2140	104	840	1310	2360	1800	1570	1360	1040	2770	2230
9	1270	2170	67	998	1590	2350	1780	1560	1320	828	2210	2200
10	1410	2180	43	1020	537	2340	1780	1660	1300	668	2050	1970
11	1550	2180	96	1100	1130	2310	1860	1740	1300	551	1930	1940
12	1660	2160	207	1320	1400	2210	1850	1740	1330	430	1860	1850
13	1820	2230	1080	1470	1400	2180	1830	1700	1310	369	1900	1800
14	1750	2450	870	1420	1490	2210	1970	1930	1280	289	1900	1740
15	1760	2390	758	1750	1740	2150	1890	2020	1370	239	1830	1770
16	1920	2390	2700	1610	1840	2150	1970	2040	1490	218	1710	1750
17	2110	2330	2780	1420	2020	2120	1690	2280	1860	228	1710	1850
18	2870	2260	2340	1380	1910	2310	1720	2720	1660	250	1580	1820
19	2520	2280	216	1440	1710	2270	1660	2780	1450	582	1620	1790
20	2080	2250	62	1740	2290	2230	1680	2840	1330	779	1570	1770
21	1980	2270	38	1910	2570	2210	1810	2870	1220	779	1570	1750
22	1820	2210	191	1730	2670	2460	1890	2570	1130	963	1440	1760
23	2210	2200	478	1690	2900	2340	2100	2340	1050	1050	1410	1780
24	2250	2290	648	1810	2590	2200	2030	2270	929	1400	1380	1900
25	2220	1360	802	2080	2390	2110	1920	2160	852	1540	1790	1910
26	2120	1410	986	2150	2420	2140	1790	2060	712	1690	1950	1930
27	2220	1670	1550	1920	2510	2120	1660	2000	656	2280	1940	1950
28	2630	1240	1840	1710	2560	2300	1610	1980	622	2370	1790	2040
29	2460	2180	1640	1710	---	2710	1610	1920	661	2260	1940	2130
30	2240	2130	886	1390	---	2780	1540	1940	686	2140	1710	2030
31	2120	---	1140	1500	---	2770	---	1880	---	1930	1610	---
TOTAL	56890	63270	23974	39605	45529	72830	56880	61770	38168	32968	58600	55440
MEAN	1835	2109	773	1278	1626	2349	1896	1993	1272	1063	1890	1848
MAX	2870	2450	2780	2150	2900	2780	2650	2870	1860	2370	2820	2230
MIN	1200	1240	38	36	275	2110	1540	1470	622	218	1380	1520
AC-FT	112800	125500	47550	78560	90310	144500	112800	122500	75710	65390	116200	110000
CAL YR 1980	TOTAL	529644.4	MEAN	1447	MAX	3010	MIN	9.4	AC-FT	1051000		
WTR YR 1981	TOTAL	605924.0	MEAN	1660	MAX	2900	MIN	36	AC-FT	1202000		

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 (4 m) downstream from bridge on State Highway 39, 2 mi (3 km) south of Genoa, 3 mi (5 km) upstream from Beaver Creek, and 6 mi (10 km) downstream from diversion dam of Loup River Public Power District.

DRAINAGE AREA.--14,400 mi² (37,300 km²), approximately, of which about 5,650 mi² (14,600 km²) 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 (469.432 m) National Geodetic Vertical Datum of 1929, Aug. 17, 1928, to June 30, 1932, nonrecording gage at present site at datum 1.49 ft (0.454 m) 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 (90 m) upstream at present datum.

REMARKS.--Records fair except those for winter period, which are 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 (10 km) upstream and returns to Platte River below mouth of Loup River; diversion began Dec. 2, 1936.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 129,000 ft³/s (3,650 m³/s) Aug. 13, 1966, gage height, 13.93 ft (4.246 m), from rating curve extended above 42,000 ft³/s (1,190 m³/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, 22,000 ft³/s (623 m³/s) Aug. 5, gage height, 10.00 ft (3.048 m); maximum gage height, 11.83 ft (3.606 m) Dec. 30, backwater from ice; no flow Sept. 8, 13, June 22-25, July 6 to Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	5.4	200	700	600	47	250	3.8	3.8	45	.00	66
2	1.8	5.5	1240	2000	700	35	46	3.8	3.8	15	.00	71
3	1.5	5.2	1400	1900	1000	36	20	5.3	3.5	16	.00	78
4	1.2	5.3	1430	1950	1000	50	16	6.4	2.8	12	.00	76
5	1.0	5.6	2000	2100	1200	55	15	4.2	2.4	8.8	11200	73
6	.90	7.2	2600	2000	1200	41	15	3.9	1.9	.00	12200	62
7	.60	7.1	2300	1800	1300	51	12	3.9	1.7	.00	1920	51
8	.00	7.1	1900	1400	1400	51	11	5.5	1.3	.00	175	54
9	.20	7.0	1800	1200	1200	78	11	4.1	.90	.00	40	63
10	.20	7.3	1850	1100	2100	70	10	3.8	.68	.00	48	65
11	.20	7.6	2100	800	900	34	9.9	3.9	.90	.00	52	44
12	.20	9.1	2200	900	700	37	9.1	5.1	.80	.00	24	36
13	.00	13	2000	800	1100	52	8.9	4.8	1.0	.00	39	33
14	.20	15	2200	800	1300	51	8.1	4.3	.80	.00	37	32
15	.30	15	2000	400	1500	51	8.2	4.2	2.0	.00	36	30
16	.50	14	498	250	1800	94	8.3	5.5	1.4	.00	36	31
17	.90	15	427	350	1800	72	7.7	9.2	21	.00	37	30
18	992	15	168	800	2000	59	7.3	450	3.6	.00	37	28
19	126	20	2100	900	2500	67	7.6	2240	2.7	.00	37	28
20	17	21	1000	500	1800	59	7.7	1270	2.3	.00	37	26
21	8.1	18	640	600	1350	48	7.9	465	.92	.00	37	25
22	6.3	17	620	500	630	30	10	42	.00	.00	38	25
23	6.8	15	600	600	245	37	9.9	20	.00	.00	45	29
24	5.9	14	500	500	59	64	7.3	14	.00	.00	44	40
25	4.8	590	400	400	48	66	6.8	11	.00	.00	57	35
26	3.9	902	600	300	52	65	5.8	9.6	23	.00	54	34
27	6.1	719	700	200	96	68	5.5	9.5	37	.00	53	33
28	7.7	1040	800	200	48	68	5.2	8.1	9.9	.00	59	31
29	8.1	47	1200	200	---	350	5.1	6.8	38	.00	46	31
30	6.9	21	1900	200	---	690	4.0	5.6	58	.00	71	30
31	5.9	---	1500	100	---	370	---	4.8	---	.00	81	---
TOTAL	1217.20	3590.4	40873	26450	29628	2946	556.3	4638.1	226.10	96.80	26540.00	1290
MEAN	39.3	120	1318	853	1058	95.0	18.5	150	7.54	3.12	856	43.0
MAX	992	1040	2600	2100	2500	690	250	2240	58	45	12200	78
MIN	.00	5.2	168	100	48	30	4.0	3.8	.00	.00	.00	25
AC-FT	2410	7120	81070	52460	58770	5840	1100	9200	448	192	52640	2560
CAL YR 1980	TOTAL	190799.00	MEAN	521	MAX	4000	MIN	.00	AC-FT	378400		
WTR YR 1981	TOTAL	138051.90	MEAN	378	MAX	12200	MIN	.00	AC-FT	273800		

PLATTE RIVER BASIN

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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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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)
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DEC 17...	1530	750	215	8.0	5.0	60	12.2	K33	K360	88
MAY 19...	1225	1820	258	8.1	14.0	60	9.6	K12000	K26000	110
AUG 05...	1430	18300	208	7.8	26.0	650	4.8	35000	46000	77

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)
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DEC 17...	.00	28	4.3	7.3	.3	6.0	98	8.2	1.7	.2
MAY 19...	.00	34	5.3	8.8	.4	6.6	110	3.7	2.5	.2
AUG 05...	.00	24	4.2	5.9	.3	8.7	81	<5.0	2.8	.3

DATE	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)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED TOTAL (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)
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DEC 17...	47	164	165	.22	332	.72	.72	.160	.020	1.2
MAY 19...	40	189	169	.26	929	.44	.44	.190	.140	1.8
AUG 05...	32	140	127	.19	6920	.38	.38	.470	.280	8.2

DATE	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
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DEC 17...	.55	1.40	.83	.57	2.1	1.3	.320	.160	20
MAY 19...	.58	2.00	1.3	.72	2.4	1.2	.420	.190	10
AUG 05...	2.0	8.70	6.4	2.3	9.1	2.7	1.70	.200	44

PLATTE RIVER BASIN

06793000 LOUP RIVER NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSFNIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
DEC 17...	1530	7	1	6	200	100	100	1	0	1	10
MAY 19...	1225	7	0	8	200	100	100	1	--	<1	20
AUG 05...	1430	14	7	7	800	700	110	0	--	<1	50
DATE	CHRO- MIUM, SUS- PENDE RECOV- (UG/L AS CR) (01031)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
DEC 17...	10	0	3	<3	9	6	3	5000	5000	30	11
MAY 19...	0	20	3	<3	8	0	9	4600	4500	60	9
AUG 05...	40	10	18	<3	53	46	7	43000	43000	210	38
DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
DEC 17...	11	0	200	190	7	.0	.0	.0	6	6	0
MAY 19...	7	2	240	220	20	.1	.1	.0	4	1	3
AUG 05...	37	1	1200	1200	5	.2	.2	.0	47	46	1
DATE	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01146)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG) (01076)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
DEC 17...	1	0	1	0	0	0	30	30	3	10	.5
MAY 19...	1	0	1	0	0	0	--	--	20	14	12
AUG 05...	0	0	1	1	1	0	200	--	<3	5.7	--

06793000 LOUP RIVER NEAR GENOA, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO AUGUST 1981

DATE TIME	DEC 17,80 1530	MAY 19,81 1225	AUG 5,81 1430
TOTAL CELLS/ML	19000	41000	29000
DIVERSITY: DIVISION	0.7	0.4	1.3
..CLASS	0.7	0.4	1.3
..ORDER	1.9	2.1	2.1
...FAMILY	1.9	2.1	2.2
....GENUS	2.3	2.5	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
..BACILLARIOPHYCEAE						
...ACHNANTHALES						
....ACHNANTHACEAE						
.....ACHNANTHES	--	-	210	1	--	-
.....COCCONEIS	290	2	210	1	--	-
..BACILLARIALES						
...NITZSCHIACEAE						
....NITZSCHIA	1200	7	10000#	25	2200	8
...EPITHEMIALES						
....EPITHEMIAEAE						
.....EPITHEMIA	--	-	--	-	*	0
.....RHOPALODIA	210	1	--	-	150	1
...EUPODISCALES						
....COSCINODISCAEAE						
.....CYCLOTELLA	290	2	3100	8	*	0
..FRAGILARIALES						
...FRAGILARIAEAE						
....DIATOMA	140	1	--	-	150	1
....FRAGILARIA	11000#	57	18000#	44	14000#	48
....OPEPHORA	640	3	2300	6	880	3
....SYNEDRA	140	1	210	1	440	2
..NAVICULALES						
...CYMBELLACEAE						
....AMPHORA	--	-	210	1	--	-
....CYMBELLA	*	0	--	-	150	1
...GOMPHONEMACEAE						
....GOMPHONEMA	--	-	--	-	150	1
..NAVICULACEAE						
....NAVICULA	1500	8	2300	6	880	3
....STAURONEIS	*	0	--	-	--	-
..SURIRELLALES						
...SURIRELLACEAE						
....CYMATOPLEURA	--	-	210	1	--	-
....SURIRELLA	210	1	820	2	*	0
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....DICTYOSPHAERIACEAE						
.....DICTYOSPHAERIUM	--	-	--	-	290	1
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	*	0
....KIRCHNERIELLA	*	0	--	-	*	0
....TREUBARIA	--	-	210	1	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	620	2	590	2
....SCENEDESMUS	2900#	15	2500	6	3100	11
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	*	0	--	-	150	1
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
.....ANACYSTIS	*	0	--	-	810	3
...OSCILLATORIALES						
....OSCILLATORIAEAE						
.....LYNGBYA	210	1	--	-	4200	14
....OSCILLATORIA	--	-	--	-	730	3
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
.....EUGLENA	--	-	210	1	--	-
....TRACHELOMONAS	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06793000 LOUP RIVER NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	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)
DEC 17...	1530	750	5.0	1360	2750	--	--	--	39	52	92	100
JAN 07...	1415	1850	1.0	780	3900	--	--	--	38	50	98	100
MAR 31...	1700	466	12.5	1050	1320	--	--	--	68	80	97	100
MAY 19...	1225	1820	14.0	3020	14800	5	5	7	42	66	90	100
AUG 05...	1430	18300	26.0	7920	391000	23	28	33	54	61	85	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)
OCT 21...	1550	8.0	15	--	0	6	67	95	100	--
DEC 17...	1530	750	4	0	8	54	96	100	--	--
JAN 07...	1415	1850	2	0	2	32	83	94	99	100
MAR 31...	1700	466	3	0	9	60	95	99	100	--
MAY 19...	1225	1820	5	0	4	55	97	100	--	--
AUG 05...	1430	18300	3	--	0	17	73	93	100	--

PLATTE RIVER BASIN

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 (2 m) downstream from county road bridge, at the west edge of Loretto.

DRAINAGE AREA.--311 mi² (805 km²), of which about 100 mi² (259 km²) 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 (544.358 m) National Geodetic Vertical Datum of 1929. Prior to May 15, 1945, staff gage at bridge 25 ft (7.6 m) upstream, May 15, 1945, to Aug. 16, 1946, water-stage recorder at site 85 ft (25.9 m) upstream, Aug. 17, 1946, to Sept. 30, 1953, at site 5 ft (1.5 m) downstream, all at same datum.

REMARKS.--Records good except those for winter period, which are poor. Minor diversions for irrigation above station.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--11 years (water years 1945-53, 1980-81), 75.6 ft³/s (2.141 m³/s), 54,770 acre-ft/yr (67.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,570 ft³/s (129 m³/s) June 2, 1950, gage height, 11.74 ft (3.578 m); minimum daily, 12 ft³/s (0.34 m³/s) July 8, Aug. 8, 9, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 249 ft³/s (7.05 m³/s) June 14, gage height, 4.02 ft (1.225 m), no peak above base of 500 ft³/s (14.2 m³/s); minimum daily, 13 ft³/s (0.37 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	47	43	52	25	54	79	38	40	31	58	31
2	31	46	37	45	21	58	68	40	42	30	80	35
3	31	44	25	35	24	55	62	40	48	42	134	35
4	32	43	31	30	24	54	58	57	46	54	108	35
5	32	41	45	30	25	54	58	54	42	41	127	34
6	33	41	47	31	26	54	58	47	38	35	109	34
7	33	42	40	30	26	53	54	44	35	31	81	38
8	32	42	35	28	19	52	51	45	35	29	64	41
9	32	41	30	26	22	51	50	44	33	26	59	40
10	31	41	35	25	17	50	50	43	35	25	51	36
11	31	40	45	24	16	50	49	43	37	23	49	34
12	33	42	55	27	20	50	47	44	36	18	46	33
13	36	44	56	31	27	50	46	48	35	16	44	31
14	35	42	54	29	35	50	46	50	97	16	43	31
15	35	42	52	27	43	48	46	50	71	13	42	30
16	44	42	50	26	68	47	46	52	47	14	41	31
17	54	42	52	22	80	47	44	69	40	14	40	34
18	45	42	53	20	90	47	42	96	34	16	36	35
19	42	43	35	24	73	46	42	113	33	19	33	35
20	41	42	25	27	67	46	42	89	31	22	34	35
21	40	42	30	30	61	46	45	71	33	28	29	36
22	39	42	35	32	60	48	47	64	42	35	30	35
23	38	42	35	35	54	54	53	61	38	29	35	36
24	38	42	29	55	57	55	46	55	35	24	34	36
25	39	40	28	58	55	54	44	54	31	31	35	36
26	39	42	30	51	54	52	42	52	28	126	33	38
27	43	41	27	51	54	53	40	52	28	134	28	38
28	47	42	40	50	61	60	38	50	27	97	29	38
29	46	42	55	49	---	132	38	48	37	98	31	41
30	47	42	56	49	---	134	38	44	37	89	31	42
31	50	---	56	45	---	96	---	43	---	68	31	---
TOTAL	1181	1266	1266	1094	1204	1800	1469	1700	1191	1274	1625	1064
MEAN	38.1	42.2	40.8	35.3	43.0	58.1	49.0	54.8	39.7	41.1	52.4	35.5
MAX	54	47	56	58	90	134	79	113	97	134	134	42
MIN	31	40	25	20	16	46	38	38	27	13	28	30
AC-FT	2340	2510	2510	2170	2390	3570	2910	3370	2360	2530	3220	2110
CAL YR 1980	TOTAL	18157	MEAN 49.6	MAX 290	MIN 12	AC-FT 36010						
WTF YR 1981	TOTAL	16134	MEAN 44.2	MAX 134	MIN 13	AC-FT 32000						

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 (0.3 km) downstream from Union Pacific Railroad bridge, 0.2 mi (0.3 km) upstream from bridge on State Highway 39, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--647 mi² (1,676 km²), of which about 410 mi² (1,062 km²) 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 (470.041 m) 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 (0.6 km) upstream at datum 4.62 ft (1.408 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected slightly by ground-water and surface-water withdrawals for irrigation.

AVERAGE DISCHARGE.--41 years, 121 ft³/s (3.427 m³/s), 87,660 acre-ft/yr (0.108 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s (600 m³/s) July 19, 1950, gage height, 18.70 ft (5.700 m), site and datum then in use, from rating curve extended above 8,500 ft³/s (241 m³/s); minimum daily, 0.41 ft³/s (0.012 m³/s) July 25, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 29	1445	1970 55.8	10.83 3.301
Aug. 5	1800	*2390 67.7	12.30 3.749

Minimum daily discharge, 3.7 ft³/s (0.10 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	56	56	60	58	82	117	55	56	99	88	36
2	34	56	40	58	56	80	100	55	57	70	81	35
3	33	55	50	54	52	78	94	60	58	191	75	34
4	35	53	56	50	54	82	85	63	61	104	102	36
5	35	52	66	45	58	81	82	64	64	77	1730	35
6	36	50	64	46	60	79	79	73	57	72	814	35
7	35	53	62	48	60	75	78	64	54	61	221	40
8	34	51	60	50	58	73	77	62	51	52	145	50
9	34	50	60	47	56	73	76	61	50	45	128	41
10	34	49	60	45	52	73	76	60	49	40	97	39
11	35	49	62	48	42	73	73	59	49	34	84	38
12	34	49	68	50	58	74	72	59	50	29	76	38
13	35	50	70	54	64	71	71	58	49	24	70	38
14	38	55	72	52	74	69	69	59	47	17	67	38
15	44	53	70	50	84	68	67	61	55	11	65	38
16	47	53	70	49	100	67	70	63	98	7.6	64	38
17	48	52	69	48	110	66	71	68	68	6.5	58	39
18	55	54	58	54	112	66	69	81	57	3.7	53	38
19	54	52	44	56	110	66	69	90	51	5.7	50	38
20	51	54	50	56	102	66	69	105	48	43	44	38
21	49	55	58	52	98	67	69	94	49	27	41	38
22	49	54	60	54	96	68	73	84	46	30	40	39
23	49	55	58	58	90	67	74	76	52	29	39	43
24	49	55	43	60	84	69	76	72	49	27	42	48
25	48	51	47	64	82	69	73	66	43	64	65	43
26	47	54	52	62	80	67	67	64	36	44	43	49
27	52	55	56	60	80	63	62	65	31	68	37	47
28	54	56	58	56	80	74	58	64	30	140	36	44
29	53	59	60	54	---	104	56	63	1270	108	36	46
30	55	60	62	52	---	140	55	60	399	98	35	47
31	55	---	64	60	---	168	---	58	---	98	36	---
TOTAL	1344	1600	1825	1652	2110	2418	2227	2086	3134	1725.5	4562	1206
MEAN	43.4	53.3	58.9	53.3	75.4	78.0	74.2	67.3	104	55.7	147	40.2
MAX	55	60	72	64	112	168	117	105	1270	191	1730	50
MIN	33	49	40	45	42	63	55	55	30	3.7	35	34
AC-FT	2670	3170	3620	3280	4190	4800	4420	4140	6220	3420	9050	2390

CAL YR 1980 TOTAL 27168.80 MEAN 74.2 MAX 980 MIN .50 AC-FT 53890
WTF YR 1981 TOTAL 25889.50 MEAN 70.9 MAX 1730 MIN 3.7 AC-FT 51350

PLATTE RIVER BASIN

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
OCT 22...	1530	49	305	8.2	17.0	9.8	33	290	880	150	45
NOV 19...	1400	55	305	8.0	2.0	14.6	--	K70	K320	130	42
DEC 17...	1645	69	278	8.0	4.0	11.6	9	K1333	570	120	38
JAN 07...	1300	48	310	7.6	1.0	13.5	21	K48	200	160	52
FEB 05...	1435	57	370	7.7	.0	10.8	2	K33	92	170	54
MAR 03...	1620	79	385	8.0	5.0	11.5	30	1700	140	130	41
31...	1515	158	255	7.6	12.0	9.2	190	3000	75000	--	33
MAY 06...	1210	75	300	8.2	15.0	10.2	29	1200	1800	140	43
JUN 02...	1630	59	331	8.4	25.0	7.8	--	1900	2400	150	48
29...	1300	1870	188	7.8	19.0	3.0	500	210000	K1300000	70	22
30...	1600	191	220	7.5	27.5	5.6	330	250000	510000	88	27
AUG 25...	1455	55	355	7.7	23.0	6.9	--	K88000	K180000	150	48
SEP 24...	1100	65	301	8.0	18.0	8.3	38	K52000	K79200	140	45

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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 22...	9.9	--	10	321	.45	.010	1.1	1.10	1.6	.300	8.7
NOV 19...	7.2	2.7	2.1	276	.55	.070	.78	.85	1.4	.340	3.6
DEC 17...	7.2	11	2.2	332	.53	.200	.90	1.10	1.6	.360	20
JAN 07...	8.3	5.8	3.6	286	.83	.210	.63	.84	1.7	.310	13
FEB 05...	8.4	14	3.0	323	.86	.320	.98	1.30	2.2	.310	11
MAR 03...	6.9	13	2.9	333	.62	.100	1.3	1.40	2.0	.440	15
31...	--	31	4.2	955	.56	.630	8.4	9.00	9.6	1.00	41
MAY 06...	7.1	2.4	2.1	439	.54	.100	1.5	1.60	2.1	.640	17
JUN 02...	7.8	2.2	2.3	400	.37	.080	1.3	1.40	1.8	.770	14
29...	3.7	3.2	--	7260	1.9	.000	16	16.0	18	3.80	200
30...	5.0	3.9	3.1	5040	1.6	.420	14	14.0	16	2.50	120
AUG 25...	8.4	3.0	6.0	573	.69	.240	1.6	1.80	2.5	.820	--
SEP 24...	7.0	<5.0	3.6	361	.62	.440	1.3	1.70	2.3	.120	9.0

PLATTE RIVER BASIN

06794000 BEAVER CREEK AT GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 19...	1400	.00	8.2	.3	6.3	150	.2	40	201
FEB 05...	1435	.00	9.9	.3	6.9	180	.3	48	258
MAR 03...	1620	--	--	--	--	--	--	--	--
MAY 06...	1210	.00	7.8	.3	6.6	140	.3	31	187
JUN 02...	1630	--	--	--	--	--	--	--	--
AUG 25...	1455	.00	8.7	.3	10	180	.2	33	229

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 19...	.27	30.0	.55	.250	7	200	40	<1	0
FEB 05...	.16	18.6	--	.230	--	--	30	--	--
MAR 03...	.45	71.1	--	--	--	--	--	--	--
MAY 06...	.25	37.9	.44	.350	9	100	--	<1	0
JUN 02...	--	--	.37	--	--	--	--	--	--
AUG 25...	.29	31.6	.67	.790	--	--	40	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 19...	1	20	0	30	.0	1	0	<3
FEB 05...	--	<10	--	30	--	--	--	--
MAR 03...	--	--	--	--	--	--	--	--
MAY 06...	2	40	0	0	.0	1	0	<3
JUN 02...	--	--	--	--	--	--	--	--
AUG 25...	--	42	--	10	--	--	--	--

PLATTE RIVER BASIN

195

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 (24 m) upstream from county road bridge, 1 mi (2 km) upstream from Loseke Creek, and 7 mi (11 km) northeast of Columbus.

DRAINAGE AREA.--270 mi² (700 km²), approximately.

PERIOD OF RECORD.--August 1947 to September 1975, October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,435 ft (437.4 m).

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--32 years, 40.2 ft³/s (1.138 m³/s), 29,120 acre-ft/yr (35.9 hm³/yr); median of yearly mean discharges, 32 ft³/s (0.906 m³/s), 23,200 acre-ft/yr (28.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,970 ft³/s (169 m³/s) June 3, 1950, gage height, 21.38 ft (6.517 m); minimum daily, 0.4 ft³/s (0.011 m³/s) July 27, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1947, reached a stage of 21.7 ft (6.61 m), from floodmark, discharge, 4,600 ft³/s (130 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 29	2130	1150 32.6	13.47 4.106
Aug. 5	2200	*1660 47.0	15.17 4.624

Minimum daily discharge, 2.4 ft³/s (0.068 m³/s) Oct. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	6.4	5.2	6.2	6.4	9.2	15	5.0	6.4	763	5.4	8.6
2	2.7	5.0	4.7	6.6	5.6	9.5	12	5.6	7.0	88	12	8.3
3	2.8	4.8	5.2	6.0	5.8	8.9	9.7	5.3	10	41	39	7.6
4	2.6	4.7	5.6	5.4	6.4	9.4	8.9	6.1	14	208	37	7.7
5	2.7	4.7	5.8	5.8	7.0	9.2	8.6	8.7	9.5	44	836	7.7
6	2.7	4.7	5.8	6.4	7.6	9.7	8.0	8.1	6.9	22	1200	7.3
7	3.2	5.5	5.6	6.2	7.2	9.1	7.7	6.5	6.1	16	145	8.2
8	2.7	4.6	5.2	6.0	6.2	8.7	8.1	6.1	6.2	11	55	11
9	2.9	4.9	5.0	5.8	6.6	8.4	8.8	6.3	5.1	9.8	36	12
10	2.4	4.5	5.0	5.4	4.5	8.0	8.2	6.5	5.6	8.7	29	8.9
11	2.4	4.9	5.2	5.2	5.2	8.2	7.3	5.8	6.6	7.2	25	7.4
12	2.4	5.1	5.6	5.8	6.0	8.1	7.6	6.5	6.6	6.4	22	5.9
13	3.6	5.8	5.2	6.6	6.4	8.3	7.5	6.8	5.6	5.9	20	6.1
14	3.6	5.3	5.2	6.2	8.4	9.6	7.8	6.9	5.3	5.4	20	6.1
15	3.2	5.7	5.4	5.2	9.2	8.5	7.6	7.0	5.8	6.1	22	6.0
16	4.7	5.8	5.6	5.2	9.8	7.9	7.5	7.2	5.8	7.0	19	5.8
17	4.7	5.6	6.0	7.0	10	8.4	7.6	8.6	5.3	5.0	16	6.0
18	4.8	5.9	5.6	6.6	11	8.5	7.4	12	5.1	4.6	14	5.9
19	4.3	6.9	5.0	6.0	12	7.9	7.3	23	4.8	5.1	13	6.4
20	3.9	6.6	4.6	5.8	14	7.9	7.4	20	4.9	4.8	12	5.5
21	5.1	6.9	4.9	5.4	15	9.9	8.0	13	5.1	4.5	11	5.4
22	2.7	5.6	5.6	6.4	17	9.5	8.9	11	5.7	5.5	9.8	5.4
23	3.6	5.4	4.9	6.8	22	7.8	9.0	9.4	5.3	6.1	10	5.8
24	3.6	6.7	3.9	7.2	24	8.2	9.9	9.6	5.3	5.7	10	7.6
25	4.0	8.7	4.3	7.8	16	8.0	7.6	8.6	4.7	5.3	14	9.8
26	4.3	7.3	5.0	8.2	9.8	7.8	6.5	8.0	3.4	5.8	16	9.5
27	4.7	6.2	5.4	7.4	9.7	7.7	6.5	7.4	5.3	7.0	15	8.6
28	5.1	7.7	6.0	6.8	9.5	8.6	6.2	7.3	5.6	6.7	11	8.7
29	5.5	7.3	6.6	6.4	---	49	6.1	7.4	464	6.3	10	6.7
30	5.3	6.3	7.0	6.0	---	84	5.6	7.7	990	6.2	9.5	5.4
31	5.0	---	6.6	6.8	---	31	---	9.0	---	5.3	9.1	---
TOTAL	114.2	175.5	166.7	194.6	278.3	404.9	244.3	266.4	1627.0	1333.4	2702.8	221.3
MEAN	3.68	5.85	5.38	6.28	9.94	13.1	8.14	8.59	54.2	43.0	87.2	7.38
MAX	5.5	8.7	7.0	8.2	24	84	15	23	990	763	1200	12
MIN	2.4	4.5	3.9	5.2	4.5	7.7	5.6	5.0	3.4	4.5	5.4	5.4
AC-FT	227	348	331	386	552	803	485	528	3230	2640	5360	439
CAL YR 1980	TOTAL	4688.5	MEAN	12.8	MAX	278	MIN	1.9	AC-FT	9300		
WTR YR 1981	TOTAL	7729.4	MEAN	21.2	MAX	1200	MIN	2.4	AC-FT	15330		

PLATTE RIVER BASIN

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 (24 m) upstream from bridge on State Highway 79, 1 mi (2 km) south of North Bend, and 5 mi (8 km) downstream from Shell Creek.

DRAINAGE AREA.--77,100 mi² (199,700 km²), approximately, of which about 63,300 mi² (163,900 km²) 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 (384.755 m) 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 (0.610 m) higher.

REMARKS.--Records good except those for winter period, 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.--32 years, 3,995 ft³/s (113.1 m³/s), 2,894,000 acre-ft/yr (3.57 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 112,000 ft³/s (3,170 m³/s) Mar. 29, 1960, gage height, 10.04 ft (3.060 m), present datum; maximum gage height, 15.55 ft (4.740 m) Mar. 19, 1978, ice jam; minimum daily discharge, 36 ft³/s (1.02 m³/s) July 29, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,000 ft³/s (850 m³/s) Aug. 6, gage height, 7.44 ft (2.268 m); minimum daily, 490 ft³/s (13.9 m³/s) July 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1750	2940	1700	4100	2100	4930	4850	2400	2780	2350	3500	1760
2	1440	2670	1400	3800	1200	4490	4550	2050	3480	2010	5190	2230
3	1710	2940	1500	3200	1200	4430	4480	2360	2850	1660	4720	2620
4	1510	2470	1600	3000	1250	4920	3310	3010	2680	1700	4820	1920
5	1780	2540	1750	3200	1300	5420	3840	2720	2590	2030	10200	2580
6	1360	2700	1900	3200	1300	5350	5000	2590	1800	1980	26100	1760
7	1770	2390	2300	3200	1250	5200	4000	2620	1200	1890	12900	2870
8	2350	2610	2700	3200	1200	5130	3580	2550	3330	2080	7290	2920
9	1870	2490	2700	3000	1100	5200	3080	2330	1710	1060	5910	2760
10	1710	2560	2500	2900	1000	5170	3190	2310	1670	1590	4990	2980
11	1610	2850	2700	2900	900	4840	2050	2180	1990	1400	4300	2700
12	1840	2440	2900	3000	1300	5110	3720	2530	1870	1440	4490	2520
13	1760	2640	3200	3000	1800	4410	3750	2990	1670	1010	4180	2720
14	2080	2650	4230	3000	2600	4730	3240	2600	1620	797	4280	2210
15	2150	2910	4260	2900	3600	4430	3140	2480	1430	833	4480	2100
16	2770	3430	5460	2600	4100	4520	3260	2530	2050	640	3850	2150
17	2510	2600	5510	2600	4500	3670	3220	2940	1700	573	3440	2520
18	2130	2740	5270	2800	5700	3940	2550	3640	1940	490	3400	2520
19	3570	2790	3420	2800	5520	3800	2400	4150	1730	490	3140	2610
20	3310	2940	1350	2600	9700	3820	2320	5390	2190	603	2670	2400
21	2650	2850	1400	2600	9820	3640	3230	4850	1660	989	2910	2210
22	2520	2790	1500	2600	6770	3890	3050	3890	1670	1200	2760	2560
23	2120	2730	2000	3000	5440	5200	3330	3710	1580	1510	3030	2400
24	2680	2850	1700	3300	4870	4170	3250	3570	1580	1330	2620	2630
25	2310	2620	2100	4000	4710	4110	3260	3490	1270	1680	3460	2760
26	2890	2550	2300	4500	4440	3990	3130	3140	1310	2030	4190	2840
27	2660	2840	2600	4600	4550	4090	2850	3030	1140	2680	3520	2660
28	2970	3040	2800	4500	4810	3550	2740	2880	919	2760	3420	2600
29	3290	2390	3000	4000	---	5280	2260	3080	1170	3560	3150	2490
30	2930	2780	3200	3300	---	6080	2360	2740	3380	3020	3050	2690
31	3020	---	3500	2100	---	5450	---	2840	---	3650	2760	---
TOTAL	71020	81740	84450	99500	98030	142960	98990	93590	57959	51035	158720	74690
MEAN	2291	2725	2724	3210	3501	4612	3300	3019	1932	1646	5120	2490
MAX	3570	3430	5510	4600	9820	6080	5000	5390	3480	3650	26100	2980
MIN	1360	2390	1350	2100	900	3550	2050	2050	919	490	2620	1760
AC-FT	140900	162100	167500	197400	194400	283600	196300	185600	115000	101200	314800	148100
CAL YR 1980 TOTAL	1680936	MEAN	4593	MAX	16600	MIN	165	AC-FT	3334000			
WTF YR 1981 TOTAL	1112684	MEAN	3048	MAX	26100	MIN	490	AC-FT	2207000			

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 micromhos June 25, 1973; minimum daily, 218 micromhos 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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
23...	1630	2350	400	8.4	12.0	10.5	28	K110	150	150	46
NOV											
20...	1400	3490	375	7.5	3.5	14.0	32	280	230	130	37
DEC											
18...	1315	5260	325	8.1	.5	13.4	11	K170	K180	120	35
JAN											
08...	1200	3170	466	8.4	.0	14.0	15	K27	K36	190	55
FEB											
06...	1045	2500	600	8.0	.0	13.4	9	90	80	220	62
MAR											
05...	1135	5950	428	8.2	4.0	13.6	27	K58	80	160	44
APR											
02...	1015	3820	345	8.0	12.0	10.2	70	K870	5300	200	43
MAY											
08...	1200	3400	381	7.9	15.5	10.8	27	306	180	140	42
JUN											
03...	1630	2500	428	8.7	27.0	9.5	38	870	1600	150	43
JUL											
01...	1430	2130	245	7.8	27.5	6.2	350	280000	88000	97	29
AUG											
05...	1800	10700	364	8.3	29.0	6.8	92	K17000	17000	110	31
06...	1400	27200	265	7.9	26.0	5.7	120	K4400	3200	86	25
07...	1115	14100	255	7.9	25.0	6.6	96	13000	6500	88	26
31...	1100	3670	430	8.7	23.5	8.0	86	K1400	290	200	61

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, (MG/L) (00500)	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											
23...	7.3	12	3.6	347	.41	.060	1.0	1.10	1.5	.550	7.1
NOV											
20...	8.6	36	7.0	444	.71	.060	.91	.97	1.7	.210	6.2
DEC											
18...	8.3	42	6.5	361	.72	.130	1.1	1.20	1.9	.260	9.8
JAN											
08...	13	100	13	387	.81	.120	.57	.69	1.5	.200	3.6
FEB											
06...	15	120	16	439	1.0	.270	.83	1.10	2.1	.190	4.1
MAR											
05...	11	75	10	393	.92	.070	1.0	1.10	2.0	.310	11
APR											
02...	22	46	8.4	539	.85	.350	2.6	2.90	3.8	.600	20
MAY											
08...	9.7	48	7.1	396	.05	.080	1.3	1.40	1.5	.300	8.7
JUN											
03...	10	67	9.7	494	.00	.080	1.5	1.60	1.6	.360	13
JUL											
01...	5.9	3.2	4.7	5480	2.0	.440	15	15.0	17	3.00	120
AUG											
05...	7.5	53	9.4	1160	.58	.450	--	.58	1.2	.900	17
06...	5.7	50	8.5	1770	.62	.430	5.3	5.70	6.3	1.70	29
07...	5.5	<5.0	6.8	1300	.55	.600	2.3	2.90	3.5	1.30	20
31...	12	36	8.1	642	1.1	.310	2.3	2.60	3.7	.710	16

PLATTE RIVER BASIN

06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIU2) (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)
NOV 20...	1400	.00	21	.8	7.1	130	.3	45	243	.33	2290
FEB 06...	1045	47	40	1.2	8.8	170	.4	45	414	.57	2840
MAY 08...	1200	5.0	21	.8	7.3	140	.4	40	260	.35	2390
JUN 03...	1630	--	--	--	--	--	--	--	--	--	--
AUG 05...	1800	19	22	1.0	8.9	89	.3	24	210	.29	6070
06...	1400	16	13	.6	9.0	70	.3	22	176	.24	12900
07...	1115	.00	11	.5	9.2	94	.3	23	133	.18	5060
31...	1100	.00	26	.8	13	210	.2	27	315	.43	3120

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)
NOV 20...	.66	--	--	--	--	--	.140	--	--	8
FEB 06...	1.0	--	--	--	--	--	.160	--	--	--
MAY 08...	.05	--	--	--	--	--	.090	--	--	8
JUN 03...	.00	.080	--	--	--	--	--	--	--	--
AUG 05...	.58	.340	.24	.00	.58	1.2	.210	9	1	8
06...	.55	.230	1.9	3.6	2.1	2.7	.230	13	6	7
07...	.55	.230	1.2	1.5	1.4	2.0	.280	--	--	--
31...	1.1	--	--	--	--	--	.320	--	--	--

DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	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, SUS- PENDE RECOV. (UG/L AS CR) (01031)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
NOV 20...	90	80	--	2	--	--	0	--	--	--
FEB 06...	--	60	--	--	--	--	--	--	--	--
MAY 08...	90	350	--	<1	--	--	0	--	--	--
JUN 03...	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	210	0	<1	30	20	10	8	<3	30
06...	--	200	1	<1	50	30	20	13	<3	47
07...	--	210	--	--	--	--	--	--	--	--
31...	--	40	--	--	--	--	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible][illegible]

PLATTE RIVER BASIN

06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL (UG/L) (39755)	SILVEX, TOTAL (UG/L) (39760)
AUG									
05...	.00	.00	.03	0	.00	.07	.02	.00	.00
06...	.00	.00	.06	0	.00	.07	.01	.00	.00

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)
AUG							
05...	1800	10700	29.0	2060	59500	46	49
06...	1400	27200	26.0	3580	263000	41	44
07...	1115	14100	25.0	1980	75400	40	45

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)
AUG						
05...	54	81	86	94	100	--
06...	51	64	74	90	98	100
07...	47	73	78	94	100	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
AUG												
05...	1800	10700	6	0	1	17	63	90	97	99	100	--
06...	1400	27200	6	--	0	12	46	75	88	96	99	100
07...	1115	14100	6	--	0	32	77	89	96	98	100	--

FLATTE 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 (4 m) downstream from bridge on county road, 4 mi (6 km) southwest of Emmet.

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

GAGE.--Water-stage recorder. Datum of gage is 2,070.12 ft (630.973 m) National Geodetic Vertical Datum of 1929. (Levels by Nebraska Natural Resources Commission.)

REMARKS.--Records good except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 489 ft³/s (13.8 m³/s) Apr. 4, 1980, gage height, 6.20 ft (1.890 m); maximum gage height, 7.61 ft (2.320 m) Feb. 28, 1979, backwater from ice; minimum daily discharge, 0.10 ft³/s (0.003 m³/s) Jan. 24, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62 ft³/s (1.76 m³/s) June 14, gage height, 2.98 ft (0.908 m); maximum gage height, 3.14 ft (0.957 m) sometime during the period Feb. 11-16, backwater from ice; minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Oct. 10, 11, Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.0	3.5	6.8	9.0	11	17	4.0	7.5	4.0	5.5	5.2
2	3.0	5.5	3.0	6.6	10	11	17	3.8	15	12	5.7	5.2
3	3.1	5.3	4.5	6.0	11	10	15	5.8	12	28	5.0	4.6
4	3.3	4.8	5.2	6.2	12	11	14	6.6	11	28	5.3	5.0
5	3.3	4.8	5.0	7.4	13	11	13	5.0	9.3	26	9.4	5.0
6	2.9	5.0	4.8	8.0	14	11	11	4.3	8.4	21	6.2	6.2
7	3.0	4.8	4.8	7.6	13	10	10	4.5	7.2	14	4.9	6.6
8	3.0	4.8	4.5	6.8	12	10	10	5.3	6.6	10	4.5	5.0
9	3.1	4.8	4.7	6.8	11	10	9.3	4.8	6.1	9.6	4.7	4.5
10	2.8	4.1	4.5	6.8	10	10	8.4	4.1	5.8	7.8	4.3	4.0
11	2.8	4.1	4.8	6.6	9.0	10	9.3	4.0	6.1	6.4	4.0	3.8
12	2.9	4.1	5.4	8.0	10	10	8.7	7.5	5.5	5.5	3.4	3.4
13	3.3	4.3	5.0	9.0	12	9.6	8.7	7.2	5.0	4.8	5.2	3.5
14	3.3	4.1	5.2	8.4	13	9.6	8.4	6.4	33	4.1	7.2	3.0
15	3.3	4.1	5.0	8.0	15	9.0	7.2	5.0	38	4.2	5.4	3.4
16	10	4.0	6.1	7.6	16	9.0	7.5	6.6	37	4.0	4.6	4.2
17	9.0	4.1	5.5	9.0	18	8.7	7.2	11	31	3.9	4.7	4.0
18	6.1	3.9	4.6	10	16	8.1	6.6	18	24	4.1	5.0	4.2
19	5.3	4.0	4.0	11	15	8.1	7.2	20	19	4.4	4.8	4.0
20	5.0	4.1	3.8	11	14	7.8	6.9	20	17	3.6	4.3	3.7
21	5.0	4.0	3.9	10	15	8.1	7.2	19	16	4.8	4.1	3.3
22	4.8	4.1	4.5	12	14	8.7	6.4	19	14	5.3	4.0	3.4
23	4.8	3.9	5.0	13	14	8.4	6.4	17	12	4.8	4.6	3.9
24	4.5	3.7	4.0	14	12	8.7	5.5	16	9.3	4.6	6.4	3.9
25	4.1	3.9	2.8	15	12	8.4	5.8	14	7.8	4.3	16	4.5
26	4.1	4.0	4.0	14	11	8.4	5.3	13	7.5	5.9	12	5.7
27	4.8	3.9	5.0	12	11	8.1	4.8	12	7.2	7.2	9.4	4.6
28	5.5	3.9	7.0	9.2	11	11	4.5	11	5.8	8.4	7.6	4.5
29	5.8	4.1	6.4	9.2	---	16	4.3	10	5.0	6.7	7.5	4.8
30	5.8	4.3	7.4	10	---	17	4.0	9.0	4.5	6.7	7.0	4.1
31	5.5	---	7.0	11	---	18	---	7.8	---	5.5	5.6	---
TOTAL	136.4	129.5	150.9	287.0	353.0	315.7	256.6	301.7	393.6	269.6	188.3	131.2
MEAN	4.40	4.32	4.87	9.26	12.6	10.2	8.55	9.73	13.1	8.70	6.07	4.37
MAX	10	5.5	7.4	15	18	18	17	20	38	28	16	6.6
MIN	2.8	3.7	2.8	6.0	9.0	7.8	4.0	3.8	4.5	3.6	3.4	3.0
AC-FT	271	257	299	569	700	626	509	598	781	535	373	260
CAL YR 1980	TOTAL	6505.6	MEAN	17.8	MAX	456	MIN	1.1	AC-FT	12900		
WTR YR 1981	TOTAL	2913.5	MEAN	7.98	MAX	38	MIN	2.8	AC-FT	5780		

PLATTE RIVER BASIN

06796985 ELKHORN RIVER AT EMMET, NE

LOCATION.--Lat 42°28'11", long 98°47'43", NE1/4SE1/4 Sec.23, T.29 N., R.13 E., Holt County, Hydrologic Unit 10220001, on right bank 20 ft (6 m) upstream from county road bridge, 0.6 mi (1.0 km) southeast of Emmet.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,002 ft (610.2 m), from topographic map.

REMARKS.--Records good except those for winter period and periods of beaver activity Oct. 10-21, Aug. 7 to Sept. 30, which are poor. Minor diversions for irrigation above station.

COOPERATION.--Discharge record furnished by Nebraska Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 100 ft³/s (2.83 m³/s) June 14, gage height, 3.01 ft (0.917 m); maximum gage height, 3.84 ft (1.170 m) Oct. 20, backwater from beaver dams; minimum daily discharge, 3.8 ft³/s (0.11 m³/s) Oct. 2, Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	22	17	27	19	36	47	17	18	7.5	9.4	7.4
2	3.8	20	12	25	18	35	44	18	26	14	15	6.4
3	4.4	24	13	24	19	37	42	21	26	59	11	6.2
4	5.2	20	14	24	20	36	44	27	23	58	9.1	6.6
5	5.7	20	15	26	21	35	40	24	22	45	20	7.8
6	6.2	20	14	29	22	34	38	20	20	37	16	8.4
7	6.0	21	13	32	21	33	36	18	18	29	13	9.0
8	5.7	20	12	30	20	32	34	22	15	23	10	7.0
9	5.7	20	13	27	19	32	32	22	13	19	6.8	6.0
10	4.5	18	14	25	18	32	31	21	13	17	7.0	5.2
11	4.4	20	15	23	17	32	32	19	13	13	6.0	4.7
12	4.6	20	16	24	19	32	32	26	13	11	7.0	4.2
13	5.4	20	17	25	22	30	30	32	13	9.1	8.6	4.0
14	5.6	20	16	24	25	30	32	28	78	7.3	11	3.8
15	6.0	21	16	23	30	30	30	24	59	6.8	9.0	4.5
16	20	19	16	22	35	29	29	24	52	6.5	7.4	5.0
17	14	20	15	23	40	29	27	37	42	6.5	6.0	4.6
18	12	17	15	24	52	27	26	55	35	5.5	6.2	5.2
19	10	22	14	25	70	29	26	53	30	7.8	5.8	4.5
20	9.6	24	12	25	61	27	26	47	26	6.5	5.4	4.3
21	9.0	22	14	24	52	29	28	42	24	6.8	5.0	3.9
22	8.4	26	16	25	47	32	27	45	21	8.1	4.8	4.1
23	11	26	17	26	45	31	27	41	19	7.8	6.6	4.3
24	14	15	15	27	44	30	25	38	17	8.4	15	4.5
25	12	16	13	28	41	29	25	33	14	8.1	19	6.0
26	10	17	19	25	38	29	23	30	13	8.1	16	8.0
27	16	18	25	20	39	27	22	26	13	9.7	13	7.0
28	17	20	30	12	37	34	20	26	12	13	11	6.4
29	22	21	33	9.0	---	55	20	24	11	12	10	6.8
30	24	23	34	12	---	51	19	24	9.1	11	8.8	6.2
31	24	---	33	20	---	49	---	20	---	9.7	8.0	---
TOTAL	310.8	612	538	735.0	911	1033	914	904	708.1	491.2	306.9	172.0
MEAN	10.0	20.4	17.4	23.7	32.5	33.3	30.5	29.2	23.6	15.8	9.90	5.73
MAX	24	26	34	32	70	55	47	55	78	59	20	9.0
MIN	3.8	15	12	9.0	17	27	19	17	9.1	5.5	4.8	3.8
AC-FT	616	1210	1070	1460	1810	2050	1810	1790	1400	974	609	341
CAL YR 1980	TOTAL	30651.93	MEAN	83.7	MAX	712	MIN	.00	AC-FT	60800		
WTR YR 1981	TOTAL	7636.00	MEAN	20.9	MAX	78	MIN	3.8	AC-FT	15150		

PLATTE RIVER BASIN

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06796985 ELKHORN RIVER AT EMMET, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
09...	1215	5.3	254	7.4	16.0	7.7	32	96	120	99	32
NOV											
06...	0900	19	204	7.9	8.5	12.3	17	110	88	85	28
DEC											
04...	1040	13	249	7.6	.5	10.5	31	96	124	97	31
JAN											
08...	1045	29	193	7.8	.5	12.9	21	480	120	79	26
FEB											
26...	1135	37	184	7.9	3.5	11.7	20	170	56	71	23
MAR											
26...	1125	28	203	7.7	9.0	11.1	17	19	120	86	28
APR											
30...	0905	19	222	7.7	15.0	8.6	23	160	360	93	29
MAY											
21...	1415	43	216	7.9	18.0	9.9	33	130	180	91	30
JUN											
26...	0930	13	233	7.8	21.0	8.1	35	680	330	98	32
JUL											
14...	1120	7.5	240	8.0	28.0	9.3	78	K2200	270	98	31
AUG											
06...	1135	17	217	7.6	25.5	7.5	38	1000	1100	91	30
SEP											
10...	1720	5.2	206	8.6	27.0	8.3	41	K52	900	91	30

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
09...	4.6	8.4	4.4	180	.00	.000	.77	.77	.77	.160	5.7
NOV											
06...	3.7	6.1	3.7	163	.42	.110	.89	1.00	1.4	.270	15
DEC											
04...	4.7	8.6	4.9	201	2.0	.220	1.1	1.30	3.3	.260	12
JAN											
08...	3.5	12	2.8	158	1.5	.160	.73	.89	2.4	.230	3.0
FEB											
26...	3.4	2.1	2.6	155	.81	.110	.75	.86	1.7	.230	6.8
MAR											
26...	4.0	1.0	3.1	166	.68	.110	.83	.94	1.6	.210	5.8
APR											
30...	4.9	1.4	2.7	190	.56	.140	1.7	1.80	2.4	.260	7.4
MAY											
21...	3.9	5.0	2.8	195	.45	.150	1.2	1.30	1.8	.180	11
JUN											
26...	4.5	2.4	2.7	193	.07	.100	1.1	1.20	1.3	.260	7.6
JUL											
14...	4.9	2.0	3.2	200	.06	.170	1.1	1.30	1.4	.350	7.1
AUG											
06...	3.8	<5.0	2.9	178	.13	.170	.61	.78	.91	.250	7.8
SEP											
10...	3.8	<5.0	1.9	157	.01	.090	1.5	1.60	1.6	.080	5.2

PLATTE RIVER BASIN

06796985 ELKHORN RIVER AT EMMET, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 06...	0900	.00	8.6	.4	5.9	100	.4	39	158
FEB 26...	1135	.00	8.3	.4	5.0	80	.2	37	133
MAY 21...	1415	.00	11	.5	5.7	100	.3	33	148
AUG 06...	1135	.00	8.7	.4	6.6	100	.3	45	159

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 06...	.21	8.2	.42	.240	7	100	40	<1	0
FEB 26...	.18	13.4	.81	.150	--	--	20	--	--
MAY 21...	.20	17.3	.39	.110	7	100	50	1	0
AUG 06...	.22	7.3	.12	.000	--	--	30	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 06...	4	50	4	30	.0	0	0	10
FEB 26...	--	80	--	10	--	--	--	--
MAY 21...	1	90	2	9	.0	0	0	20
AUG 06...	--	84	--	26	--	--	--	--

PLATTE RIVER BASIN

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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 350 ft (107 m) downstream from bridge on State Highway 420, 0.8 mi (1.3 km) north of Ewing, and 1.5 mi (2.4 km) upstream from South Fork Elkhorn River.

DRAINAGE AREA.--1,400 mi² (3,630 km²), approximately, of which about 740 mi² (1,920 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,836.24 ft (559.686 m), National Geodetic Vertical Datum of 1929, levels by Nebraska Department of Roads (revised). Prior to Oct. 22, 1952, at site 300 ft (90 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--34 years, 162 ft³/s (4.588 m³/s), 117,400 acre-ft/yr (0.145 km³/yr); median of yearly mean discharges, 114 ft³/s (3.228 m³/s), 82,600 acre-ft/yr (0.102 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s (212 m³/s) June 10, 1962, gage height, 10.60 ft (3.231 m); minimum daily, 5.2 ft³/s (0.15 m³/s) Sept. 6, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 11.32 ft (3.450 m) June 23, 24, 1947, from floodmark at site 300 ft (90 m) upstream, discharge, 6,600 ft³/s (187 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 130 ft³/s (3.68 m³/s), Feb. 20, gage height, 4.00 ft (1.219 m), no peak above base of 500 ft³/s (14.2 m³/s); maximum gage height, 4.28 ft (1.305 m) Jan. 2, backwater from ice; minimum daily discharge, 9.3 ft³/s (0.26 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	38	43	30	50	69	80	40	44	28	34	18
2	9.3	37	40	27	45	66	76	39	46	34	34	17
3	10	37	42	27	40	65	76	39	44	71	34	17
4	11	36	43	29	41	64	75	41	45	82	34	17
5	11	37	45	32	41	64	74	41	46	84	46	17
6	13	38	46	34	42	62	72	42	52	89	47	15
7	13	37	47	36	41	61	69	41	50	86	43	20
8	13	36	46	36	40	59	65	41	44	82	40	18
9	15	36	43	36	37	59	62	40	41	74	37	17
10	13	36	45	35	35	58	61	38	40	66	35	16
11	13	35	46	37	36	58	62	38	38	57	31	14
12	13	36	46	39	38	58	64	41	36	51	30	13
13	14	36	45	43	39	57	61	46	31	46	31	12
14	15	36	44	45	40	57	59	48	44	36	31	12
15	15	37	41	45	41	57	58	49	66	34	31	11
16	28	37	42	44	41	55	59	50	81	31	31	12
17	26	38	43	43	50	55	58	55	80	28	31	13
18	28	36	39	45	60	54	57	63	76	27	29	13
19	36	38	32	49	87	54	56	69	71	26	29	12
20	38	40	35	50	121	53	56	75	69	24	27	12
21	38	39	37	50	102	54	55	73	66	24	24	11
22	36	40	38	54	90	54	56	74	61	25	21	11
23	35	40	34	58	81	55	54	69	55	24	22	11
24	34	32	32	66	77	57	52	67	46	23	22	11
25	32	36	34	63	74	56	50	63	40	32	20	12
26	32	37	35	59	73	54	49	60	36	30	20	18
27	34	38	37	56	72	54	46	58	34	32	21	15
28	33	39	38	54	70	63	45	56	31	36	22	14
29	35	43	39	54	---	87	43	54	33	38	23	13
30	37	49	40	52	---	88	41	50	31	37	21	13
31	37	---	39	54	---	86	---	47	---	36	20	---
TOTAL	726.8	1130	1256	1382	1604	1893	1791	1607	1477	1393	921	425
MEAN	23.4	37.7	40.5	44.6	57.3	61.1	59.7	51.8	49.2	44.9	29.7	14.2
MAX	38	49	47	66	121	88	80	75	81	89	47	20
MIN	9.3	32	32	27	35	53	41	38	31	23	20	11
AC-FT	1440	2240	2490	2740	3180	3750	3550	3190	2930	2760	1830	843
CAL YR 1980	TOTAL	47936.2	MEAN	131	MAX	2100	MIN	7.6	AC-FT	95080		
WTR YR 1981	TOTAL	15605.8	MEAN	42.8	MAX	121	MIN	9.3	AC-FT	30950		

PLATTE RIVER BASIN

06797500 ELKHORN RIVER AT EWING, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-66, 1974-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
DEC					MAY				
15...	1030	41	210	1.0	13...	1125	46	202	10.0
JAN					JUN				
05...	1130	28	219	1.0	01...	1050	46	196	19.0
FEB					JUL				
16...	0950	41	166	.5	14...	1320	35	227	31.0
MAR					AUG				
10...	1155	58	199	5.0	25...	0715	--	212	18.0
APR					SEP				
21...	1010	55	210	11.5	17...	1210	13	218	14.5

PLATTE RIVER BASIN

207

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 (5 m) (revised) downstream from bridge on county highway, 2.9 mi (4.7 km) southwest of intersection with U.S. Highway 275 in Ewing and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--314 mi² (810 km²), approximately, of which about 190 mi² (490 km²) 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 (7.2 km) downstream at different datum.

GAGE.--Water-stage recorder. Altitude of gage is 1,880 ft (573 m) from topographic map. See WSP 1918 for history of changes prior to June 14, 1963.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--22 years (water years 1948-53, 1961-72, 1978-81) 63.0 ft³/s (1.784 m³/s), 45,640 acre-ft/yr (56.3 hm³/yr); median of yearly mean discharges, 50 ft³/s (1.416 m³/s), 36,200 acre-ft/yr (44.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,760 ft³/s (49.8 m³/s) Apr. 5, 1949, gage height, 5.02 ft (1.530 m); maximum gage height, 6.12 ft (1.865 m) Mar. 7, 1949, backwater from ice, site then in use; minimum daily discharge, 11 ft³/s (0.31 m³/s) Jan. 15, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1947, reached a stage of 7.22 ft (2.201 m), from floodmarks at site and datum then in use; discharge, about 3,400 ft³/s (96.3 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 82 ft³/s (2.32 m³/s) July 2, gage height, 1.45 ft (0.442 m), no peak above base of 200 ft³/s (5.66 m³/s); maximum gage height, 2.04 ft (0.622 m) Feb. 1, backwater from ice; minimum daily discharge, 19 ft³/s (0.54 m³/s) July 16, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	23	29	35	33	38	43	33	31	25	30	26
2	26	24	28	31	32	37	42	34	44	38	30	26
3	27	26	30	29	32	36	38	32	33	47	28	27
4	26	28	32	34	34	35	40	30	33	34	32	27
5	24	25	35	36	34	38	38	29	32	36	48	27
6	24	24	36	36	35	37	40	30	32	31	33	28
7	24	26	36	35	33	36	36	30	29	29	31	33
8	21	26	35	34	32	37	33	32	29	27	32	27
9	21	25	31	32	33	36	32	28	29	26	32	26
10	21	26	31	31	31	36	35	30	28	26	31	27
11	21	26	34	31	33	37	38	30	27	28	32	28
12	23	27	35	34	35	38	40	36	26	24	29	26
13	24	27	37	39	38	41	38	36	28	24	32	25
14	24	29	37	39	41	42	38	39	40	23	34	24
15	25	26	36	36	43	40	36	41	32	20	29	23
16	43	28	37	30	45	38	35	44	30	19	27	23
17	24	27	37	30	46	36	35	50	32	20	28	26
18	22	30	31	32	50	37	35	49	29	20	27	28
19	24	30	29	33	48	38	36	41	26	21	26	26
20	24	27	28	33	48	39	37	41	28	19	24	24
21	26	33	29	38	46	35	39	45	27	24	24	21
22	27	31	30	34	43	35	35	50	27	24	22	23
23	23	27	28	33	42	33	34	45	27	24	23	23
24	24	33	25	34	44	34	33	42	25	24	24	20
25	23	32	29	34	45	35	36	39	24	28	26	19
26	24	31	30	34	42	36	35	37	24	28	24	26
27	27	32	30	34	42	35	35	34	23	30	23	21
28	28	32	31	34	38	43	35	31	24	30	25	20
29	28	32	31	34	---	48	35	31	25	30	27	20
30	24	32	33	34	---	43	36	33	23	27	27	19
31	24	---	35	34	---	39	---	31	---	29	24	---
TOTAL	773	845	995	1047	1098	1168	1098	1133	867	835	884	739
MEAN	24.9	28.2	32.1	33.8	39.2	37.7	36.6	36.5	28.9	26.9	28.5	24.6
MAX	43	33	37	39	50	48	43	50	44	47	48	33
MIN	21	23	25	29	31	33	32	28	23	19	22	19
AC-FT	1530	1680	1970	2080	2180	2320	2180	2250	1720	1660	1750	1470
CAL YR 1980	TOTAL	16567	MEAN 45.3	MAX 424	MIN 20	AC-FT	32860					
WTR YR 1981	TOTAL	11482	MEAN 31.5	MAX 50	MIN 19	AC-FT	22770					

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 (0.8 km) west and 2 mi (3 km) south of Clearwater, and about 3 mi (5 km) upstream from mouth.

DRAINAGE AREA.--210 mi² (540 km²), approximately, of which about 130 mi² (340 km²) contributes directly to surface runoff.

PERIOD OF RECORD.--July 1961 to September 1964, October 1977 to current year.

GAGE.--Water-stage recorder. Prior to Sept. 7, 1961, wire-weight gage at same site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--7 years (water years 1962-64, 1978-81), 31.7 ft³/s (0.898 m³/s), 22,970 acre-ft/yr (28.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 762 ft³/s (21.6 m³/s) Aug. 5, 1981, gage height, 9.00 ft (2.743 m); minimum daily discharge, 4.4 ft³/s (0.12 m³/s) Aug. 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 2	2230	135 3.8	5.69 1.734	Aug. 5	0200	*762 21.6	9.00 2.743
July 25	1230	492 13.9	7.86 2.396				

Minimum daily discharge, 6.8 ft³/s (0.19 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	21	17	22	19	24	37	18	16	16	40	18
2	15	20	17	23	19	24	31	18	38	31	79	17
3	15	20	18	22	20	23	25	21	24	77	35	16
4	16	19	25	23	20	24	24	25	20	42	33	17
5	15	19	25	24	21	23	25	22	18	30	282	18
6	15	19	21	25	21	23	25	20	16	25	104	17
7	16	19	20	22	21	22	23	20	15	20	91	25
8	15	18	20	21	20	23	22	23	14	18	64	24
9	14	19	19	21	20	22	22	20	15	16	40	20
10	14	18	20	21	20	22	22	20	15	14	32	19
11	14	18	23	22	19	21	21	20	15	13	28	18
12	14	18	21	24	21	21	21	22	15	12	24	18
13	14	18	20	24	25	20	20	23	15	11	25	17
14	14	18	20	25	28	20	20	22	30	8.1	28	17
15	14	18	21	24	33	19	21	20	24	7.0	25	17
16	38	18	22	24	37	19	21	21	20	7.8	22	19
17	24	17	22	25	34	19	21	26	19	7.8	20	19
18	20	18	21	26	28	19	20	32	17	6.8	18	19
19	20	19	15	26	28	19	20	29	17	12	18	18
20	19	19	18	26	28	20	20	24	17	12	18	18
21	18	19	19	27	26	20	21	23	17	12	17	18
22	19	19	20	25	26	20	21	22	16	13	17	18
23	18	18	20	24	26	20	21	19	16	13	17	18
24	19	18	19	23	25	20	20	19	14	12	19	18
25	19	19	20	22	25	20	20	19	14	153	19	18
26	19	19	21	22	23	20	19	18	13	91	18	24
27	20	18	22	22	25	20	18	18	13	105	18	24
28	21	18	22	21	25	27	17	17	12	88	18	22
29	21	18	24	20	---	57	18	16	18	56	18	21
30	23	18	23	20	---	56	18	18	17	40	18	19
31	22	---	22	20	---	46	---	17	---	32	18	---
TOTAL	560	557	637	716	683	753	654	652	530	1001.5	1223	571
MEAN	18.1	18.6	20.5	23.1	24.4	24.3	21.8	21.0	17.7	32.3	39.5	19.0
MAX	38	21	25	27	37	57	37	32	38	153	282	25
MIN	14	17	15	20	19	19	17	16	12	6.8	17	16
AC-FT	1110	1100	1260	1420	1350	1490	1300	1290	1050	1990	2430	1130

CAL YR 1980 TOTAL 8484.6 MEAN 23.2 MAX 163 MIN 4.4 AC-FT 16830
WTR YR 1981 TOTAL 8537.5 MEAN 23.4 MAX 282 MIN 6.8 AC-FT 16930

PLATTE RIVER BASIN

209

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 (9 m) downstream from bridge on old State Highway 14 at Neligh.

DRAINAGE AREA.--2,200 mi² (5,700 km²), approximately, of which about 1,200 mi² (3,110 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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 (522.427 m) (revised) National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1933, nonrecording gage at site 10 ft (3 m) downstream at present datum. Apr. 16, 1933, to Jan. 23, 1939, nonrecording gage at bridge 30 ft (9 m) 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 (6 m) upstream at present datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--49 years, 276 ft³/s (7.816 m³/s), 200,000 acre-ft/yr (0.247 km³/yr); median of yearly mean discharges, 229 ft³/s (6.485 m³/s), 165,900 acre-ft/yr (0.205 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,000 ft³/s (340 m³/s) June 23, 1947, gage height, 12.53 ft (3.819 m), from main channel rating curve extended above 4,900 ft³/s (139 m³/s) and field estimate of flow through break in highway fill; minimum daily, 12 ft³/s (0.34 m³/s) July 2, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1960, reached a stage of 12.24 ft (3.731 m), from floodmark, discharge, 12,300 ft³/s (348 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 676 ft³/s (19.1 m³/s) Aug. 5, gage height, 5.71 ft (1.740 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily, 51 ft³/s (1.44 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	110	114	150	140	171	230	108	114	81	124	93
2	51	104	90	140	135	169	209	108	258	98	198	91
3	54	108	100	133	130	164	202	121	177	241	153	87
4	58	104	110	105	135	165	186	148	156	224	115	88
5	59	104	116	121	140	158	184	127	136	184	419	94
6	60	107	118	142	160	158	181	124	120	166	284	97
7	61	106	120	143	150	156	184	121	118	153	186	122
8	60	106	122	138	140	152	180	139	110	143	158	120
9	61	104	124	137	150	151	172	128	106	134	127	109
10	60	102	125	124	140	150	165	114	102	127	116	97
11	57	104	130	124	120	150	165	115	100	118	112	91
12	60	106	135	130	140	150	170	123	96	101	106	81
13	64	106	140	145	160	148	170	142	92	90	106	79
14	67	104	140	141	165	147	159	133	143	77	124	71
15	69	108	145	133	170	144	156	126	181	71	118	70
16	131	108	158	135	180	141	151	132	164	67	108	76
17	151	111	133	139	200	143	155	182	175	68	108	81
18	104	112	107	155	290	137	142	233	164	66	108	81
19	97	115	100	158	310	141	137	228	156	73	104	80
20	105	116	110	152	320	142	135	203	143	73	98	73
21	105	112	143	152	307	141	137	187	143	71	94	68
22	102	115	122	157	255	151	146	193	124	83	86	65
23	101	113	115	167	223	149	144	195	112	79	86	67
24	98	104	115	179	205	148	136	174	101	72	120	69
25	93	97	104	184	194	143	134	163	90	131	103	78
26	90	104	116	173	182	137	131	155	83	251	98	98
27	102	113	130	170	191	133	124	150	81	169	97	103
28	108	106	135	160	184	190	120	144	79	186	100	89
29	108	112	150	150	---	389	116	135	107	163	105	84
30	113	116	155	140	---	307	110	129	101	137	103	81
31	110	---	155	150	---	273	---	124	---	118	100	---
TOTAL	2614	3237	3877	4527	5216	5198	4731	4604	3832	3815	4064	2583
MEAN	84.3	108	125	146	186	168	158	149	128	123	131	86.1
MAX	151	116	158	184	320	389	230	233	258	251	419	122
MIN	51	97	90	105	120	133	110	108	79	66	86	65
AC-FT	5180	6420	7690	8980	10350	10310	9380	9130	7600	7570	8060	5120
CAL YR 1980	TOTAL	85699	MEAN 234	MAX 2650	MIN 28	AC-FT 170000						
WTR YR 1981	TOTAL	48298	MEAN 132	MAX 419	MIN 51	AC-FT 95800						

PLATTE RIVER BASIN

06798500 ELKHORN RIVER AT NELIGH, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
DEC					MAY				
15...	1535	144	236	1.0	11...	1125	117	280	13.0
JAN					JUN				
05...	1450	127	284	1.0	01...	1450	113	229	27.0
FEB					JUL				
16...	1245	176	183	1.0	14...	0915	77	264	26.0
MAR					AUG				
11...	1430	151	244	10.0	25...	1450	103	255	25.5
APR					SEP				
20...	1400	134	250	15.0	14...	1515	72	285	24.5

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 (61 m) downstream from U.S. Highway 81 bridge, 1 mi (2 km) south of intersection of U.S. Highways 81 and 275, and 3.6 mi (5.8 km) upstream from North Fork Elkhorn River.

DRAINAGE AREA.--2,790 mi² (7,230 km²), approximately, of which about 1,790 mi² (4,640 km²) 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 (60 m) 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 (458.709 m) 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 (5.1 km) upstream at datum 17.88 ft (5.450 m) higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--36 years, 479 ft³/s (13.57 m³/s), 347,000 acre-ft/yr (0.428 km³/yr); median of yearly mean discharges, 396 ft³/s (11.21 m³/s), 287,000 acre-ft/yr (0.354 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s (479 m³/s) June 14, 1967, gage height, 8.52 ft (2.597 m), site and datum then in use; maximum gage height observed, 13.63 ft (4.154 m) Mar. 11, 1949, at site 200 ft (60 m) upstream at present datum, backwater from ice; minimum daily discharge, 33 ft³/s (0.93 m³/s) Aug. 3, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 13, 1944, reached a stage of 11.8 ft (3.60 m), at site 200 ft (60 m) upstream at present datum, discharge, 14,300 ft³/s (405 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) June 14, gage height, 4.88 ft (1.487 m), no peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily, 72 ft³/s (2.04 m³/s) Oct. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	194	255	215	200	271	418	176	213	187	252	144
2	72	190	130	205	190	265	379	171	594	137	420	140
3	72	190	150	190	170	266	349	183	663	265	361	129
4	72	186	170	175	220	261	316	228	490	367	302	125
5	74	186	180	170	270	260	303	230	325	297	384	125
6	80	190	185	175	260	254	295	194	279	228	730	123
7	82	186	185	180	240	242	297	164	266	196	532	132
8	87	186	180	180	245	241	278	163	253	193	376	147
9	90	182	180	180	250	241	266	167	251	183	333	144
10	82	167	185	170	220	242	251	172	237	175	293	132
11	85	176	185	190	180	235	233	173	227	169	269	125
12	87	186	190	205	220	243	230	170	226	158	244	121
13	85	186	195	215	230	246	232	174	221	148	234	121
14	90	186	195	220	250	240	226	186	726	135	233	121
15	98	190	200	210	290	243	234	179	704	127	211	121
16	104	198	210	205	320	248	240	170	480	120	213	125
17	142	198	200	200	340	248	242	221	337	112	198	127
18	174	202	135	220	370	235	237	265	282	108	187	134
19	167	205	130	230	370	229	241	305	257	110	179	138
20	149	208	150	235	367	225	233	334	236	114	169	140
21	150	217	170	230	370	235	238	314	230	115	159	134
22	154	230	200	230	359	250	254	309	214	123	151	136
23	158	235	180	260	317	253	242	303	199	123	151	138
24	160	225	150	280	302	258	226	294	173	122	155	138
25	163	225	155	300	297	256	217	285	158	206	168	144
26	167	225	165	290	303	252	207	281	149	728	168	160
27	186	229	180	280	280	248	201	274	151	569	161	160
28	182	234	190	270	280	312	192	268	152	371	166	179
29	182	244	200	240	---	784	180	256	161	350	164	169
30	194	259	210	220	---	877	177	239	159	318	160	158
31	198	---	220	230	---	585	---	227	---	276	153	---
TOTAL	3866	6115	5610	6800	7710	9245	7634	7075	9013	6830	7876	4130
MEAN	125	204	181	219	275	298	254	228	300	220	254	138
MAX	198	259	255	300	370	877	418	334	726	728	730	179
MIN	72	167	130	170	170	225	177	163	149	108	151	121
AC-FT	7670	12130	11130	13490	15290	18340	15140	14030	17880	13550	15620	8190

CAI YR 1980 TOTAL 119079 MEAN 325 MAX 2880 MIN 33 AC-FT 236200
WTR YR 1981 TOTAL 81904 MEAN 224 MAX 877 MIN 72 AC-FT 162500

PLATTE RIVER BASIN

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
OCT											
17...	1115	140	319	8.0	7.5	11.8	12	K11400	5400	140	43
NOV											
18...	1444	210	310	8.1	3.5	11.5	14	--	88	150	48
DEC											
16...	0900	232	285	7.9	1.0	12.2	16	310	250	130	40
JAN											
15...	1030	208	350	8.1	.0	12.7	43	250	K68	150	47
FEB											
26...	0910	270	350	8.2	4.5	12.2	13	K37	110	130	41
MAR											
18...	1345	202	301	8.0	6.0	12.6	16	K30	K56	150	47
APR											
10...	1100	256	319	8.2	16.0	9.8	21	K40	160	150	46
MAY											
20...	0700	280	305	8.2	13.0	9.9	13	K240	500	140	43
JUL											
08...	0830	232	258	8.1	23.5	--	59	1100	540	130	41
15...	0945	125	322	8.4	26.5	9.8	51	K860	430	160	50
AUG											
12...	1000	312	329	8.4	22.5	8.6	59	1200	200	150	49
SEP											
22...	1345	119	380	8.5	18.0	9.6	29	930	260	160	51

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS CL) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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...	7.2	11	3.7	331	.26	.040	.69	.73	.99	.210	5.1
NOV											
18...	7.2	3.8	3.0	249	.42	.060	.44	.50	.92	.190	3.7
DEC											
16...	7.3	13	7.0	257	.59	.260	1.2	1.50	2.1	.230	9.7
JAN											
15...	7.3	11	4.0	239	.83	.190	.81	1.00	1.8	.040	20
FEB											
26...	6.3	11	3.3	252	.55	.130	.87	1.00	1.5	.240	6.0
MAR											
18...	7.1	13	2.8	280	.34	.080	.68	.76	1.1	.220	3.8
APR											
10...	7.3	13	3.2	238	.28	.050	1.1	1.10	1.4	.280	10
MAY											
20...	6.7	1.6	2.8	274	.41	.110	.89	1.00	1.4	.270	12
JUL											
08...	6.7	1.6	2.9	338	.03	.070	1.8	1.90	1.9	.400	16
15...	7.4	1.0	3.5	293	.02	.050	1.4	1.40	1.4	.370	15
AUG											
12...	7.5	<1.0	12	290	.01	.050	1.5	1.50	1.5	.390	7.0
SEP											
22...	7.7	<5.0	3.3	264	.28	.090	.79	.88	1.2	<.010	4.1

PLATTE RIVER BASIN

06799000 ELKHORN RIVER AT NORFOLK, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 18...	1444	.00	9.2	.3	6.5	150	.3	37	--
FEB 26...	0910	.00	9.0	.3	6.3	130	.3	36	194
APR 10...	1100	--	--	--	--	--	.3	--	--
MAY 20...	0700	.00	9.1	.3	6.6	160	.3	30	197
AUG 12...	1000	.00	9.7	.4	8.5	170	.3	38	--

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 18...	--	--	.41	.140	4	200	40	<1	0
FEB 26...	.26	141	.55	.240	--	--	20	--	--
APR 10...	--	--	--	--	--	--	--	--	--
MAY 20...	.27	149	.40	.220	5	200	20	<1	10
AUG 12...	--	--	.02	.280	--	--	30	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	3	10	3	40	.0	1	0	4
FEB 26...	--	40	--	20	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--
MAY 20...	0	40	4	10	.2	1	0	90
AUG 12...	--	20	--	6	--	--	--	--

FLATTE 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 (10.9 km) south of Foster and 7.2 mi (11.6 km) southwest of Pierce.

DRAINAGE AREA.--137 mi² (355 km²).

PERIOD OF RECORD.--October 1975 (monthly discharge only) to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,650 ft (503 m) from topographic map.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--6 years, 8.24 ft³/s (0.233 m³/s), 5,970 acre-ft/yr (7.36 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 275 ft³/s (7.79 m³/s) Mar. 23, 1979, gage height, 7.62 ft (2.323 m), backwater from ice; maximum gage height, 8.21 ft (2.502 m) Mar. 19, 1978, from high-water mark, backwater from ice; minimum daily discharge, 1.5 ft³/s (0.042 m³/s) Feb. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66 ft³/s (1.87 m³/s) June 14, gage height, 4.26 ft (1.298 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	5.1	4.6	5.4	2.4	5.6	8.7	4.5	4.2	5.8	5.1	4.4
2	2.8	5.1	4.0	4.5	1.5	5.7	8.0	4.7	15	5.8	7.4	4.5
3	2.9	4.8	4.5	4.1	3.0	6.0	7.4	5.4	11	9.0	6.2	4.1
4	3.1	4.7	4.7	3.9	4.5	6.1	6.6	8.1	6.7	7.0	5.3	4.1
5	3.2	5.0	5.0	3.8	4.7	5.7	6.3	5.8	5.9	6.2	28	4.4
6	3.3	4.8	4.9	4.0	4.6	5.8	6.1	5.1	5.2	5.8	28	4.4
7	3.3	5.0	4.8	4.2	4.3	5.7	6.0	4.8	4.9	5.4	12	6.2
8	3.2	5.4	3.4	4.1	3.6	5.4	5.7	5.1	4.5	5.2	9.2	5.4
9	3.2	4.7	3.5	4.0	2.5	5.7	5.8	4.7	4.5	4.9	8.2	5.0
10	2.8	5.0	4.1	3.8	4.5	5.6	5.7	4.4	4.8	4.8	7.5	4.6
11	2.7	4.7	4.6	4.4	6.0	5.8	5.4	4.5	4.7	4.7	7.1	4.1
12	3.0	5.0	5.1	4.7	7.4	6.1	5.5	4.7	4.6	4.1	6.7	3.8
13	2.9	4.8	5.3	4.8	9.8	6.0	5.4	5.3	5.4	3.7	7.0	3.9
14	3.0	4.8	5.1	4.7	13	6.0	5.2	5.0	30	3.3	9.0	3.9
15	3.1	5.0	5.1	4.5	23	6.1	5.4	4.5	16	3.2	7.4	3.6
16	4.8	5.0	5.3	4.3	24	5.8	5.5	4.7	9.5	3.2	6.6	3.7
17	4.5	5.0	5.5	4.2	17	5.7	5.5	7.3	8.2	3.2	6.2	3.7
18	3.9	5.0	5.1	4.8	11	4.4	5.3	7.6	7.5	3.1	5.9	3.9
19	4.0	5.0	4.8	4.8	9.1	5.5	5.4	6.8	7.3	5.8	6.2	3.9
20	3.9	4.8	4.5	4.6	8.3	5.5	5.2	5.6	7.3	5.1	5.7	3.8
21	4.0	4.8	5.2	4.6	7.7	5.7	5.6	5.4	8.2	4.0	5.5	3.6
22	4.1	4.8	5.8	4.7	7.1	6.2	6.0	5.4	7.1	4.0	5.1	3.6
23	3.9	4.8	5.2	5.0	6.6	5.8	6.0	5.0	6.4	3.8	4.7	3.7
24	4.5	4.3	4.7	5.7	6.2	5.7	5.6	5.2	5.8	3.5	4.9	3.8
25	4.0	4.2	5.4	5.8	5.8	5.6	5.6	5.0	5.4	3.9	6.9	4.1
26	4.1	4.4	6.2	5.3	5.3	5.5	5.6	5.1	5.2	4.5	5.7	5.1
27	4.4	4.8	6.6	4.8	6.0	5.7	5.3	5.0	5.4	4.8	5.3	4.8
28	4.7	4.1	6.2	4.4	6.7	12	4.9	5.2	5.6	5.4	5.6	4.3
29	5.0	4.8	6.6	4.0	---	19	5.0	4.9	6.2	5.0	5.5	4.4
30	5.3	5.0	6.3	3.8	---	13	4.7	4.5	6.0	5.0	5.1	4.2
31	5.3	---	6.0	4.1	---	10	---	4.3	---	4.7	4.8	---
TOTAL	116.0	144.7	158.1	139.8	215.6	208.4	174.4	163.6	228.5	147.9	243.8	127.0
MEAN	3.74	4.82	5.10	4.51	7.70	6.72	5.81	5.28	7.62	4.77	7.86	4.23
MAX	5.3	5.4	6.6	5.8	24	19	8.7	8.1	30	9.0	28	6.2
MIN	2.7	4.1	3.4	3.8	1.5	4.4	4.7	4.3	4.2	3.1	4.7	3.6
AC-FT	230	287	314	277	428	413	346	325	453	293	484	252

CAL YR 1980 TOTAL 3031.9 MEAN 8.28 MAX 118 MIN 2.1 AC-FT 6010
WIB YR 1981 TOTAL 2067.6 MEAN 5.67 MAX 30 MIN 1.5 AC-FT 4100

FLATTE RIVER BASIN

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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 (4.0 km) southeast of Pierce.

DRAINAGE AREA.--700 mi² (1,810 km²), approximately, of which about 30 mi² (78 km²) is noncontributing.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,553.07 ft (473.376 m) National Geodetic Vertical Datum of 1929 (U.S. Weather Bureau levels).

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--21 years, 77.0 ft³/s (2.181 m³/s), 55,790 acre-ft/yr (68.8 hm³/yr); median of yearly mean discharges, 64 ft³/s (1.812 m³/s), 46,400 acre-ft/yr (57.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s (430 m³/s) Feb. 19, 1971, gage height, 15.10 ft (4.602 m); minimum daily, 3.8 ft³/s (0.11 m³/s) July 24, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 998 ft³/s (28.3 m³/s) June 14 at 1400, gage height, 9.98 ft (3.042 m), no other peak above base of 870 ft³/s (24.6 m³/s); minimum daily, 8.4 ft³/s (0.24 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	22	20	31	20	32	45	24	23	22	17	24
2	15	22	21	29	19	31	40	24	143	18	203	23
3	16	21	20	26	18	31	38	26	69	27	78	23
4	16	21	24	28	19	32	36	34	36	24	42	23
5	16	20	25	30	21	31	35	32	30	22	251	23
6	17	20	26	29	21	31	33	28	27	20	204	23
7	17	20	26	29	20	30	34	27	26	19	92	28
8	16	21	25	28	20	30	33	27	25	18	50	27
9	17	20	25	28	21	31	32	27	25	17	40	24
10	17	20	25	26	18	31	32	27	24	16	35	23
11	17	20	26	22	16	31	31	26	24	15	32	27
12	17	21	27	27	17	31	31	27	23	14	30	22
13	17	21	28	28	18	31	31	29	25	13	32	21
14	18	21	29	29	21	31	30	29	575	12	100	21
15	19	21	30	28	25	31	29	28	197	8.6	69	21
16	24	21	31	25	35	30	29	27	113	8.8	33	22
17	23	22	30	25	40	31	30	32	62	8.8	29	22
18	21	21	30	27	45	30	29	35	44	8.4	28	22
19	20	21	25	28	51	31	29	34	36	260	27	22
20	20	22	23	28	42	32	29	31	33	92	26	21
21	20	21	30	26	40	32	29	28	353	40	26	21
22	20	22	35	25	37	34	31	28	222	24	26	20
23	21	22	35	27	34	33	31	26	95	17	25	21
24	21	21	33	27	34	33	29	26	68	11	25	21
25	20	18	36	26	33	32	29	27	54	11	29	22
26	21	19	37	25	32	31	27	26	46	15	27	25
27	23	20	39	24	33	31	27	26	39	19	25	25
28	22	19	41	23	34	40	25	26	34	19	26	23
29	23	21	38	22	---	80	25	25	30	19	26	23
30	22	22	32	20	---	79	25	24	28	18	25	22
31	22	---	35	23	---	54	---	23	---	18	24	---
TOTAL	592	623	907	819	784	1098	934	859	2529	854.6	1702	685
MEAN	19.1	20.8	29.3	26.4	28.0	35.4	31.1	27.7	84.3	27.6	54.9	22.8
MAX	24	22	41	31	51	80	45	35	575	260	251	28
MIN	14	18	20	20	16	30	25	23	23	8.4	17	20
AC-FT	1170	1240	1800	1620	1560	2180	1850	1700	5020	1700	3380	1360
CAL YR 1980	TOTAL	19839.8	MEAN	54.2	MAX	4170	MIN	5.6	AC-FT	39350		
WTF YR 1981	TOTAL	12386.6	MEAN	33.9	MAX	575	MIN	8.4	AC-FT	24570		

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 (4 m) downstream from bridge on U.S. Highway 81, in Madison.

DRAINAGE AREA.--174 mi² (451 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,549.70 ft (472.349 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) June 30, 1981, gage height, 17.26 ft (5.261 m); minimum daily, 3.6 ft³/s (0.10 m³/s) July 30, 31, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) June 30, gage height, 17.26 ft (5.261 m); minimum daily, 3.9 ft³/s (0.11 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	12	13	13	12	13	17	10	13	141	11	9.8
2	7.9	12	11	12	13	13	14	10	14	44	16	9.4
3	7.9	12	12	13	12	13	13	12	11	70	11	9.5
4	8.1	12	12	12	12	13	12	13	10	102	14	9.3
5	8.8	12	13	12	12	12	13	11	10	40	65	10
6	8.8	12	12	12	12	12	12	11	10	25	189	11
7	8.8	11	12	13	12	12	12	11	10	19	31	14
8	8.8	11	12	13	11	12	12	11	9.1	16	17	12
9	8.6	12	11	12	11	13	12	11	9.8	14	13	11
10	8.3	12	11	12	10	13	12	11	9.5	11	11	11
11	8.6	12	12	12	13	13	13	10	8.8	9.8	9.2	11
12	9.0	12	13	12	12	13	13	11	8.4	10	9.7	11
13	8.8	12	13	12	12	13	12	11	8.8	6.3	11	11
14	9.0	12	13	13	13	13	14	11	9.5	4.0	13	11
15	11	11	13	13	16	13	13	11	9.9	4.5	11	11
16	12	11	14	12	17	12	13	12	8.3	5.0	11	12
17	11	13	14	12	19	12	13	18	7.2	4.0	13	12
18	10	12	13	12	19	12	12	22	7.7	3.9	9.4	12
19	10	13	12	12	18	12	12	16	7.4	5.7	9.0	12
20	11	14	11	12	18	13	12	15	7.7	5.6	8.8	13
21	11	12	12	12	18	13	12	14	8.1	6.0	8.8	12
22	11	13	12	12	16	14	14	14	8.8	6.4	9.0	12
23	12	12	12	12	15	13	13	12	8.3	6.5	9.8	12
24	11	12	11	13	15	13	12	12	7.7	6.2	10	14
25	11	12	11	13	15	14	12	12	6.6	51	10	13
26	12	13	12	13	14	14	12	12	5.4	29	11	14
27	15	13	12	13	14	13	12	11	6.1	12	9.3	13
28	13	12	13	13	13	36	12	11	7.2	14	9.9	14
29	13	13	14	12	---	64	11	11	756	11	11	13
30	13	13	14	12	---	38	10	11	1350	9.9	10	12
31	13	---	13	12	---	21	---	11	---	9.7	10	---
TOTAL	319.1	365	383	383	394	505	376	379	2354.3	702.5	591.9	352.0
MEAN	10.3	12.2	12.4	12.4	14.1	16.3	12.5	12.2	78.5	22.7	19.1	11.7
MAX	15	14	14	13	19	64	17	22	1350	141	189	14
MIN	7.7	11	11	12	10	12	10	10	5.4	3.9	8.8	9.3
AC-FT	633	724	760	760	781	1000	746	752	4670	1390	1170	698
CAL YR 1980	TOTAL	5911.1	MEAN 16.2	MAX 339	MIN 3.6	AC-FT 11720						
WTR YR 1981	TOTAL	7104.8	MEAN 19.5	MAX 1350	MIN 3.9	AC-FT 14090						

PLATTE RIVER BASIN

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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 (2 km) west of West Point.

DRAINAGE AREA.--5,100 mi² (13,200 km²), approximately, of which about 4,100 mi² (10,600 km²) 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 (393.576 m) National Geodetic Vertical Datum of 1929. Prior to May 18, 1976, at site on left bank 50 ft (15 m) upstream from bridge at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Some small diversions above station for irrigation.

AVERAGE DISCHARGE.--13 years (water years 1969-81), 669 ft³/s (18.95 m³/s), 484,700 acre-ft/yr (0.598 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, 33,000 ft³/s (935 m³/s) June 25, 1969, gage height, 13.21 ft (4.026 m); maximum gage height, 16.09 ft (4.904 m) Mar. 18, 1978, ice jam; minimum daily, 41 ft³/s (1.16 m³/s) Aug. 31, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1960 reached a stage of 19.09 ft (5.819 m), backwater from ice; observed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,430 ft³/s (97.1 m³/s) June 15, gage height, 8.40 ft (2.560 m), no peak above base of 4,500 ft³/s (127 m³/s); minimum daily, 129 ft³/s (3.65 m³/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	279	270	260	330	397	663	261	283	2000	395	253
2	132	272	180	250	310	393	573	248	304	1300	786	248
3	129	270	190	240	290	385	525	257	640	800	660	236
4	133	270	200	230	300	385	463	283	911	660	715	228
5	136	270	220	250	300	384	445	301	679	580	770	224
6	142	270	220	250	310	380	428	310	481	501	882	224
7	143	270	210	230	300	378	411	306	400	400	992	222
8	145	270	210	240	290	381	394	292	338	334	895	224
9	142	260	200	220	270	378	388	279	310	301	507	228
10	137	270	210	210	240	370	381	274	343	283	400	232
11	133	270	210	240	220	369	374	270	296	253	357	221
12	134	270	210	260	240	374	357	279	274	220	321	208
13	137	274	210	270	260	366	354	274	270	204	306	207
14	142	280	220	280	280	366	344	310	261	192	328	203
15	147	280	230	290	310	366	348	279	1430	178	320	196
16	198	280	290	260	350	359	343	266	772	161	308	195
17	208	280	250	240	380	350	337	348	756	147	329	196
18	222	270	210	260	410	354	327	428	546	142	279	192
19	217	270	170	270	480	360	332	476	451	142	259	186
20	234	280	190	280	580	358	329	346	395	148	251	178
21	220	290	210	260	533	362	327	422	366	292	244	173
22	221	290	220	270	451	371	356	416	410	266	239	165
23	232	280	210	300	441	367	360	393	593	175	237	164
24	233	270	170	330	455	363	354	374	463	208	244	177
25	243	270	190	350	438	365	342	365	343	371	264	193
26	240	270	210	360	422	365	327	357	329	747	273	183
27	263	270	220	360	419	359	304	352	324	789	301	187
28	285	280	240	350	407	382	288	344	257	600	273	189
29	283	280	250	340	---	787	288	336	439	514	267	195
30	284	280	260	340	---	821	266	323	1150	445	259	196
31	287	---	260	360	---	749	---	309	---	416	257	---
TOTAL	5943	8235	6740	8650	10016	12744	11328	10078	14814	13769	12918	6123
MEAN	192	275	217	279	358	411	378	325	494	444	417	204
MAX	287	290	290	360	580	821	663	476	1430	2000	992	253
MIN	129	260	170	210	220	350	266	248	257	142	237	164
AC-FT	11790	16330	13370	17160	19870	25280	22470	19990	29380	27310	25620	12140
CAL YR 1980	TOTAL	177838	MEAN	486	MAX	4800	MIN	59	AC-FT	352700		
WTR YR 1981	TOTAL	121358	MEAN	332	MAX	2000	MIN	129	AC-FT	240700		

PLATTE RIVER BASIN

06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD-- Water years 1968-69, October 1980 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
17...	1340	205	428	8.1	10.5	10.8	12	320	260	180	55
NOV											
18...	1115	319	405	8.0	.5	12.9	14	--	88	200	60
DEC											
16...	1500	236	368	8.1	2.0	12.4	8	290	130	170	54
JAN											
15...	1500	289	460	7.9	.0	14.3	28	330	144	200	61
FEB											
26...	1330	415	365	8.4	7.0	12.2	21	230	330	160	50
MAR											
17...	1600	371	375	7.9	9.0	11.3	41	K10	K28	180	55
APR											
08...	1630	393	401	8.2	17.0	10.0	26	K230	1400	180	57
MAY											
20...	1500	420	365	8.2	20.5	9.8	27	440	330	170	52
JUL											
07...	1650	379	316	8.1	30.0	9.2	67	5400	1100	150	47
15...	1220	175	393	8.8	30.5	8.6	61	730	11000	190	60
AUG											
12...	1530	321	368	8.9	28.5	10.2	86	1500	200	160	51
SEP											
22...	1145	166	455	8.5	16.0	10.2	35	K7500	440	200	61

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

DATE	MAGNE- SIUM, DIS- SOLVFD (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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...	11	24	14	310	.44	.050	1.1	1.10	1.5	.260	4.1
NOV											
18...	11	20	10	346	.65	.190	.73	.92	1.6	.250	38
DEC											
16...	9.6	22	15	299	.86	.410	.89	1.30	2.2	.250	5.8
JAN											
15...	11	23	11	326	.97	.470	1.0	1.50	2.5	.040	7.2
FEB											
26...	8.6	21	11	325	.90	.260	1.1	1.40	2.3	.310	8.1
MAR											
17...	9.6	21	8.7	339	.63	.110	.81	.92	1.6	.300	4.3
APR											
08...	10	23	9.0	362	.61	.050	1.3	1.30	1.9	.410	11
MAY											
20...	9.1	24	10	328	.68	.080	1.4	1.50	2.2	.420	14
JUL											
07...	8.5	2.0	7.3	663	.05	.090	2.9	3.00	3.1	.630	14
15...	9.8	2.0	9.6	361	.01	.040	1.8	1.80	1.8	.400	16
AUG											
12...	8.4	<1.0	15	460	.01	.050	1.9	1.90	1.9	.560	19
SEP											
22...	11	<5.0	12	311	.22	.060	.89	.95	1.2	.010	4.6

PLATTE RIVER BASIN

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06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	FLUD- 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)
NOV 18...	1115	.00	14	.4	6.7	180	.3	33	--
FEB 26...	1330	14	14	.5	6.3	160	.3	31	243
MAY 20...	1500	.00	16	.5	7.9	180	.2	26	254
AUG 12...	1530	.00	14	.5	10	190	.3	29	--

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 18...	--	--	.65	.190	5	200	60	<1	10
FEB 26...	.33	272	.90	.240	--	--	20	--	--
MAY 20...	.35	288	--	.270	7	200	20	<1	10
AUG 12...	--	--	.00	.260	--	--	30	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	4	20	3	40	.0	3	0	<3
FEB 26...	--	10	--	30	--	--	--	--
MAY 20...	3	50	3	20	.2	2	0	8
AUG 12...	--	20	--	3	--	--	--	--

PLATTE RIVER BASIN

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 (4 m) downstream from bridge on county road, 1 mi (2 km) southwest of Scribner and 3 mi (5 km) upstream from mouth.

DRAINAGE AREA.--204 mi² (528 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,234.72 ft (376.343 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft³/s (229 m³/s) June 13, 1980, gage height, 19.13 ft (5.831 m); minimum daily, 0.29 ft³/s (0.008 m³/s) July 20, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 404 ft³/s (11.4 m³/s) June 30, gage height, 6.84 ft (2.085 m); minimum daily, 0.29 ft³/s (0.008 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	6.3	4.7	7.0	6.4	7.9	9.0	5.3	4.3	27	4.2	4.1
2	3.7	6.3	5.8	6.4	6.2	7.4	7.3	5.5	4.5	7.6	51	3.5
3	3.9	6.1	6.6	5.2	6.6	7.1	6.7	5.9	4.8	5.1	18	3.4
4	4.3	5.6	7.2	5.4	7.0	7.4	6.8	8.7	4.4	9.2	8.1	3.1
5	4.5	6.0	8.4	5.4	7.4	8.2	6.3	6.9	4.5	8.1	5.3	3.2
6	5.0	6.0	6.6	5.6	7.8	7.4	6.2	5.4	4.2	4.3	4.8	3.1
7	5.4	5.8	5.8	5.4	7.0	7.4	6.1	4.9	4.1	3.5	6.7	3.9
8	5.0	5.8	4.5	5.2	6.8	7.4	6.3	5.0	4.3	2.9	5.0	3.5
9	4.7	6.0	5.2	5.0	6.4	7.4	6.3	4.7	4.8	2.9	3.5	3.4
10	4.5	5.6	5.0	4.8	6.8	6.8	6.0	4.6	4.6	2.7	3.0	3.4
11	4.5	5.6	5.4	4.5	5.6	9.6	5.8	5.0	4.8	2.4	3.0	3.2
12	4.5	6.1	6.6	5.0	4.6	7.9	6.1	5.3	5.0	1.8	2.8	3.2
13	4.7	6.8	5.8	5.6	7.0	8.7	6.4	5.9	4.6	1.7	3.2	3.1
14	4.7	6.4	4.7	5.8	8.0	6.2	6.6	5.4	4.8	1.3	3.5	3.2
15	5.0	6.3	5.0	5.0	8.8	6.1	6.4	4.8	5.3	1.2	4.6	3.1
16	9.3	5.8	4.5	4.8	10	5.9	6.1	5.6	4.3	.66	3.4	3.1
17	9.3	5.6	4.1	5.0	12	6.2	6.4	6.4	3.9	.35	3.6	3.1
18	6.1	5.8	3.2	5.4	19	6.3	6.5	9.4	3.9	.30	3.5	3.2
19	5.4	5.4	3.2	5.8	14	6.1	6.7	9.4	3.8	.30	3.4	3.3
20	5.4	5.2	3.1	5.6	12	6.4	6.7	6.8	3.5	.29	3.5	3.3
21	5.2	5.6	4.0	6.0	13	6.8	7.0	6.3	3.5	.47	3.5	3.3
22	5.2	5.9	4.4	6.6	11	8.2	9.0	6.3	3.8	1.3	2.1	3.3
23	5.4	5.2	4.0	7.0	8.9	7.3	8.5	6.3	3.4	1.0	3.4	3.3
24	5.4	4.3	3.5	7.4	8.9	7.0	6.5	5.6	3.2	.86	2.9	5.0
25	5.2	6.3	3.0	6.6	8.6	6.9	6.7	5.5	2.1	1.4	5.1	6.8
26	5.2	6.1	3.5	6.4	8.5	7.2	6.7	5.3	.83	1.1	4.3	6.5
27	6.8	4.7	5.0	6.4	8.7	6.2	7.0	5.0	1.9	2.1	3.9	6.1
28	7.6	5.8	6.0	6.2	8.6	8.2	7.2	5.1	2.3	2.8	3.8	5.2
29	6.8	4.9	7.4	6.0	---	26	6.1	5.1	21	3.4	3.8	3.5
30	6.6	4.2	7.2	6.4	---	20	5.6	4.7	256	2.3	4.1	3.6
31	6.6	---	6.8	6.2	---	12	---	4.4	---	2.6	3.6	---
TOTAL	170.2	171.5	160.2	179.1	245.6	259.6	201.0	180.5	386.43	102.93	184.6	113.0
MEAN	5.49	5.72	5.17	5.78	8.77	8.37	6.70	5.82	12.9	3.32	5.95	3.77
MAX	9.3	6.8	8.4	7.4	19	26	9.0	9.4	256	27	51	6.8
MIN	3.7	4.2	3.0	4.5	4.6	5.9	5.6	4.4	.83	.29	2.1	3.1
AC-FT	338	340	318	355	487	515	399	358	766	204	366	224
CAL YR 1980	TOTAL	13063.50	MEAN	35.7	MAX	2570	MIN	3.0	AC-FT	25910		
WTR YR 1981	TOTAL	2354.66	MEAN	6.45	MAX	256	MIN	.29	AC-FT	4670		

PLATTE RIVER BASIN

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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 (61 m) downstream from bridge on Nebraska State Highway 94 at Pender and 0.7 mi (1.1 km) downstream from Rattlesnake Creek.

DRAINAGE AREA.--731 mi² (1,890 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,300.96 ft (396.533 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 23, 1966, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--16 years, 121 ft³/s (3.427 m³/s), 87,660 acre-ft/yr (0.108 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,900 ft³/s (1,050 m³/s) Feb. 19, 1971, gage height, 23.11 ft (7.044 m); minimum daily, 12 ft³/s (0.34 m³/s) Aug. 11, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
June 14	1715	*9670	274	14.27	4.349
June 21	2200	1990	56.4	8.05	2.454

Minimum daily discharge, 26 ft³/s (0.74 m³/s) Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	47	35	72	52	57	78	43	37	73	36	34
2	40	47	35	74	48	56	67	46	40	60	202	35
3	39	46	36	60	46	54	59	48	204	79	79	34
4	42	44	38	60	50	53	49	54	76	143	47	34
5	42	44	42	62	54	53	49	50	53	75	45	34
6	41	44	47	60	56	51	50	46	45	60	109	34
7	41	44	48	56	54	50	49	45	43	57	57	35
8	39	45	47	58	54	48	46	43	40	55	41	36
9	39	44	47	46	54	48	45	42	40	54	36	32
10	39	43	45	38	44	47	46	42	40	51	33	32
11	38	43	47	38	40	45	46	41	39	46	30	29
12	40	43	49	39	50	46	44	42	39	43	28	28
13	41	44	50	41	62	45	42	43	38	40	28	27
14	40	44	50	43	70	45	44	42	3990	38	34	27
15	40	44	49	42	78	45	45	40	1390	35	35	26
16	45	45	52	41	78	45	45	40	283	31	33	26
17	45	45	54	40	84	45	45	41	149	30	32	27
18	42	46	52	43	90	43	44	44	115	95	30	28
19	42	46	50	46	100	42	45	42	105	127	28	30
20	42	45	47	45	79	43	46	39	95	152	28	31
21	42	45	44	49	60	45	48	38	530	147	28	31
22	42	44	48	52	61	45	50	39	659	63	27	31
23	42	42	43	56	59	44	48	38	117	44	28	30
24	41	40	35	58	60	44	47	89	75	43	31	30
25	43	38	40	56	58	43	45	46	62	46	32	31
26	43	40	50	54	57	43	43	41	59	38	32	32
27	47	39	56	52	58	44	43	38	182	39	31	32
28	46	41	62	50	57	44	42	38	101	42	33	32
29	45	45	70	48	---	297	43	37	313	43	34	33
30	45	48	74	47	---	195	44	38	131	41	35	32
31	46	---	76	50	---	104	---	38	---	38	35	---
TOTAL	1300	1315	1518	1576	1713	1909	1437	1353	9090	1928	1337	933
MEAN	41.9	43.8	49.0	50.8	61.2	61.6	47.9	43.6	303	62.2	43.1	31.1
MAX	47	48	76	74	100	297	78	89	3990	152	202	36
MIN	38	38	35	38	40	42	42	37	37	30	27	26
AC-FT	2580	2610	3010	3130	3400	3790	2850	2680	18030	3820	2650	1850
CAL YR 1980	TOTAL	35284	MEAN	96.4	MAX	7500	MIN	19	AC-FT	69990		
WTE YR 1981	TOTAL	25409	MEAN	69.6	MAX	3990	MIN	26	AC-FT	50400		

PLATTE RIVER BASIN

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
15...	1240	40	742	8.1	11.0	12.7	9	K190	380	360	100
NOV											
18...	1245	42	765	7.9	.5	11.1	8	--	200	420	120
DEC											
16...	1100	54	835	7.9	.5	11.6	10	200	200	380	110
JAN											
15...	1315	43	785	7.7	.0	13.7	58	K10	K33	410	120
FEB											
24...	1500	58	835	8.1	9.0	13.5	6	K58	K52	380	110
MAR											
18...	0750	42	720	8.0	.5	14.2	13	K20	K60	390	110
APR											
08...	1840	46	796	7.8	16.0	10.0	24	290	600	390	110
MAY											
20...	0930	39	720	8.2	15.5	10.1	8	130	170	350	100
JUL											
08...	1700	53	618	8.2	30.0	12.8	62	1000	420	310	81
15...	1120	34	720	8.5	28.5	9.7	44	390	K130	340	93
AUG											
12...	1330	27	720	8.5	28.0	14.0	53	240	110	330	90
SEP											
22...	1700	28	750	8.3	19.0	13.4	34	600	K300	350	94

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
15...	27	120	13	520	.49	.010	.71	.72	1.2	.130	4.8
NOV											
18...	28	120	12	572	1.3	.060	.82	.88	2.2	.150	2.3
DEC											
16...	26	120	32	579	1.4	.640	1.4	2.00	3.4	.710	6.8
JAN											
15...	27	120	12	567	1.6	.260	.84	1.10	2.7	.040	4.9
FEB											
24...	25	120	11	541	1.4	.240	1.2	1.40	2.8	.220	6.1
MAR											
18...	27	140	8.6	527	.80	.060	.86	.92	1.7	.150	8.9
APR											
08...	28	160	9.3	644	.96	.030	1.2	1.20	2.2	.280	8.5
MAY											
20...	25	130	12	566	1.2	.100	1.0	1.10	2.3	.290	16
JUL											
08...	25	130	7.9	642	.60	.070	1.9	2.00	2.6	.290	1.0
15...	25	140	17	525	.00	.040	1.2	1.20	1.2	.290	6.1
AUG											
12...	26	120	19	498	.20	.070	1.5	1.60	1.8	.280	6.4
SEP											
22...	27	120	15	491	.37	.060	.87	.93	1.3	.080	3.2

PLATTE RIVER BASIN

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06799450 LOGAN CREEK AT PENDER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 18...	1245	114	27	.6	6.8	300	.3	20	--
FEB 24...	1500	98	25	.6	6.0	280	.2	22	494
MAY 20...	0930	63	30	.7	6.8	290	.2	20	499
AUG 12...	1330	92	33	.8	9.4	240	.2	16	459

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 18...	--	--	1.3	.090	3	100	90	2	0
FEB 24...	.67	77.4	1.5	.220	--	--	50	--	--
MAY 20...	.68	52.5	1.2	.230	7	100	60	<1	10
AUG 12...	.62	33.5	.18	.180	--	--	70	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PR) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	5	10	3	310	.1	12	0	5
FEB 24...	--	10	--	200	--	--	--	--
MAY 20...	3	100	2	190	.1	10	0	10
AUG 12...	--	<10	--	42	--	--	--	--

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 (3 km) southwest of Uehling and 8 mi (13 km) upstream from mouth.

DRAINAGE AREA.--1,030 mi² (2,670 km²), approximately.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,208.73 ft (368.421 m) National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to July 15, 1963.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--40 years, 174 ft³/s (4.928 m³/s), 126,100 acre-ft/yr (0.155 km³/yr); median of yearly mean discharges, 150 ft³/s (4.248 m³/s), 109,000 acre-ft/yr (0.134 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,200 ft³/s (714 m³/s) Feb. 20, 1971, gage height, 20.15 ft (6.142 m), from floodmark; maximum gage height, 20.15 ft (6.142 m), Mar. 27, 1962, present datum, Feb. 20, 1971; minimum daily discharge, 6.1 ft³/s (0.17 m³/s) July 26, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1940, reached a stage of 20.6 ft (6.28 m), present datum, from floodmarks, discharge, 22,200 ft³/s (629 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 15	0200	*7590 215	13.50 4.115
June 22	1200	1540 43.6	6.42 1.957

Minimum daily discharge, 18 ft³/s (0.51 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	55	43	86	66	62	97	45	43	126	40	44
2	47	55	41	88	62	61	78	47	46	83	95	43
3	47	55	38	70	60	60	74	48	50	144	190	43
4	48	55	41	70	68	61	69	59	164	145	80	43
5	49	54	46	74	72	61	63	59	76	132	72	43
6	49	54	52	72	78	60	63	58	53	82	62	43
7	49	54	54	68	74	59	60	53	48	66	101	46
8	49	54	54	72	66	57	60	52	47	60	60	44
9	48	54	52	60	68	58	57	51	44	54	42	47
10	49	53	52	50	50	58	55	48	42	52	42	44
11	48	53	60	49	46	56	56	48	41	48	40	42
12	48	52	62	50	62	56	55	48	39	43	38	41
13	48	54	64	54	76	55	55	51	39	37	40	40
14	50	53	62	56	86	53	53	54	855	32	43	38
15	52	50	66	54	92	54	52	55	3340	29	46	37
16	57	50	68	52	90	54	52	51	580	22	44	37
17	61	49	72	50	96	52	53	54	214	18	40	37
18	58	49	72	54	104	52	51	63	131	20	38	39
19	55	49	60	58	114	53	50	60	108	53	37	40
20	52	50	56	56	125	53	50	58	98	107	38	40
21	52	47	54	62	108	53	50	51	93	119	38	39
22	52	46	64	66	83	55	53	49	832	118	37	39
23	57	45	60	70	73	55	57	51	314	66	39	38
24	57	44	40	74	70	54	53	49	125	39	37	41
25	57	41	45	72	68	54	51	89	86	38	38	44
26	57	43	56	70	65	54	49	60	71	56	39	44
27	56	41	66	64	66	52	47	50	65	45	39	42
28	56	45	80	60	67	55	47	48	148	45	39	40
29	56	47	88	58	---	77	45	47	323	46	42	40
30	56	49	94	56	---	298	45	45	416	41	43	38
31	56	---	90	62	---	157	---	42	---	39	44	---
TOTAL	1624	1500	1852	1957	2155	2099	1700	1643	8531	2005	1623	1236
MEAN	52.4	50.0	59.7	63.1	77.0	67.7	56.7	53.0	284	64.7	52.4	41.2
MAX	61	55	94	88	125	298	97	89	3340	145	190	47
MIN	47	41	38	49	46	52	45	42	39	18	37	37
AC-FT	3220	2980	3670	3880	4270	4160	3370	3260	16920	3980	3220	2450
CAL YR 1980	TOTAL	43632	MEAN	119	MAX	4870	MIN	19	AC-FT	86540		
WTR YR 1981	TOTAL	27925	MEAN	76.5	MAX	3340	MIN	18	AC-FT	55390		

PLATTE RIVER BASIN

06799500 LOGAN CREEK NEAR UEHLING, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-71, 1974-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
OCT					MAY				
15...	1050	52	730	11.0	18...	1415	66	650	11.0
DEC					JUL				
16...	1330	53	820	1.0	07...	1330	67	592	28.5
JAN					21...	0920	84	413	23.0
13...	1300	55	845	.5	AUG				
FEB					11...	1315	39	578	26.0
24...	1125	68	800	3.5	SEP				
APR					03...	1030	43	289	19.0
08...	1345	61	821	14.0	24...	1145	48	640	18.0

PLATTE RIVER BASIN

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 (37 m) upstream from bridge on U.S. Highways 77 and 275, 1.5 mi (2.4 km) northwest of Nickerson, and 4 mi (6 km) upstream from mouth.

DRAINAGE AREA.--450 mi² (1,170 km²), 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 (364.102 m) National Geodetic Vertical Datum of 1929. Prior to July 28, 1960, nonrecording gage at site 120 ft (37 m) downstream at present datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--30 years, 53.9 ft³/s (1.526 m³/s), 39,050 acre-ft/yr (48.1 hm³/yr); median of yearly mean discharges, 48 ft³/s (1.359 m³/s), 34,800 acre-ft/yr (42.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) June 21, 1960, gage height, 14.67 ft (4.471 m); maximum gage height, 16.10 ft (4.907 m) Feb. 19, 1971, from floodmark, backwater from ice; minimum daily discharge, 0.1 ft³/s (0.003 m³/s) Jan. 15, 16, 1956, Aug. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1944, 16.28 ft (4.962 m) June 11, 1944, from floodmarks, discharge, 35,000 ft³/s (991 m³/s), from indirect measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 30	0600	*1320 37.4	a10.00 3.048
Aug. 5	2400	1120 31.7	b9.50 2.896

a About.

b From floodmark.

Minimum daily discharge, 0.13 ft³/s (0.004 m³/s), Sept. 22, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.63	.49	.40	.60	.81	5.7	.94	.30	177	1.1	.35
2	.30	.74	.40	.40	.50	.78	1.4	.85	.84	57	1.5	.35
3	.29	.67	.50	.40	.50	.65	2.0	1.5	.61	27	.52	.39
4	.44	.62	.60	.40	.60	.93	1.6	2.6	.32	23	5.0	.35
5	.55	.64	.70	.50	.70	.92	1.1	.78	.27	70	143	.38
6	.49	.72	.60	.50	.60	.82	.87	.56	.24	18	428	.30
7	.43	.67	.60	.50	.60	.89	.78	.55	.25	3.9	95	.60
8	.44	.75	.50	.50	.50	.82	.75	.61	.20	1.0	26	.26
9	.44	.88	.50	.40	.50	.66	.48	.62	.33	.66	4.8	.26
10	.33	.49	.50	.40	.50	.82	.53	.48	.27	.47	1.6	.22
11	.27	.55	.60	.50	.40	1.2	.79	.51	.53	.30	1.0	.22
12	.42	.75	.60	.60	.40	.62	.70	.95	.55	.26	.76	.22
13	.69	.75	.50	.50	.50	.54	.64	.60	.55	.26	1.1	.22
14	.75	.71	.50	.50	.60	.58	.64	.54	1.0	.26	.75	.18
15	.59	.64	.50	.50	.70	.66	.45	.43	1.2	.22	.60	.16
16	4.8	.65	.50	.50	.70	.64	.56	.47	.23	.18	.50	.22
17	.68	.74	.60	.50	.80	.86	.71	.82	.20	.22	.50	.22
18	.60	.69	.50	.50	.80	1.0	.55	1.6	.15	.16	.50	.18
19	.57	.75	.40	.60	.70	.94	.69	.78	.16	.22	.40	.22
20	.55	.74	.30	.60	.70	.92	.75	.56	.35	.22	.40	.22
21	.33	.64	.40	.50	.80	1.0	.82	.58	.67	.26	.40	.18
22	.36	1.0	.50	.50	.90	.96	1.4	.62	.50	.26	.40	.13
23	.63	1.1	.50	.60	1.0	.75	.98	.56	.33	.26	.75	.16
24	.34	.78	.40	.70	1.1	.89	.75	.42	.16	.26	.51	.60
25	.41	.50	.30	.60	.62	.76	1.0	.48	.15	.30	1.1	.22
26	.46	.50	.40	.50	.51	.74	.71	.51	.22	.30	.44	.26
27	1.6	.60	.50	.50	.69	.74	.68	.60	.45	.83	.40	.13
28	.76	.60	.50	.50	1.1	1.3	.71	.55	49	.44	.44	.18
29	.56	.60	.50	.50	---	2.0	.77	.46	25	.35	.44	.22
30	.55	.58	.50	.50	---	22	.87	.33	910	.35	.48	.22
31	.59	---	.50	.60	---	22	---	.38	---	.44	.43	---
TOTAL	20.68	20.68	15.39	15.70	18.62	69.20	30.38	22.24	995.03	384.38	718.82	7.82
MEAN	.67	.69	.50	.51	.67	2.23	1.01	.72	33.2	12.4	23.2	.26
MAX	4.8	1.1	.70	.70	1.1	.22	5.7	2.6	910	177	428	.60
MIN	.27	.49	.30	.40	.40	.54	.45	.33	.15	.16	.40	.13
AC-FT	41	41	31	31	37	137	60	44	1970	762	1430	16
CAL YR 1980	TOTAL	8183.95	MEAN	22.4	MAX	957	MIN	.25	AC-FT	16230		
WTR YR 1981	TOTAL	2318.94	MEAN	6.35	MAX	910	MIN	.13	AC-FT	4600		

PLATTE RIVER BASIN

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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 (30 m) upstream from bridge at north edge of Waterloo and 3.5 mi (5.6 km) downstream from Rawhide Creek.

DRAINAGE AREA.--6,900 mi² (17,900 km²), approximately, of which about 5,870 mi² (15,200 km²) 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 (336.722 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1960, to June 28, 1978, at datum 2.00 ft (0.610 m) higher. See WSP 1918 for history of changes prior to Oct. 1, 1960.

REMARKS.--Records good except those for winter period, which are poor. Some small diversions above station for irrigation.

AVERAGE DISCHARGE.--61 years, 1,109 ft³/s (31.41 m³/s), 803,500 acre-ft/yr (0.991 km³/yr); median of yearly mean discharges, 1,000 ft³/s (28.32 m³/s), 724,500 acre-ft/yr (0.893 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft³/s (2,830 m³/s) June 12, 1944, gage height, 16.6 ft (5.06 m) from floodmark in gage well, site and datum then in use, from rating curve extended above 22,000 ft³/s (623 m³/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 (1.42 m³/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.--Maximum discharge, 5,100 ft³/s (0.14 m³/s) June 15, gage height, 7.06 ft (2.152 m), no peak above base of 6,000 ft³/s (170 m³/s); minimum daily, 152 ft³/s (4.30 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	381	380	350	460	540	852	406	326	3440	392	345
2	210	371	300	340	440	524	773	397	359	2220	665	330
3	210	371	320	320	420	508	685	397	345	957	718	321
4	214	361	340	310	420	535	652	809	364	766	1040	303
5	198	351	350	330	430	524	602	596	932	659	815	299
6	194	346	330	340	500	502	557	487	919	646	1200	286
7	202	341	310	350	480	487	535	481	652	659	1160	303
8	206	346	307	350	400	466	529	461	487	540	919	308
9	210	336	279	340	370	461	513	451	402	451	759	281
10	214	336	302	330	350	451	497	421	364	402	801	273
11	210	326	371	320	290	441	487	402	345	345	614	273
12	206	322	346	330	300	441	487	406	335	312	508	277
13	206	326	336	350	320	431	481	411	294	281	466	264
14	210	336	322	350	350	421	476	411	273	256	451	248
15	218	346	361	350	450	411	466	426	2610	226	426	229
16	434	336	392	340	500	402	446	421	2470	181	426	218
17	462	336	413	330	560	402	436	431	1300	174	411	211
18	341	331	410	350	640	392	436	508	752	158	397	218
19	326	331	300	360	750	388	426	574	614	155	402	226
20	317	336	280	370	1280	392	416	557	513	152	350	229
21	307	351	330	370	1250	397	426	513	471	211	317	222
22	326	356	320	410	868	416	471	487	431	208	290	222
23	322	356	290	480	717	416	481	524	950	374	294	215
24	322	356	240	510	653	416	497	466	579	299	312	226
25	331	346	250	530	608	411	497	441	562	252	340	268
26	322	336	300	520	585	411	481	461	411	201	369	317
27	351	346	310	500	562	406	456	426	326	260	340	312
28	376	356	320	500	546	406	446	406	268	471	345	286
29	387	366	330	490	---	446	431	392	374	691	369	277
30	397	387	350	480	---	956	416	369	1090	602	359	277
31	387	---	360	490	---	1360	---	350	---	456	345	---
TOTAL	8838	10422	10119	12090	15499	15160	15354	14288	20118	17005	16600	8064
MEAN	285	347	326	390	554	489	512	461	671	549	535	269
MAX	462	387	413	530	1280	1360	852	809	2610	3440	1200	345
MIN	194	322	240	310	290	388	416	350	268	152	290	211
AC-FT	17530	20670	20070	23980	30740	30070	30450	28340	39900	33730	32930	15990
CAL YR 1980	TOTAL	302848	MEAN	827	MAX	9280	MIN	110	AC-FT	600700		
WTR YR 1981	TOTAL	163557	MEAN	448	MAX	3440	MIN	152	AC-FT	324400		

PLATTE RIVER BASIN

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 current year.

WATER TEMPERATURES: November 1977 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 750 micromhos Jan. 10, 1979; minimum daily, 235 micromhos Mar. 15, 1979.

WATER TEMPERATURES: Maximum, 36.0°C Aug. 19, 1979; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 697 micromhos June 17; minimum daily, 265 micromhos July 2.

WATER TEMPERATURES: Maximum, 34.0°C July 14; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
OCT											
06...	1030	192	568	8.3	14.0	16	--	--	K760	250	240
NOV											
13...	1100	330	545	8.2	4.0	27	--	36	2000	3000	220
DEC											
09...	1330	260	660	8.5	.0	--	13.2	20	1100	220	290
JAN											
13...	1145	340	589	8.0	.0	10	13.8	17	1230	820	250
FEB											
13...	1200	322	680	7.9	.5	--	10.6	18	1000	800	270
MAR											
09...	1330	461	497	8.2	6.0	40	10.4	7	250	80	210
APR											
14...	1420	478	493	8.6	15.0	--	12.0	32	150	450	220
MAY											
13...	1300	412	440	8.6	12.5	24	10.4	31	1400	K690	210
JUN											
09...	1400	376	433	8.4	26.5	--	7.4	54	3200	1400	180
15...	1435	4920	290	7.6	21.0	--	.5	1300	K370000	600000	130
16...	1415	2140	282	7.6	28.0	--	6.0	500	77000	110000	130
JUL											
14...	1215	258	490	8.4	31.0	45	9.0	44	570	190	210
AUG											
12...	1120	507	350	8.6	25.0	--	8.2	80	4400	880	150
SEP											
01...	0830	345	463	7.6	18.8	14	8.4	69	400	640	170

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)
OCT										
06...	20	68	17	30	.8	8.3	220	58	23	.4
NOV										
13...	7.0	64	14	27	.8	8.2	210	44	23	.3
DEC										
09...	--	85	18	--	--	--	--	58	24	--
JAN										
13...	18	76	14	26	.7	6.9	230	49	21	.4
FEB										
13...	--	83	16	--	--	--	--	52	23	--
MAR										
09...	17	63	12	22	.7	6.5	190	41	14	.3
APR										
14...	--	63	14	--	--	--	--	50	15	--
MAY										
13...	17	60	14	26	.8	7.2	190	53	19	.3
JUN										
09...	--	54	11	--	--	--	--	44	13	--
15...	45	37	8.1	7.2	.3	8.2	81	3.0	39	.5
16...	21	41	7.0	8.6	.3	8.4	110	1.7	6.7	.5
JUL										
14...	29	64	12	23	.7	10	180	58	18	.3
AUG										
12...	--	46	8.6	--	--	--	--	12	13	--
SEP										
01...	2.0	49	12	26	.9	8.8	170	30	29	.3

PLATTE RIVER BASIN

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06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	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, TOTAL (MG/L) (00500)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 06...	21	405	361	.55	210	--	.58	.57	.020	.000
NOV 13...	23	480	335	.65	428	480	1.1	1.1	.060	.060
DEC 09...	--	--	--	--	--	463	2.0	--	.330	--
JAN 13...	35	382	374	.52	351	391	1.7	1.7	.440	.440
FEB 13...	--	--	--	--	--	432	1.9	--	.390	--
MAR 09...	29	307	308	.42	382	411	1.3	1.3	.150	.150
APR 14...	--	--	--	--	--	406	.32	--	.040	--
MAY 13...	18	326	313	.44	363	427	.32	.31	.140	.100
JUN 09...	--	--	--	--	--	824	1.8	--	.160	--
15...	11	--	165	.22	2190	20200	1.7	1.7	1.10	1.10
16...	14	--	154	.21	890	7620	1.4	1.4	.610	.600
JUL 14...	25	308	320	.42	215	461	.29	.29	.120	.110
AUG 12...	--	--	--	--	--	575	.37	--	.230	--
SEP 01...	21	290	279	.39	270	391	.14	.12	.090	.100

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 06...	1.6	.56	1.60	1.0	.56	2.2	1.1	.660	.480	8.4
NOV 13...	.71	.71	.77	.00	.77	1.9	1.9	.520	.460	19
DEC 09...	1.1	--	1.40	--	--	3.4	--	.620	--	10
JAN 13...	.76	.56	1.20	.20	1.0	2.9	2.7	.460	.360	3.6
FEB 13...	.81	--	1.20	--	--	3.1	--	.630	--	7.6
MAR 09...	1.3	.82	1.50	.53	.97	2.8	2.3	.510	.370	13
APR 14...	2.1	--	2.10	--	--	2.4	--	.590	--	9.5
MAY 13...	1.9	.55	2.00	1.4	.65	2.3	.96	.610	.320	15
JUN 09...	1.6	--	1.80	--	--	3.6	--	.970	--	87
15...	7.5	1.0	8.60	6.5	2.1	10	3.9	7.30	.160	200
16...	1.9	1.1	2.50	.80	1.7	3.9	3.1	6.50	.180	24
JUL 14...	1.7	1.3	1.80	.40	1.4	2.1	1.7	.680	.460	6.3
AUG 12...	2.6	--	2.80	--	--	3.2	--	.000	--	18
SEP 01...	2.2	.65	2.30	1.6	.75	2.4	.87	.660	.230	7.7

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS R) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)
JAN 13...	1145	6	2	4	200	0	200	--	0	0	1	10
MAR 09...	1330	8	2	6	300	100	200	--	1	--	<1	0
JUN 15...	1435	200	200	3	--	--	--	370	7	7	0	320
JUN 16...	1415	--	--	4	--	--	--	310	3	3	0	130
JUL 14...	1215	16	1	15	300	0	300	--	1	--	<1	10
SEP 01...	0830	11	2	9	200	50	150	--	0	0	1	10

DATE	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR) (01031)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO) (01036)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
JAN 13...	10	0	1	--	<3	4	3	1	700	670	30	2
MAR 09...	0	0	4	--	<3	11	8	3	2600	2600	20	14
JUN 15...	310	10	220	220	1	600	590	11	380000	380000	70	350
JUN 16...	110	20	100	100	0	210	200	12	160000	160000	80	180
JUL 14...	0	10	1	--	<3	11	4	7	4900	4900	20	--
SEP 01...	10	0	1	--	<3	9	7	2	3400	--	<10	7

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
JAN 13...	0	2	80	20	60	.1	.1	.0	4	1	3
MAR 09...	12	2	160	120	40	.2	.1	.1	3	1	2
JUN 15...	350	3	26000	25000	1300	1.1	.4	.7	--	--	--
JUN 16...	180	3	12000	12000	10	.8	.6	.2	--	--	--
JUL 14...	--	2	400	400	5	.1	.0	.1	6	0	6
SEP 01...	0	8	300	300	5	.1	.1	.0	7	5	2

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG) (01076)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
JAN 13...	5	1	4	0	0	0	10	--	--	3.8	.6
MAR 09...	3	0	3	0	0	0	50	30	20	7.6	.8
JUN 15...	3	3	0	--	--	--	1600	1600	30	--	--
JUN 16...	0	0	1	--	--	--	660	650	10	--	--
JUL 14...	--	--	4	0	0	0	40	10	30	6.4	1.3
SEP 01...	3	0	3	0	0	0	160	150	14	5.3	1.4

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)
JUN										
15...	1435	.00	.00	.00	.00	.00	.00	.00	.00	.00
16...	1415	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)
JUN									
15...	.01	.00	.00	.00	.00	.00	.00	.00	.00
16...	.01	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION TOTAL (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL (UG/L) (39755)	SILVEX, TOTAL (UG/L) (39760)
JUN									
15...	.00	.00	.00	0	.00	.37	.00	.00	.00
16...	.00	.00	.00	0	.00	.01	.00	.00	.00

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 13,80 1100	MAR 9,81 1330	MAY 13,81 1300	JUL 14,81 1215	SEP 1,81 0830	
TOTAL CELLS/ML	30000	4500	56000	250000	130000	
DIVERSITY: DIVISION	1.7	1.5	1.3	1.2	1.4	
..CLASS	1.7	1.5	1.3	1.2	1.4	
...ORDER	2.6	2.7	1.5	1.7	1.5	
...FAMILY	2.8	3.1	2.1	1.9	2.6	
....GENUS	3.0	3.1	2.1	2.6	3.5	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
..BACILLARIOPHYCEAE						
...ACHNANTHALES						
...ACHNANTHACEAE						
....ACHNANTHES	340	1	--	--	--	--
..BACILLARIALES						
...NITZSCHIAEAE						
...NITZSCHIA	4500	15	1100#	24	1500	3
...EUPODISCALES					6500	3
...COSCINODISCAEAE						
....CYCLOTELLA	5500#	18	410	9	10000	4
....MELOSIRA	1500	5	--	--	--	--
....STEPHANODISCUS	--	--	--	--	--	--
..FRAGILARIALES						
...FRAGILARIAEAE						
....FRAGILARIA	--	--	--	--	4100	2
....SYNEDRA	520	2	54	1	--	--
..NAVICULALES						
...CYMBELLACEAE						
....AMPHORA	--	--	27	1	--	--
...GOMPHONEMACEAE						
....GOMPHONEMA	--	--	54	1	--	--
...NAVICULACEAE					*	0
....NAVICULA	690	2	410	9	--	--
....PINNULARIA	--	--	27	1	--	--
..SURIPELLALES						
...SURIPELLACEAE						
....CYMATOPLEURA	--	--	27	1	--	--
....SURIPELLA	--	--	82	2	--	--
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHLOROCOCCACEAE						
....SCHROEDERIA	--	--	--	--	1700	1
....TETRAEDRON	--	--	--	--	--	--
...COCCOMYXACEAE						4700
....ELAKATOTHRIX	--	--	--	--	--	--
...DICTYOSPHAERIAEAE					*	0
....DICTYOSPHAERIUM	340	1	--	--	--	--
...HYDRODICTYACEAE						6500
....PEDIASTRUM	--	--	--	--	--	--
...MICRACTINIACEAE						8600
....ACANTHOSPHAERA	--	--	--	--	--	--
....GOLENKINIA	--	--	--	--	*	0
....MICRACTINIUM	--	--	--	--	*	0
...OOCYSTACEAE					--	--
....ANKISTRODESMUS	690	2	250	5	4000	7
....CHODATELLA	170	1	--	--	--	--
....KIRCHNERIELLA	--	--	--	--	--	--
...OOCYSTIS	--	--	--	--	4800	2
...SELENASTRUM	--	--	--	--	2100	1
...TREUBARIA	--	--	--	--	1700	1
...PALMELLACEAE					--	--
....SPHAEROCYSTIS	--	--	--	--	*	0
...SCENEDESMACEAE						--
....ACTINASTRUM	--	--	--	--	--	--
....COELASTRUM	--	--	--	--	12000	5
....GLOEOACTINIUM	--	--	--	--	3100	1
...SCENEDESMUS	--	--	--	--	1400	1
...TETRASTRUM	4100	14	1000#	22	16000#	28
...VOLVOCALES	170	1	--	--	18000	7
...CHLAMYDOMONADACEAE					1400	1
....CHLAMYDOMONAS	2700	9	520	11	--	--
...PHACOTACEAE					*	0
....PTEROMONAS	--	--	27	1	--	--
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	--	--	--	--	--
...CRYPTOMONADACEAE					*	0
....CRYPTOMONAS	520	2	--	--	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

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06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTERRER 1981

DATE TIME	NOV 13,80 1100		MAR 9,81 1330		MAY 13,81 1300		JUL 14,81 1215		SEP 1,81 0830	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	14000	6	23000#	18
....ANACYSTIS	--	-	--	-	4300	8	150000#	59	--	-
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-	10000	8
..NOSTOCALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	*	0	--	-
...OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	8200#	27	410	9	--	-	8300	3	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	82	2	--	-	*	0	--	-
....TRACHELOMONAS	170	1	82	2	--	-	--	-	1100	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	609	519	541	518	474	467	478	545	500	382	370	489
2	615	528	606	515	521	468	456	543	492	265	371	481
3	628	535	610	512	556	470	456	535	504	270	361	500
4	636	548	616	508	600	463	465	405	505	269	444	500
5	625	539	622	514	663	470	488	429	480	402	402	493
6	618	541	630	513	637	470	495	546	389	409	391	490
7	631	526	641	528	632	480	490	520	380	439	316	480
8	634	531	649	553	653	488	502	522	385	422	419	502
9	633	522	660	561	631	478	510	518	430	414	419	478
10	638	521	630	571	645	482	503	529	471	417	369	489
11	628	531	597	602	660	490	509	545	490	428	358	460
12	625	534	605	602	669	484	490	548	500	461	389	430
13	621	541	606	600	680	480	498	539	509	478	408	432
14	641	541	588	609	620	495	490	534	498	495	441	468
15	649	539	571	574	560	489	501	523	385	309	468	497
16	504	538	555	609	560	489	504	472	527	512	470	530
17	502	541	542	602	501	502	497	485	697	504	480	540
18	545	546	511	609	439	500	500	492	354	511	501	557
19	582	543	539	594	418	500	500	512	345	490	471	538
20	574	555	576	600	374	489	500	518	369	507	476	514
21	582	531	629	588	385	486	508	516	385	541	490	499
22	573	542	559	585	376	490	488	501	450	599	497	508
23	568	541	641	579	378	500	498	474	433	476	501	548
24	543	544	632	562	407	504	475	489	370	435	481	554
25	552	541	610	522	419	490	485	490	388	379	491	548
26	556	551	590	472	435	490	475	492	369	385	420	519
27	547	542	545	462	447	475	450	281	390	450	481	529
28	542	534	540	462	467	488	479	501	418	444	478	514
29	538	558	528	448	---	480	480	482	433	383	461	538
30	534	543	532	459	---	486	495	495	505	334	489	549
31	525	---	524	445	---	528	---	498	---	329	482	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	6.0	2.0	.0	.0	3.0	10.0	14.0	20.0	23.0	24.0	19.0
2	14.0	7.0	.0	.0	.0	3.0	12.0	15.0	20.0	24.0	24.0	18.0
3	10.0	10.0	.0	.0	.0	4.0	15.0	17.0	19.0	25.0	25.0	20.0
4	10.0	8.0	.0	.0	.0	3.0	10.0	16.0	20.0	24.0	26.0	20.0
5	12.0	8.0	.0	.0	.0	2.0	8.0	14.0	23.0	24.0	26.0	20.0
6	14.0	9.0	.0	.0	.0	3.0	9.0	15.0	24.0	26.0	27.0	25.0
7	14.0	10.0	.0	.0	.0	2.0	10.0	14.0	24.0	26.0	25.0	21.0
8	15.0	10.0	.0	.0	.0	2.0	12.0	14.0	25.0	26.0	26.0	19.0
9	16.0	8.0	.0	.0	.0	3.0	12.0	17.0	24.0	25.0	24.0	20.0
10	16.0	7.0	.0	.0	.0	4.0	13.0	10.0	22.0	25.0	23.0	20.0
11	11.0	8.0	.0	.0	.0	4.0	14.0	11.0	23.0	26.0	22.0	22.0
12	10.0	7.0	.0	.0	.0	5.0	15.0	14.0	23.0	31.0	23.0	20.0
13	10.0	8.0	.0	.0	.0	6.0	18.0	12.0	27.0	33.0	24.0	21.0
14	13.0	4.0	.0	.0	.0	5.0	10.0	11.0	25.0	34.0	23.0	21.0
15	12.0	4.0	.0	.0	.0	7.0	11.0	14.0	21.0	32.0	25.0	18.0
16	14.0	2.0	.0	.0	.0	6.0	12.0	16.0	22.0	32.0	24.0	15.0
17	12.0	2.0	1.0	.0	2.0	8.0	12.0	15.0	23.0	27.0	21.0	12.0
18	9.0	.0	1.0	.0	1.0	4.0	14.0	11.0	23.0	26.0	20.0	13.0
19	7.0	1.0	.0	.0	.0	3.0	15.0	10.0	21.0	25.0	21.0	14.0
20	9.0	2.0	.0	.0	.0	3.0	13.0	14.0	21.0	25.0	21.0	16.0
21	10.0	1.0	.0	.0	2.0	4.0	12.0	16.0	22.0	25.0	21.0	18.0
22	10.0	3.0	.0	.0	3.0	4.0	12.0	16.0	20.0	23.0	21.0	18.0
23	11.0	5.0	.0	.0	2.0	6.0	12.0	19.0	22.0	25.0	23.0	16.0
24	7.0	1.0	.0	.0	3.0	8.0	12.0	17.0	23.0	24.0	21.0	19.0
25	7.0	.0	.0	.0	5.0	10.0	15.0	17.0	24.0	25.0	22.0	19.0
26	5.0	.0	.0	.0	5.0	11.0	18.0	19.0	23.0	23.0	23.0	20.0
27	5.0	1.0	.0	.0	6.0	10.0	20.0	20.0	22.0	19.0	23.0	15.0
28	1.0	.0	.0	.0	5.0	14.0	19.0	21.0	23.0	18.0	21.0	15.0
29	2.0	.0	.0	.0	---	13.0	17.0	21.0	25.0	19.0	20.0	17.0
30	4.0	2.0	.0	.0	---	11.0	16.0	20.0	23.0	20.0	23.0	19.0
31	5.0	---	.0	.0	---	13.0	---	21.0	---	22.0	23.0	---

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
OCT 06...	1030	192	14.0	70	36	--	--
NOV 13...	1100	330	4.0	83	74	--	--
FEB 13...	1200	322	.5	29	25	--	--
MAR 09...	1330	461	6.0	165	205	--	--
APR 14...	1420	478	15.0	128	165	--	--
MAY 13...	1300	412	12.5	119	132	--	--
JUN 15...	1435	4920	21.0	30800	409000	55	68
JUN 16...	1415	2140	28.0	9040	52200	68	79
JUL 14...	1215	258	31.0	155	108	--	--
SEP 01...	0830	345	18.8	122	114	--	--

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)
OCT 06...	--	74	--	--	--	--
NOV 13...	--	86	90	100	--	--
FEB 13...	--	77	--	--	--	--
MAR 09...	--	69	73	99	100	--
APR 14...	--	83	89	100	--	--
MAY 13...	--	96	98	100	--	--
JUN 15...	89	97	98	100	--	--
JUN 16...	93	98	99	100	--	--
JUL 14...	--	96	98	100	--	--
SEP 01...	--	96	97	98	98	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. FALL DIAM. % FINER THAN 16.0 MM (80172)
OCT 06...	1015	--	9	--	0	29	53	74	82	93	99	100
NOV 13...	1100	330	4	0	3	37	74	90	97	100	--	--
FEB 13...	1200	322	3	7	21	79	94	97	100	--	--	--
MAR 09...	1330	461	3	0	2	46	84	95	98	100	--	--
APR 14...	1420	478	4	0	1	45	85	97	99	100	--	--
MAY 13...	1300	412	8	0	2	42	79	92	97	100	--	--
JUN 15...	1435	4920	4	11	15	30	56	83	97	100	--	--
JUN 16...	1415	2140	4	0	3	28	64	83	90	95	98	98
JUL 14...	1215	258	7	0	10	64	80	95	99	100	--	--
SEP 01...	0830	345	8	0	3	48	74	87	93	98	100	--

PLATTE RIVER BASIN

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 (5 m) downstream from highway bridge at west edge of Roca.

DRAINAGE AREA.--167 mi² (433 km²).

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 (363.474 m) 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.--Records fair except those for winter period and periods of backwater from beaver dams, which are poor. Flood flow affected by several detention dams.

AVERAGE DISCHARGE.--30 years, 41.0 ft³/s (1.161 m³/s), 29,700 acre-ft/yr (36.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s (473 m³/s) July 10, 1958, gage height, 22.70 ft (6.919 m); minimum daily, 0.2 ft³/s (0.006 m³/s) July 23, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 8, 1950, reached a stage of 26.0 ft (7.92 m), from floodmark established by Corps of Engineers, discharge, 67,000 ft³/s (1,900 m³/s), but may have been exceeded by flood of July 5, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 293 ft³/s (8.30 m³/s) Aug. 2, gage height, 6.31 ft (1.923 m), no peak above base of 850 ft³/s (24.1 m³/s); minimum daily, 0.80 ft³/s (0.023 m³/s) July 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	5.3	5.0	6.0	5.4	5.4	6.5	3.5	3.5	2.0	1.8	3.2
2	1.7	5.3	5.4	5.6	5.6	5.6	6.0	3.6	3.9	.92	167	3.2
3	1.4	5.7	5.8	5.4	5.2	5.5	6.1	4.1	3.4	1.0	44	3.0
4	1.8	5.6	6.2	5.2	5.0	7.8	9.3	4.9	3.6	1.2	9.6	2.5
5	3.0	5.9	6.2	5.4	5.6	12	9.9	4.3	2.8	.88	4.7	2.4
6	2.4	5.9	6.3	5.6	6.4	10	6.8	6.0	4.8	1.4	4.1	2.3
7	1.8	7.4	6.5	5.4	6.8	8.3	6.0	5.0	4.9	1.1	11	3.9
8	1.8	6.9	7.2	5.4	6.4	7.6	6.7	4.8	5.3	1.7	5.3	4.7
9	2.3	5.9	6.6	5.2	5.8	6.5	6.3	5.2	3.5	.96	3.2	3.7
10	2.5	5.9	6.2	5.0	5.4	6.7	5.8	4.6	2.5	.80	2.5	3.2
11	1.4	5.0	6.4	4.8	5.0	6.7	6.0	4.9	3.7	.80	2.3	2.5
12	1.4	5.1	6.1	6.0	6.0	6.8	5.7	4.1	2.7	.80	2.2	2.4
13	2.1	5.3	6.1	6.8	7.0	6.4	6.0	5.2	2.3	.84	2.8	2.4
14	2.7	5.6	5.1	7.0	9.0	6.3	6.1	5.0	3.4	.84	3.1	1.9
15	2.9	5.9	6.2	6.8	11	7.2	6.2	4.4	4.1	.84	3.2	1.9
16	4.0	5.0	6.2	6.2	14	7.0	5.8	4.3	3.2	1.6	2.8	1.8
17	5.1	4.5	5.8	5.4	14	6.2	5.8	4.9	2.7	3.6	2.4	1.8
18	4.7	4.5	5.1	6.0	9.0	6.6	5.7	11	2.1	3.7	2.3	2.1
19	4.5	4.5	4.5	6.6	6.9	6.4	5.3	30	1.6	3.7	2.3	1.9
20	4.7	4.7	4.0	6.5	5.3	5.9	5.5	16	1.2	3.6	2.3	2.1
21	4.8	4.1	4.1	6.1	5.3	6.4	5.4	8.8	2.3	1.8	2.0	1.9
22	4.7	3.9	4.5	6.1	5.6	8.7	6.2	5.5	1.9	2.0	2.0	1.8
23	5.4	4.2	4.4	6.2	5.8	9.5	7.7	5.1	3.2	11	2.3	1.8
24	4.8	4.5	3.9	6.5	5.5	7.1	6.3	5.2	1.6	28	4.3	1.9
25	4.2	4.8	4.0	6.7	5.5	6.4	5.0	4.6	1.1	3.4	129	53
26	4.4	4.6	4.5	6.6	5.4	6.0	4.3	4.4	2.1	1.9	66	12
27	5.9	4.8	4.7	6.0	5.6	6.6	4.3	4.8	2.4	2.2	17	2.7
28	10	5.0	5.0	5.8	5.6	7.2	4.4	4.4	3.3	2.5	8.1	1.7
29	7.2	5.0	4.9	5.4	---	9.0	4.5	4.5	3.3	2.1	5.8	1.3
30	5.9	5.6	5.8	5.0	---	9.9	4.1	4.2	3.0	1.8	4.4	1.2
31	5.6	---	6.2	5.2	---	7.8	---	3.8	---	1.8	3.5	---
TOTAL	117.1	156.4	168.9	181.9	189.1	225.5	179.7	191.1	89.4	90.78	523.3	132.2
MEAN	3.78	5.21	5.45	5.87	6.75	7.27	5.99	6.16	2.98	2.93	16.9	4.41
MAX	10	7.4	7.2	7.0	14	12	9.9	30	5.3	28	167	53
MIN	1.4	3.9	3.9	4.8	5.0	5.4	4.1	3.5	1.1	.80	1.8	1.2
AC-FT	232	310	335	361	375	447	356	379	177	180	1040	262
CAL YR 1980	TOTAL	11111.60	MEAN	30.4	MAX	1070	MIN	1.4	AC-FT	22040		
WTR YR 1981	TOTAL	2245.38	MEAN	6.15	MAX	167	MIN	.80	AC-FT	4450		

PLATTE RIVER BASIN

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06803080 SALT CREEK ABOVE BEAL SLOUGH, AT LINCOLN, NE

LOCATION.--Lat 40°46'13", long 96°43'05", in SW1/4SW1/4 sec.2, T.9 N., R.6 E., Lancaster County, Hydrologic Unit 10200203, at county road bridge 0.9 mi (1.4 km) west of U.S. Highway 77 and of northeast corner of State Penitentiary at Lincoln.

DRAINAGE AREA.--221 mi² (572 km²).

PERIOD OF RECORD.--Water year 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
OCT 14...	1100	3.7	790	7.5	11.5	7.9	22	K167	268	67	524	.71
NOV 12...	1415	5.9	1200	8.0	12.0	12.2	29	K10	220	150	697	.95
DEC 09...	1015	13	1430	8.0	.5	14.6	49	K70	K64	210	825	1.1
JAN 02...	1215	11	1200	8.0	.5	15.0	15	K18	K12	170	733	1.0
FEB 04...	1030	7.5	1200	7.9	.0	13.7	5	K13	K27	160	742	1.0
MAR 05...	0930	14	1200	8.2	1.0	12.2	27	K37	80	120	594	.81
APR 08...	1320	8.8	850	8.3	17.0	12.6	40	K200	K42	74	533	.72
MAY 12...	0815	6.8	805	8.0	8.5	7.0	23	200	1300	54	509	.69
JUN 10...	0915	4.3	940	7.9	20.5	5.2	51	93	K100	100	585	.80
JUL 07...	0915	4.1	750	8.0	23.5	5.5	30	370	K240	56	491	.67
AUG 18...	1115	4.9	755	8.1	19.5	9.2	62	350	600	62	437	.59
SEP 03...	1245	5.9	1360	8.0	20.0	8.7	92	480	K3000	190	679	.92

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

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	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)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 14...	5.2	--	.05	.050	1.1	1.10	1.2	.320	--	--	--	--
NOV 12...	11.1	21	.19	.020	.74	.76	.95	.380	100	0	10	.00
DEC 09...	29.0	6	.34	.010	.62	.63	.97	.250	0	0	20	.00
JAN 02...	21.8	12	.58	.070	.80	.87	1.5	.220	0	0	20	.00
FEB 04...	15.0	10	.35	.080	--	--	--	.270	100	0	10	.00
MAR 05...	22.5	6	.47	.140	.80	.94	1.4	.320	67	1	20	.00
APR 08...	12.7	69	.00	.050	1.5	1.50	1.5	.460	0	0	20	.00
MAY 12...	9.4	98	.55	.160	1.2	1.40	2.0	--	0	0	10	.00
JUN 10...	6.8	112	.15	.310	.89	1.20	1.4	.630	100	0	20	.00
JUL 07...	5.4	93	.06	.050	1.5	1.50	1.6	.500	0	0	10	.00
AUG 18...	5.8	13	.13	.100	1.4	1.50	1.6	.330	0	0	20	.01
SEP 03...	10.8	76	1.0	.110	1.2	1.30	2.3	.450	0	0	70	.00

PLATTE RIVER BASIN

06803080 SALT CREEK ABOVE BEAL SLOUGH, AT LINCOLN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	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- LITY LAB (MG/L AS CAC03) (90410)
NOV 12...	1415	25	330	63	97	22	110	2.6	9.3	270
FEB 04...	1030	5	380	52	110	26	130	2.9	5.6	280
AUG 18...	1115	10	240	16	68	16	59	1.8	8.2	220

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	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)	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)
NOV 12...	110	.4	22	684	.10	.350	130	20	300
FEB 04...	160	.4	15	778	.35	.220	140	40	500
AUG 18...	77	.4	18	460	.02	.280	100	<10	240

DATE	TIME	PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINUN, TOTAL (UG/L) (39570)
NOV 12...	1415	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB 04...	1030	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY 12...	0815	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 18...	1115	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TIME	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)
NOV 12...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
FEB 04...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY 12...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AUG 18...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	TIME	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL (UG/L) (39755)	SILVEX, TOTAL (UG/L) (39760)
NOV 12...	.00	.00	.00	.00	0	.00	.04	.00	.00	.00
FEB 04...	.00	.00	.00	.00	0	.00	.01	.00	.00	.00
MAY 12...	.00	.00	.00	.00	0	.00	.07	.00	.00	.00
AUG 18...	.00	.00	.00	.00	0	.00	.15	.00	.00	.00

PLATTE RIVER BASIN

239

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 (41 m) downstream from bridge on North 27th Street at north edge of Lincoln, 1 mi (2 km) downstream from Oak Creek.

DRAINAGE AREA.--684 mi² (1,772 km²).

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

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder; nonrecording gage read twice daily. Datum of gage is 1,113.90 ft (339.517 m) National Geodetic Vertical Datum of 1929. Prior to July 27, 1979, water-stage recorder for stages above 6.2 ft (1.89 m) on downstream side of bridge pier, 135 ft (41.1 m) upstream at same datum.

REMARKS.--Records good except those for no gage height record, which are poor. Flood flow affected by several detention dams.

AVERAGE DISCHARGE.--32 years, 201 ft³/s (5.692 m³/s), 145,600 acre-ft/yr (0.180 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft³/s (799 m³/s) June 2, 1951, gage height, 26.15 ft (7.971 m); minimum daily, 21 ft³/s (0.59 m³/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 (10.24 m). Channel changes since 1908 have materially altered the stage-discharge relation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 1	2300	*4670 132	11.85 3.612
Sept. 24	2230	3170 89.8	9.96 3.036

Minimum daily discharge, 48 ft³/s (1.36 m³/s) July 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	107	80	86	70	66	81	76	81	61	401	72
2	52	101	67	82	70	68	76	73	80	61	1140	68
3	54	100	76	78	68	72	110	149	79	58	265	67
4	55	97	70	76	69	155	142	287	78	54	119	65
5	52	95	81	78	67	100	90	136	78	48	733	63
6	55	94	82	80	64	90	85	89	74	56	589	60
7	57	96	102	80	65	79	80	84	71	57	171	231
8	58	89	82	80	59	72	104	82	74	61	132	79
9	54	87	82	78	62	73	79	79	74	70	110	71
10	56	85	77	76	61	72	79	78	73	61	99	69
11	52	84	80	70	57	71	78	77	73	57	92	67
12	49	83	79	76	59	70	77	84	69	53	89	64
13	53	85	78	80	62	72	128	77	64	55	116	61
14	56	83	77	78	69	70	93	76	62	70	87	64
15	71	81	78	76	75	69	80	76	82	107	84	63
16	296	79	78	74	81	69	78	84	68	60	77	62
17	1020	86	78	78	91	69	78	172	64	63	79	60
18	281	78	79	78	91	70	77	426	64	203	75	60
19	242	76	68	76	84	70	78	311	61	91	72	59
20	197	74	75	74	78	69	79	149	57	72	70	57
21	188	74	73	72	78	99	79	119	55	90	69	59
22	169	72	74	74	76	81	144	111	59	70	66	58
23	198	76	78	76	74	73	87	113	59	66	220	59
24	158	85	75	76	69	73	85	94	62	66	84	479
25	153	84	69	76	69	72	80	91	59	79	148	1100
26	129	85	78	76	69	72	78	90	57	77	215	161
27	212	84	79	74	68	69	78	88	81	69	131	94
28	143	86	84	72	68	96	77	88	53	62	94	79
29	127	84	87	70	---	108	77	86	58	61	83	73
30	119	74	89	68	---	91	76	84	60	62	78	69
31	113	---	94	70	---	83	---	80	---	62	78	---
TOTAL	4573	2564	2449	2358	1973	2463	2633	3709	2029	2182	5866	3693
MEAN	148	85.5	79.0	76.1	70.5	79.5	87.8	120	67.6	70.4	189	123
MAX	1020	107	102	86	91	155	144	426	82	203	1140	1100
MIN	49	72	67	68	57	66	76	73	53	48	66	57
AC-FT	9070	5090	4860	4680	3910	4890	5220	7360	4020	4330	11640	7330
CAL YR 1980	TOTAL	63457	MEAN 173	MAX 3130	MIN 49	AC-FT 125900						
WTR YR 1981	TOTAL	36492	MEAN 100	MAX 1140	MIN 48	AC-FT 72380						

FLATTE RIVER BASIN

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 (3 m) downstream from county road bridge and 0.4 mi (0.6 km) north of intersection of Interstate Highway 80 and North 27th Street north of Lincoln.

DRAINAGE AREA.--43.6 mi² (112.9 km²).

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 (339.770 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 10, 1980, water-stage recorder at present site and datum 3.00 ft (0.914 m) higher.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--12 years, 10.9 ft³/s (0.309 m³/s), 7,900 acre-ft/yr (9.74 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft³/s (94.0 m³/s) May 2, 1979, gage height, 14.45 ft (4.404 m), current datum; maximum gage height, 16.38 ft (4.993 m) Oct. 11, 1973, backwater from Salt Creek, current datum, minimum daily discharge, 0.20 ft³/s (0.006 m³/s) Sept. 29, 30, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 474 ft³/s (13.4 m³/s) Aug. 5, gage height, 8.24 ft (2.512 m), from floodmark, no peak above base of 550 ft³/s (15.6 m³/s); minimum daily discharge, 0.50 ft³/s (0.014 m³/s) Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.2	3.6	4.3	4.1	3.5	6.4	2.4	3.2	1.8	4.8	2.4
2	1.4	3.2	3.4	4.1	3.5	3.5	5.8	2.2	2.8	1.7	2.1	2.4
3	.70	3.2	3.6	3.9	3.1	3.5	6.0	3.1	3.0	1.7	3.7	2.3
4	.70	3.2	3.7	3.6	3.3	10	16	16	2.9	1.7	2.5	2.1
5	.80	3.0	3.7	3.8	3.7	7.7	7.7	3.8	3.0	1.6	168	2.3
6	1.8	3.2	3.9	4.1	3.7	4.6	7.0	2.7	2.9	1.4	5.2	2.2
7	2.4	3.2	4.3	3.9	3.5	3.5	6.4	2.7	2.8	1.3	2.2	3.0
8	2.7	3.0	4.5	4.3	3.5	3.5	7.7	3.5	3.2	1.3	1.7	2.2
9	1.4	3.2	4.3	4.0	2.8	3.5	4.0	3.6	3.2	1.3	1.7	1.7
10	.70	3.0	4.1	3.8	2.9	3.5	3.0	3.7	3.2	1.4	1.6	2.0
11	1.1	3.6	3.5	3.7	1.7	3.7	3.2	3.8	2.9	1.5	1.6	1.6
12	1.2	2.8	3.7	4.8	2.2	3.9	3.3	3.9	2.9	1.5	1.7	1.7
13	1.1	2.9	3.9	4.7	2.7	3.7	3.5	3.5	2.3	1.4	1.8	1.7
14	1.1	3.1	3.7	4.6	2.4	3.6	3.3	3.7	2.2	1.5	1.9	1.5
15	.88	3.0	3.7	4.3	2.2	3.7	3.1	3.5	2.2	1.8	1.8	1.5
16	1.5	3.4	3.5	4.0	2.0	3.7	3.6	3.4	2.2	1.6	1.9	1.7
17	.70	3.4	3.6	3.5	1.8	3.7	3.9	6.0	2.2	1.6	2.1	1.6
18	.50	3.7	3.8	3.7	1.8	3.4	3.6	45	2.1	2.2	2.0	1.6
19	.60	3.7	3.5	3.8	3.2	3.6	3.3	22	2.1	1.8	2.0	1.6
20	10	3.5	3.3	4.1	4.1	3.4	2.9	6.7	2.1	1.8	2.1	1.7
21	3.2	3.7	3.6	3.8	4.1	4.1	2.7	4.3	2.1	2.0	2.1	1.6
22	3.2	3.5	3.5	3.9	4.1	6.8	9.0	3.9	2.2	1.9	1.9	1.5
23	3.8	3.5	3.4	4.1	3.7	5.1	3.0	6.7	2.1	1.9	3.7	1.5
24	3.4	3.2	3.0	4.7	3.9	5.7	3.0	2.6	2.0	1.8	2.8	1.8
25	3.2	3.7	3.1	4.8	3.9	5.9	3.1	2.4	1.9	1.9	2.3	2.1
26	3.0	3.5	3.4	4.3	3.9	5.5	3.0	2.4	1.8	1.9	2.4	1.6
27	6.0	3.7	3.5	4.1	4.1	5.1	3.2	2.6	1.9	1.8	2.9	1.4
28	5.6	3.9	3.7	4.0	3.5	6.0	3.0	3.0	1.8	1.8	2.1	1.5
29	4.0	3.7	3.9	3.9	---	14	3.0	2.9	1.8	1.7	2.2	1.5
30	3.4	3.7	4.1	3.8	---	9.1	2.4	2.9	1.7	1.7	2.3	1.5
31	3.2	---	4.3	4.0	---	6.4	---	2.9	---	1.9	2.4	---
TOTAL	76.38	100.6	114.8	126.4	89.4	156.9	139.1	181.8	72.7	52.2	258.4	54.8
MEAN	2.46	3.35	3.70	4.08	3.19	5.06	4.64	5.86	2.42	1.68	8.34	1.83
MAX	10	3.9	4.5	4.8	4.1	14	16	45	3.2	2.2	168	3.0
MIN	.50	2.8	3.0	3.5	1.7	3.4	2.4	2.2	1.7	1.3	1.6	1.4
AC-FT	151	200	228	251	177	311	276	361	144	104	513	109

CAL YR 1980 TOTAL 3912.08 MEAN 10.7 MAX 658 MIN .50 AC-FT 7760
WTR YR 1981 TOTAL 1423.48 MEAN 3.90 MAX 168 MIN .50 AC-FT 2820

PLATTE RIVER BASIN

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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 (6 m) upstream from county road bridge on Havelock Avenue and 1.6 mi (2.6 km) east of 70th Street at east edge of Lincoln.

DRAINAGE AREA.--47.8 mi² (123.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECCRD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,125.57 ft (343.074 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--13 years, 12.3 ft³/s (0.348 m³/s), 8,910 acre-ft/yr (11.0 hm³/yr); median of yearly mean discharges, 8.2 ft³/s (0.232 m³/s), 5,940 acre-ft/yr (7.32 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft³/s (88.4 m³/s) July 22, 1978, gage height, 17.01 ft (5.185 m) on basis of indirect measurement of peak flow; maximum gage height, 17.03 ft (5.191 m) Oct. 10, 1974; no flow July 31, Aug. 2-4, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 2	0030	829 23.5	8.46 2.579
Sept. 25	0230	*898 2.8	8.83 2.691

Minimum daily discharge, 0.16 ft³/s (0.005 m³/s) Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	.75	.90	1.4	.90	1.1	1.0	1.1	.54	.26	1.4	.51
2	.34	.75	.70	1.2	.90	1.1	.88	.64	.51	.26	234	.31
3	.34	.84	.82	1.1	.80	1.1	.82	1.0	.51	.34	9.3	.33
4	.36	.84	.88	1.0	.90	1.8	1.2	1.4	.54	.40	1.4	.45
5	.36	.84	1.0	1.0	1.0	2.4	1.1	1.4	.54	.28	12	.39
6	.34	.84	1.1	1.1	1.1	1.7	1.1	1.0	.48	.30	4.0	.35
7	.34	.84	1.2	1.0	1.0	1.5	.88	.82	.48	.30	1.2	1.0
8	.36	.84	1.3	1.0	.90	1.4	1.1	.78	.51	.32	.56	.70
9	.34	.84	1.1	1.0	.90	1.4	1.6	.78	.54	.34	.39	.51
10	.34	.75	1.0	.90	.70	1.4	1.1	.73	.51	.28	.30	.32
11	.34	.84	1.0	.90	.60	1.4	1.3	1.0	.46	.26	.32	.29
12	.28	.84	1.1	.96	.80	1.4	1.2	.82	.46	.24	.21	.31
13	.34	.90	1.1	1.1	.90	1.5	1.4	.68	.46	.36	.28	.36
14	.40	.96	1.1	1.2	1.4	1.4	2.0	.82	.38	.30	.47	.28
15	.40	.82	1.1	1.1	3.3	1.4	1.9	.82	.38	.34	.47	.32
16	1.0	.82	1.1	1.0	3.6	1.2	1.6	.78	.38	.32	.26	.38
17	.90	.82	1.1	.96	3.4	1.2	1.5	.96	.40	.30	.28	.35
18	.50	.82	1.1	1.0	2.9	1.1	1.2	3.1	.38	.26	.39	.47
19	.60	.88	1.0	1.1	2.0	1.1	1.4	11	.36	.34	.25	.36
20	.60	.82	.88	1.1	1.6	1.1	1.6	2.7	.38	.36	.16	.33
21	.60	.88	.88	1.1	1.5	1.2	1.5	1.3	.46	.34	.27	.49
22	.50	.96	.96	1.1	1.4	1.4	1.4	.88	.36	.40	.25	.30
23	.70	1.0	.90	1.2	1.4	1.5	1.8	.64	.30	.32	.53	.37
24	.84	.96	.70	1.3	1.3	1.4	1.5	.64	.38	.30	.99	6.7
25	.70	.82	.70	1.3	1.1	1.3	1.5	.68	.32	.30	1.0	261
26	.60	.82	.90	1.4	1.1	1.3	1.1	.68	.26	.34	.40	4.0
27	1.0	.96	1.0	1.3	1.3	1.1	1.0	.57	.32	.38	.44	.84
28	1.3	.96	1.1	1.2	1.4	1.0	.82	.64	.26	.34	.32	.45
29	1.2	.96	1.2	1.1	---	1.1	.82	.64	.24	.40	.31	.31
30	.84	.96	1.3	1.0	---	1.2	1.0	.54	.24	.38	.37	.25
31	.84	---	1.5	1.0	---	1.0	---	.57	---	.40	.40	---
TOTAL	17.98	25.93	31.72	34.12	40.10	41.2	38.32	40.11	12.34	10.06	272.92	283.03
MEAN	.58	.86	1.02	1.10	1.43	1.33	1.28	1.29	.41	.32	8.80	9.43
MAX	1.3	1.0	1.5	1.4	3.6	2.4	2.0	11	.54	.40	234	261
MIN	.28	.75	.70	.90	.60	1.0	.82	.54	.24	.24	.16	.25
AC-FT	36	51	63	68	80	82	76	80	24	20	541	561

CAL YR 1980 TOTAL 2794.47 MEAN 7.64 MAX 462 MIN .20 AC-FT 5540
WTR YR 1981 TOTAL 847.83 MEAN 2.32 MAX 261 MIN .16 AC-FT 1680

PLATTE RIVER BASIN

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 (0.8 km) north of Interstate Highway 80 and 3 mi (5 km) southwest of Waverly.

DRAINAGE AREA.--815 mi² (2,110 km²).

PERIOD OF RECORD.--Water year 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)	CHLO- RIDE, DIS- SOLVED (MG/L) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
OCT 14...	1315	49	8000	7.9	15.0	6.6	66	K700	248	2600	4910	6.7
NOV 12...	1130	83	6600	7.8	9.5	--	120	300	88	1900	3820	5.2
DEC 09...	1400	95	6900	7.6	3.5	10.3	49	K102000	K16200	1700	3570	4.9
JAN 02...	1115	83	6500	7.8	1.0	11.0	50	K57000	4500	2300	3940	5.4
FEB 04...	1545	90	7300	7.9	.0	11.1	67	K30	K40	2000	4090	5.6
MAR 05...	1300	125	4600	8.1	6.5	10.9	60	K20	640	1300	2570	3.5
APR 08...	1100	158	3900	7.8	15.0	6.1	92	50000	4400	950	2000	2.7
MAY 11...	1245	80	6800	7.9	17.5	7.2	59	K1000	K81	2000	4140	5.6
JUN 10...	1100	71	7500	8.0	23.0	8.1	74	150	230	2300	4330	5.9
JUL 07...	1200	65	7800	7.9	26.5	5.8	120	290	170	2400	4780	6.5
AUG 17...	1315	77	7000	8.4	23.5	9.4	160	380	K57	2000	3990	5.4
SEP 03...	1145	69	8000	7.8	20.5	7.3	300	K80	K72	2200	4250	5.8

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

DATE	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, 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)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CYANIDE TOTAL (MG/L AS CN) (00720)
OCT 14...	650	--	1.3	6.30	2.3	8.60	9.9	4.20	--	--	--	--
NOV 12...	856	37	1.7	3.90	--	--	--	3.10	100	1	20	.01
DEC 09...	916	22	2.9	2.90	3.4	6.30	9.2	3.20	0	1	100	.01
JAN 02...	883	25	2.7	3.00	1.3	4.30	7.0	2.70	200	0	70	.00
FEB 04...	994	33	1.1	7.90	3.1	11.0	12	3.30	100	1	60	.01
MAR 05...	867	70	.94	3.10	1.7	4.80	5.7	1.90	34	2	40	.00
APR 08...	853	206	.99	2.20	4.7	6.90	7.9	3.60	0	0	100	.00
MAY 11...	894	24	1.8	5.50	3.7	9.20	11	4.20	0	0	30	.01
JUN 10...	830	20	1.1	5.70	4.3	10.0	11	7.90	100	0	20	.01
JUL 07...	839	35	2.0	4.10	4.5	8.60	11	4.90	0	1	40	.01
AUG 17...	830	15	1.4	5.20	.90	6.10	7.5	3.40	0	0	30	--
SEP 03...	792	50	4.0	2.10	1.4	3.50	7.5	4.20	0	0	30	.01

PLATTE RIVER BASIN

06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	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- LITY LAB (MG/L AS CAC03) (90410)
NOV 12...	1130	22	360	71	95	30	1300	30	20	290
FEB 04...	1545	20	370	47	96	31	1500	34	15	320
MAY 11...	1245	10	370	57	96	31	1400	32	16	310
AUG 17...	1315	5	350	70	89	31	1400	33	17	280

DATE	TIME	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS ST02) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	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)
NOV 12...	1130	340	.7	22	3890	1.7	3.10	480	60	220
FEB 04...	1545	370	.7	25	4240	1.1	3.00	660	60	450
MAY 11...	1245	330	.7	22	4090	1.8	4.10	640	50	180
AUG 17...	1315	330	.7	21	4060	1.2	3.30	640	30	100

DATE	TIME	PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)
NOV 12...	1130	.00	.00	.00	.00	.00	.00	.00	.00	.04
FEB 04...	1545	.00	.00	.00	.00	.00	.00	.00	.00	.07
MAY 11...	1245	.00	.00	.00	.00	.00	.00	.00	.00	.28
AUG 17...	1315	.00	.00	.00	.00	.00	.00	.00	.00	.16

DATE	TIME	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)
NOV 12...	1130	.00	.00	.00	.00	.00	.00	.01	.01	.00
FEB 04...	1545	.00	.00	.00	.00	.00	.00	.01	.01	.00
MAY 11...	1245	.00	.00	.00	.00	.00	.00	.02	.03	.00
AUG 17...	1315	.00	.00	.00	.00	.00	.00	.03	.00	.00

DATE	TIME	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL (UG/L) (39755)	SILVEX, TOTAL (UG/L) (39760)
NOV 12...	1130	.00	.00	.00	0	.00	.12	.00	.00	.00
FEB 04...	1545	.00	.00	.00	0	.00	.86	.00	.00	.00
MAY 11...	1245	.00	.00	.00	0	.00	.21	.01	.00	.02
AUG 17...	1315	.00	.00	.00	0	.00	.09	.00	.00	.00

PLATTE RIVER BASIN

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 left (revised) bank 30 (revised) ft (9 m) downstream from bridge on east-west county road and 5.7 mi (9.2 km) southeast of Ceresco.

DRAINAGE AREA.--119 mi² (308 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NE-76-1: 1975 (H).

GAGE.--Water-stage recorder. Datum of gage is 1,112.18 ft (338.992 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1981, at datum 3.0 ft (0.91 m) higher.

REMARKS.--Records fair except those for winter period and period of beaver activity Oct. 4 to Feb. 20, which are poor.

AVERAGE DISCHARGE.--11 years, 27.0 ft³/s (0.765 m³/s), 19,560 acre-ft/yr (24.1 hm³/yr); median of yearly mean discharges, 23 ft³/s (0.651 m³/s), 16,700 acre-ft/yr (20.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,120 ft³/s (117 m³/s) May 1, 1972, gage height, 17.2 ft (5.24 m), present datum, from floodmark; minimum daily, 0.25 ft³/s (0.007 m³/s) July 13, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,980 ft³/s (113 m³/s) Aug. 5 at 1800, gage height, 16.84 ft (5.133 m), no other peak above base of 850 ft³/s (24.1 m³/s); minimum daily, 3.1 ft³/s (0.088 m³/s) July 7, 9, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	8.0	11	8.9	7.2	12	9.4	5.2	7.3	3.7	16	8.0
2	6.7	7.4	9.1	7.3	6.6	11	8.7	5.1	8.7	3.3	241	7.9
3	6.9	7.2	13	6.1	6.7	11	11	5.6	8.9	3.2	19	7.3
4	7.2	6.0	13	5.9	6.5	23	31	148	8.5	3.6	9.0	7.7
5	7.6	6.6	13	6.6	6.2	20	11	16	7.6	3.6	2710	7.7
6	7.6	7.6	12	7.2	6.7	12	8.0	12	7.4	3.5	337	8.0
7	7.6	8.2	11	7.4	7.4	10	7.6	8.1	6.7	3.1	39	24
8	7.6	8.2	8.0	7.2	6.5	9.4	8.1	7.9	6.5	3.2	19	9.9
9	7.6	7.4	8.6	7.1	6.2	8.9	7.8	8.1	6.9	3.1	15	7.9
10	7.6	7.4	8.5	5.2	6.0	9.0	7.4	8.3	6.3	3.2	13	7.9
11	7.4	7.2	9.3	5.6	5.0	9.2	7.4	7.2	6.4	3.5	11	7.7
12	7.4	7.0	9.9	6.3	5.8	9.8	7.3	7.9	6.3	3.4	11	7.7
13	7.4	7.7	10	6.4	6.5	9.8	7.7	8.6	6.1	3.1	11	7.6
14	7.6	7.1	9.2	6.8	8.5	9.6	8.3	9.3	5.8	3.8	12	7.3
15	8.0	7.3	9.1	7.2	13	9.8	7.9	7.6	7.3	15	11	7.0
16	116	7.6	9.6	6.1	13	11	7.7	7.6	6.7	6.7	10	7.3
17	34	6.5	9.4	5.6	16	11	7.7	10	5.9	8.5	9.9	7.3
18	11	6.5	10	6.4	15	11	7.3	92	5.3	16	9.4	7.3
19	8.0	6.5	7.0	7.0	13	11	7.4	125	5.4	11	9.2	7.3
20	7.6	8.5	6.6	7.7	12	11	7.8	24	5.1	13	9.3	7.3
21	7.6	9.0	7.8	7.8	11	12	6.9	16	6.1	9.1	8.9	7.3
22	8.0	9.5	9.3	7.4	12	15	12	15	6.9	9.2	8.8	7.0
23	13	10	10	7.5	11	12	9.6	17	5.6	8.2	17	7.3
24	10	9.8	5.6	8.3	11	13	7.1	14	5.1	7.0	17	8.7
25	9.0	8.8	6.0	9.5	11	13	6.7	10	4.8	8.1	16	10
26	11	8.7	7.0	9.2	11	11	6.3	9.4	4.9	9.0	177	8.0
27	16	9.5	11	8.1	13	10	6.0	9.2	5.4	8.7	30	7.0
28	14	9.1	13	7.0	13	11	5.8	8.9	4.9	8.7	13	7.3
29	10	9.4	12	6.0	---	20	5.4	8.7	4.0	9.3	11	7.3
30	9.0	12	10	6.9	---	14	5.3	7.6	4.1	8.5	9.7	7.0
31	8.6	---	9.5	7.1	---	10	---	7.5	---	9.7	8.6	---
TOTAL	404.3	241.7	298.5	218.8	266.8	370.5	257.6	646.8	186.9	213.0	3838.8	247.0
MEAN	13.0	8.06	9.63	7.06	9.53	12.0	8.59	20.9	6.23	6.87	124	8.23
MAX	116	12	13	9.5	16	23	31	148	8.9	16	2710	24
MIN	6.7	6.0	5.6	5.2	5.0	8.9	5.3	5.1	4.0	3.1	8.6	7.0
AC-FT	802	479	592	434	529	735	511	1280	371	422	7610	490
CAL YR 1980	TOTAL	9614.2	MEAN	26.3	MAX	1050	MIN	2.3	AC-FT	19070		
WTR YR 1981	TOTAL	7190.7	MEAN	19.7	MAX	2710	MIN	3.1	AC-FT	14260		

PLATTE RIVER BASIN

06803530 ROCK CREEK NEAR CERESCO, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	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)
MAY											
04...	1100	387	15.0	28000	29300	57	68	89	100	--	--
04...	1300	246	16.0	20800	13800	63	72	91	100	--	--
04...	1500	178	16.0	20100	9660	65	74	93	100	--	--
AUG											
02...	1140	140	23.5	1840	695	60	66	81	99	100	--
05...	1200	2910	25.0	3930	30900	56	60	76	99	99	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL DIAM. % FINER THAN 8.00 MM (80171)
MAY											
04...	1300	246	2	58	67	73	86	93	98	99	100
04...	1500	178	2	49	56	62	77	85	93	98	--

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 (0.8 km) west of Greenwood.

DRAINAGE AREA.--1,051 mi² (2,722 km²).

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 (325.569 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 5, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--29 years (water years 1953-81), 275 ft³/s (7.788 m³/s), 199,200 acre-ft/yr (0.246 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft³/s (1,160 m³/s) June 24, 1963, gage height, 23.46 ft (7.151 m); maximum gage height, 23.50 ft (7.163 m) Oct. 11, 1973, from floodmark; minimum daily discharge, 14 ft³/s (0.40 m³/s) Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 2	0415	8500 241	11.56 3.523
Aug. 5	0845	*9470 268	12.12 3.694

Minimum daily discharge, 66 ft³/s (1.87 m³/s) Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	132	99	114	98	118	111	84	129	80	107	106
2	70	128	90	108	96	111	108	82	148	80	3930	99
3	71	122	96	101	94	116	104	80	103	86	680	93
4	76	117	94	96	106	230	278	516	99	84	357	90
5	73	115	106	104	102	242	161	366	98	76	5370	86
6	70	113	117	106	102	171	121	152	93	72	2440	80
7	73	116	119	106	102	149	111	119	88	82	523	298
8	75	116	150	104	98	137	149	119	86	85	322	175
9	74	112	115	100	100	132	114	104	90	92	228	112
10	73	108	109	100	98	129	103	101	88	99	184	104
11	73	111	108	96	90	126	100	97	88	86	164	99
12	68	112	108	110	100	124	97	111	90	78	146	93
13	66	109	103	120	110	121	100	108	80	72	143	88
14	76	116	101	110	130	116	218	102	76	78	203	86
15	78	112	102	106	145	111	114	93	101	190	130	90
16	205	107	103	100	160	106	107	92	100	110	115	90
17	1230	107	103	104	171	108	106	146	82	94	104	86
18	380	110	100	110	171	111	99	617	78	239	103	86
19	302	104	92	110	158	108	100	908	76	248	99	84
20	266	103	94	108	143	111	101	345	76	133	94	82
21	230	102	94	102	137	111	105	220	74	122	92	78
22	197	103	96	106	137	168	223	181	74	183	90	80
23	221	101	104	110	129	116	162	189	76	112	168	82
24	202	107	98	109	126	121	117	161	76	102	319	117
25	171	112	90	111	118	113	108	134	80	116	251	1700
26	155	112	100	110	116	111	97	128	76	141	386	382
27	234	116	102	110	124	108	91	128	106	130	327	171
28	268	108	106	105	116	108	90	125	90	119	175	116
29	176	116	110	97	---	184	90	121	74	101	135	101
30	156	110	114	92	---	137	87	112	82	101	120	90
31	145	---	118	98	---	126	---	103	---	101	109	---
TOTAL	5630	3357	3241	3263	3377	4080	3672	5944	2677	3492	17614	5044
MEAN	182	112	105	105	121	132	122	192	89.2	113	568	168
MAX	1230	132	150	120	171	242	278	908	148	248	5370	1700
MIN	66	101	90	92	90	106	87	80	74	72	90	78
AC-FT	11170	6660	6430	6470	6700	8090	7280	11790	5310	6930	34940	10000
CAL YR 1980	TOTAL	98321	MEAN	269	MAX	6610	MIN	66	AC-FT	195000		
WTR YR 1981	TOTAL	61391	MEAN	168	MAX	5370	MIN	66	AC-FT	121800		

PLATTE RIVER BASIN

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 current year.

WATER TEMPERATURES: October 1980 to current year.

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 micromhos Sep. 22, 1981; minimum daily, 220 micromhos Aug. 5, 1981.

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 (447,000 tonnes) Oct. 11, 1973; minimum daily, 1.0 ton (0.9 tonne) Oct. 9, 1971.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 9,100 micromhos Sep. 22; minimum daily, 220 micromhos Aug. 5.

WATER TEMPERATURES: Maximum, 36.0°C June 25; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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												
14...	1220	77	6950	8.0	14.5	9.0	59	K433	388	390	100	35
NOV												
12...	1025	119	5700	7.9	10.0	--	74	1100	280	340	90	28
DEC												
09...	1245	121	5600	7.8	1.0	14.1	49	K90000	K13400	330	88	26
JAN												
02...	1030	109	7000	7.8	.5	11.2	59	K50000	4100	380	100	32
FEB												
04...	1410	110	6600	8.2	.0	10.4	36	67	K48	380	100	32
MAR												
05...	1430	215	--	8.2	6.5	10.7	130	110	3100	240	65	18
APR												
08...	0930	119	5200	7.9	14.5	7.1	54	K5300	460	320	85	27
MAY												
11...	1115	98	6500	7.9	15.5	7.1	52	K550	420	360	96	30
JUN												
10...	1330	93	5900	8.5	27.0	14.6	71	380	2900	360	92	31
JUL												
07...	1105	87	8200	8.0	27.0	8.8	99	320	K240	370	93	33
AUG												
17...	1140	104	6500	8.1	22.5	11.4	160	290	220	350	91	30
SEP												
03...	1015	95	7500	7.0	20.5	8.0	250	K130	300	350	92	28
29...	1200	107	4700	7.7	21.0	7.3	340	5300	1400	330	86	27

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 1980 TO SEPTEMBER 1981

DATE	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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)	ARSENIC DIS- SOLVED (UG/L) AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L) AS BA) (01005)
OCT 14...	400	2600	5670	1.5	--	1.8	4.90	6.4	3.30	8	100
NOV 12...	290	1500	3210	2.5	2.70	1.5	4.20	6.7	2.80	6	200
DEC 09...	260	1500	3150	4.2	.170	8.3	8.50	13	2.80	4	200
JAN 02...	410	810	3900	2.5	1.90	1.1	3.00	5.5	2.20	3	100
FEB 04...	360	2000	3740	1.5	6.40	8.6	15.0	17	2.60	4	200
MAR 05...	210	820	1960	1.2	1.90	1.9	3.80	5.0	1.50	4	90
APR 08...	300	1400	3150	1.7	3.60	3.6	7.20	8.9	1.90	5	100
MAY 11...	300	1800	3870	2.3	2.60	1.4	4.00	6.3	3.10	8	200
JUN 10...	330	1900	3800	1.6	2.00	9.0	11.0	13	6.30	11	200
JUL 07...	430	2500	5130	2.8	1.60	1.6	3.20	6.0	4.50	11	200
AUG 17...	340	1900	3850	1.4	.690	1.2	1.90	3.3	1.90	10	200
SEP 03...	360	2100	4140	3.2	.720	.58	1.30	4.5	3.30	9	200
29...	290	1500	3350	3.5	1.00	1.5	2.50	6.0	1.80	8	100

DATE	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)	MERCURY DIS- SOLVED (UG/L) AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE) (01145)	SILVER, DIS- SOLVED (UG/L) AS AG) (01075)	ZINC, DIS- SOLVED (UG/L) AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L) AS C) (00680)
OCT 14...	1	20	4	70	2	660	.1	2	0	240	10
NOV 12...	1	20	4	50	2	240	.0	1	0	20	18
DEC 09...	1	0	4	50	0	250	.0	1	0	30	24
JAN 02...	0	0	1	40	3	310	.1	2	0	40	15
FEB 04...	0	10	4	50	0	580	.9	2	0	20	21
MAR 05...	8	0	5	50	0	530	.1	1	0	30	20
APR 08...	1	20	3	40	0	590	.1	0	0	0	19
MAY 11...	0	10	4	50	0	190	.0	2	0	20	8.1
JUN 10...	0	10	3	20	0	240	.2	1	0	30	17
JUL 07...	0	20	13	30	0	320	.1	1	0	20	8.6
AUG 17...	0	10	5	50	1	90	.2	1	0	10	7.3
SEP 03...	0	20	8	40	3	110	.2	1	0	40	7.1
29...	0	0	14	20	0	70	.0	2	0	10	12

PLATTE RIVER BASIN

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO ₃) (95902)	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 LAR (MG/L AS CACO ₃) (90410)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)
OCT 14...	1220	--	--	--	--	--	--	--
NOV 12...	1025	50	1100	26	17	290	.7	23
FEB 04...	1410	61	1300	29	13	320	.7	27
MAR 05...	1430	--	--	--	--	--	--	--
MAY 11...	1115	63	1300	30	14	300	.7	22
JUL 07...	1105	--	--	--	--	--	--	--
AUG 17...	1140	130	1400	33	16	220	.7	16

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, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	BORON, DIS- SOLVED (UG/L AS B) (01020)
OCT 14...	5670	--	7.7	1180	--	--	--
NOV 12...	--	--	--	--	2.5	2.90	450
FEB 04...	--	--	--	--	1.5	2.50	590
MAR 05...	1960	--	2.7	1140	--	--	--
MAY 11...	--	3750	5.1	992	2.3	2.80	560
JUL 07...	5130	--	7.0	1210	--	--	--
AUG 17...	--	--	--	--	1.3	2.30	580

PLATTE RIVER BASIN

06803555 SALT CREEK AT GREENWOOD, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6590	4250	5050	5850	6500	5130	5200	5800	6100	7240	6500	6800
2	6800	4200	5380	5900	6250	5590	5330	6050	4790	7450	680	7250
3	6100	4450	5580	6250	7250	5670	5590	6250	6000	7240	1420	7400
4	6800	4650	4870	6750	6400	3910	2740	1290	6200	8250	1890	7600
5	6400	4750	5150	7400	6400	3240	3400	1950	6450	8250	220	7700
6	6800	5350	4670	6000	6250	4250	4390	3760	6400	7650	532	7800
7	6700	5500	4230	6100	6120	4690	5390	5000	6800	8200	1540	6200
8	6900	4450	3290	6000	5990	5070	5440	5420	7100	7050	2950	2880
9	6800	5150	4720	6000	5870	5350	5200	5190	6500	6900	4100	5200
10	6700	5500	4830	7300	5630	5390	5600	5470	6500	6770	4600	7200
11	6600	5710	4980	7700	5510	5500	5630	5810	6400	7040	5400	7600
12	6750	5700	4620	7250	5370	5690	5800	5680	6450	7500	5900	6800
13	6400	5900	4550	5900	5220	5690	5910	5000	6750	8010	6250	7600
14	6400	5420	4490	5900	5050	5800	2690	5800	7050	7800	3700	8100
15	6550	5790	4640	5500	4800	5660	4800	6000	7100	4700	5700	8400
16	5200	5680	4790	6000	5000	5730	5150	5900	5200	5500	6500	8100
17	531	5880	4750	6800	4750	5600	5300	3030	7800	6500	6750	7700
18	1830	5790	4680	6600	4450	5870	6300	1920	8500	6990	7250	7900
19	2290	6000	5280	6300	4750	5800	5790	1320	7300	3690	7250	7500
20	2650	6250	5400	5700	4950	6360	5690	2350	7300	4980	7250	8100
21	2990	6100	5780	5700	5000	6360	5600	3330	7400	4700	7500	8250
22	3260	5880	6090	6000	5100	3750	4750	3900	7600	4200	7750	9100
23	3490	5830	6020	6100	5400	5390	3800	4800	7100	6000	7600	8300
24	2920	5820	5970	5950	5500	5500	5000	3950	7500	6190	2450	8700
25	3420	5480	5920	5500	5650	5600	5200	4790	7250	6500	4700	628
26	3840	5590	5880	5700	5650	5740	5490	4840	7250	5330	2700	1020
27	3650	5550	5740	5800	5800	5880	5900	4840	7500	4790	2220	2950
28	2410	5500	5050	5900	5700	5880	5800	5000	6550	5400	3320	4500
29	3650	5440	4940	6300	---	3590	6000	5080	7500	6590	4800	5700
30	3940	5480	4420	6600	---	4870	6000	5280	7200	6740	6000	6700
31	4150	---	4810	5950	---	5140	---	5480	---	6670	6500	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	12.0	2.0	3.5	.0	9.0	18.5	22.0	25.5	27.0	31.0	18.5
2	15.5	13.5	.0	3.5	.0	10.0	23.0	24.0	23.5	28.5	25.5	17.5
3	15.0	14.0	.5	.5	.0	6.0	19.5	22.5	26.0	27.5	28.5	19.0
4	18.0	12.5	.5	.0	.5	5.5	10.5	18.0	24.0	30.0	26.5	20.5
5	18.0	12.5	6.5	.5	1.0	8.0	12.0	20.0	28.0	29.5	21.5	20.5
6	20.5	15.0	3.5	.5	1.5	8.0	17.0	20.5	31.0	29.5	24.0	21.0
7	21.5	16.0	1.5	.0	.0	6.5	19.0	17.0	30.0	30.0	23.0	22.0
8	21.0	14.0	1.5	.5	.0	7.0	18.0	21.0	28.0	31.0	22.0	19.0
9	21.5	13.5	2.5	2.5	.0	10.5	18.5	16.0	27.0	27.5	23.0	19.5
10	18.0	10.5	2.5	.0	.0	11.0	22.5	17.0	29.0	24.5	21.5	20.0
11	16.5	10.0	4.5	.0	.0	14.0	22.0	21.0	28.0	34.0	20.0	21.0
12	15.0	14.0	6.5	2.0	.0	14.5	24.5	16.5	32.0	35.0	22.0	22.0
13	17.5	7.5	6.0	1.0	.0	13.5	17.0	12.5	28.5	34.0	23.5	20.0
14	18.0	5.5	5.5	1.0	.0	14.0	17.0	21.0	26.5	35.0	22.5	20.5
15	13.5	6.5	7.0	.5	3.0	13.5	17.5	23.5	24.5	29.5	25.0	18.0
16	19.0	6.0	6.5	.5	8.0	14.0	13.0	18.0	25.5	32.0	27.0	15.0
17	14.5	4.5	8.5	1.5	14.0	11.0	18.0	14.5	18.0	32.0	20.0	12.0
18	12.0	5.5	4.0	1.0	10.5	11.5	14.0	11.0	19.5	28.0	19.0	12.0
19	13.0	6.5	.5	2.0	12.0	9.0	19.0	16.0	26.5	31.0	19.0	15.0
20	15.0	7.0	.0	.5	10.5	4.5	13.0	20.5	27.0	33.5	19.0	17.0
21	15.5	6.0	.0	1.0	8.0	5.5	15.0	19.0	26.5	26.0	20.5	18.0
22	16.0	6.5	.5	5.0	8.0	13.5	16.5	18.0	29.0	29.0	20.5	17.0
23	12.0	7.0	.0	6.5	10.0	15.0	20.0	26.0	31.0	28.0	22.5	15.5
24	11.5	5.5	.0	5.5	13.0	18.0	22.0	23.5	26.0	27.0	20.5	20.0
25	9.5	4.5	.0	8.0	13.0	19.0	26.0	26.5	36.0	28.5	22.0	19.0
26	8.0	5.5	.5	6.5	7.0	17.0	28.0	25.5	29.0	21.5	23.0	20.0
27	5.0	4.5	.5	5.5	9.5	18.5	27.5	22.5	29.0	20.5	21.5	16.0
28	6.5	3.5	1.0	4.5	5.5	17.5	22.5	21.5	29.0	21.0	21.0	15.0
29	8.5	5.5	1.0	1.0	---	14.0	24.0	25.5	27.0	21.5	18.0	18.0
30	11.0	8.0	2.0	1.0	---	18.0	22.0	27.0	30.0	26.5	22.5	20.0
31	12.0	---	5.0	.5	---	17.0	---	25.5	---	24.5	24.0	---

PLATTE RIVER BASIN

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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 (5 m) downstream from bridge on State Highway 63 and 0.5 mi (0.8 km) south of Ithaca.

DRAINAGE AREA.--271 mi² (702 km²), of which 268 mi² (694 km²) 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 (338.474 m) 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 (2.4 km) upstream at datum 8.21 ft (2.502 m) higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--32 years, 75.2 ft³/s (2.130 m³/s), 54,480 acre-ft/yr (67.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,400 ft³/s (2,190 m³/s) June 24, 1963, gage height, 22.93 ft (6.989 m), from rating curve extended above 13,000 ft³/s (368 m³/s) on basis of indirect measurement of peak flow; minimum daily, 3.3 ft³/s (0.093 m³/s) June 11, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since about 1910, 23.22 ft (7.077 m), from floodmark, Aug. 2, 1959, discharge, 45,300 ft³/s (1,280 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 16	2400	*3760 106	a19.00 5.791	Aug. 5	2200	3040 86.1	a*19.23 5.861
May 4	0930	2750 77.9	a16.72 5.096				

a Highwater mark.

Minimum daily discharge, 12 ft³/s (0.34 m³/s) July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	26	24	24	21	24	23	18	23	21	17	27
2	16	25	18	22	26	23	24	18	364	20	267	25
3	15	25	21	20	26	23	24	19	220	19	63	24
4	16	23	20	19	24	28	38	1120	45	20	27	23
5	17	24	22	20	25	31	33	87	34	20	1750	23
6	16	25	24	22	24	28	23	38	29	19	1150	22
7	16	24	24	22	23	25	22	29	26	17	100	44
8	16	24	24	22	21	24	22	31	25	16	56	57
9	17	24	20	22	22	24	22	28	25	16	46	24
10	16	23	16	20	17	23	22	25	24	16	42	22
11	16	23	23	19	16	24	22	26	24	15	38	22
12	16	23	22	22	23	24	22	24	23	14	35	21
13	16	23	23	22	28	24	21	26	23	12	34	21
14	16	23	24	22	30	25	21	26	22	12	34	20
15	18	23	23	22	31	25	21	25	25	35	34	20
16	1450	23	24	21	34	24	21	24	27	26	32	21
17	1070	23	24	20	41	25	21	29	22	19	31	20
18	80	23	24	23	36	24	22	166	20	32	30	20
19	44	23	24	22	30	24	21	322	19	24	29	22
20	36	24	22	21	25	24	20	57	19	19	28	21
21	31	23	23	19	25	24	20	39	36	17	27	21
22	28	23	22	20	25	26	25	34	37	17	26	21
23	26	23	21	22	24	29	28	41	22	19	27	21
24	28	23	16	22	23	26	24	32	20	16	34	22
25	26	23	17	22	23	26	22	29	19	15	50	83
26	25	23	21	22	23	25	21	27	19	34	437	37
27	27	23	23	21	24	25	20	27	19	20	104	23
28	33	24	23	19	24	25	20	26	21	23	54	22
29	31	24	24	18	---	30	19	26	21	20	33	22
30	28	24	24	17	---	39	18	25	21	17	29	22
31	27	---	24	19	---	27	---	24	---	16	26	---
TOTAL	3233	707	684	648	714	798	682	2468	1274	606	4690	793
MEAN	104	23.6	22.1	20.9	25.5	25.7	22.7	79.6	42.5	19.5	151	26.4
MAX	1450	26	24	24	41	39	38	1120	364	35	1750	83
MIN	15	23	16	17	16	23	18	18	19	12	17	20
AC-FT	6410	1400	1360	1290	1420	1580	1350	4900	2530	1200	9300	1570
CAL YR 1980	TOTAL	22893	MEAN 62.5	MAX 1500	MIN 11	AC-FT 45410						
WTR YR 1981	TOTAL	17297	MEAN 47.4	MAX 1750	MIN 12	AC-FT 34310						

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°00'55", long 96°09'26", 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 (2 km) north of Louisville.

DRAINAGE AREA.--85,800 mi² (222,200 km²), approximately, of which about 71,000 mi² (183,900 km²) 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 (306.964 m) National Geodetic Vertical Datum of 1929. Dec. 5, 1961, to Sept. 30, 1973, at site 7 mi (11 km) upstream at datum 31.43 feet higher.

REMARKS.--Records good except those for winter period, which are 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.--28 years, 5,628 ft³/s (159.4 m³/s), 4,077,000 acre-ft/yr (5.03 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 124,000 ft³/s (3,510 m³/s) Mar. 30, 1960, gage height, 12.45 ft (3.795 m); minimum daily, 131 ft³/s (3.71 m³/s) Sept. 3, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since at least 1881, 124,000 ft³/s (3,510 m³/s) Mar. 30, 1960, gage height, 12.45 ft (3.795 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42,000 ft³/s (1,190 m³/s) Aug. 6, gage height, 8.04 ft (2.451 m); minimum daily, 670 ft³/s (19.0 m³/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1870	3660	3300	5000	3500	5530	7440	2870	2780	3170	3530	3260
2	1770	3330	2800	4800	2000	5860	6220	2810	3590	6250	10200	2830
3	1690	3390	2200	4400	1600	5580	5470	2580	4390	3920	7290	2510
4	1670	3550	2000	3700	1650	5400	5500	4500	4090	2490	5900	2770
5	1630	3260	1950	3800	1700	5810	4300	5290	2980	2210	12300	2480
6	1660	2920	2790	3900	1700	6020	3660	4050	3170	2040	23000	2560
7	1770	3450	2440	3800	1700	5790	4430	3280	2710	2230	25600	2900
8	1690	2770	3130	3700	1650	5570	4130	3460	1940	2150	12200	3180
9	1870	3140	3180	3500	1600	5480	3490	3070	2570	2090	8040	3470
10	2280	3210	3470	3400	1600	5400	3100	2600	2500	1840	6570	2510
11	1710	2850	3610	3600	2000	5400	3080	3010	1800	1280	4880	3420
12	1670	3860	3610	3700	2500	5050	2880	2370	1870	1420	4640	2760
13	1800	2850	3320	3600	2800	5220	2690	2780	1970	1260	4700	2580
14	1840	3470	3690	3500	3500	4840	4340	3280	1870	1210	4440	3090
15	1850	3840	4760	3400	4000	4970	3520	3230	1850	1100	4470	2250
16	2610	3340	5390	3300	4600	4800	3020	2570	4810	965	4170	2570
17	6550	4000	6620	3300	4740	5050	3010	3580	3720	874	3840	2160
18	4320	3450	6750	3600	8030	4440	3390	4280	2600	802	3200	2360
19	3090	3500	4000	3500	8830	4560	2950	6670	2300	844	3440	2460
20	3390	3120	2000	3400	12100	4520	2950	6070	2110	743	2810	2400
21	3960	3320	1600	3300	15700	4640	2710	7820	2410	670	2560	2580
22	3430	3350	1550	3200	13000	4720	3920	7280	2310	683	2510	2240
23	2950	3320	3000	3500	8960	4880	3880	6400	1950	752	2630	2470
24	2730	3300	2700	4100	7320	5680	3960	5850	2360	999	2800	2500
25	2450	3570	3100	4700	6440	5360	4020	5260	1930	1230	2780	3960
26	2620	3220	3300	5200	5720	4880	3880	5030	1870	1310	4200	3820
27	3050	2930	3600	5800	5090	4640	3570	4480	1680	1860	5120	3140
28	3910	3460	3800	6200	5310	4520	3210	4190	1640	2390	4190	2700
29	3440	3740	4000	6400	---	4600	3710	3990	1510	3190	3970	2800
30	3450	3450	4200	5600	---	5130	2750	3960	1500	3940	3730	2880
31	3560	---	4500	4600	---	8180	---	3020	---	4110	3610	---
TOTAL	82280	100620	106360	127500	139340	162520	115180	129630	74780	60022	193320	83610
MEAN	2654	3354	3431	4113	4976	5243	3839	4182	2493	1936	6236	2787
MAX	6550	4000	6750	6400	15700	8180	7440	7820	4810	6250	25600	3960
MIN	1630	2770	1550	3200	1600	4440	2690	2370	1500	670	2510	2160
AC-FT	163200	199600	211000	252900	276400	322400	228500	257100	148300	119100	383500	165800
CAL YR 1980	TOTAL	2276191	MEAN	6219	MAX	26300	MIN	336	AC-FT	4515000		
WTR YR 1981	TOTAL	1375162	MEAN	3768	MAX	25600	MIN	670	AC-FT	2728000		

PLATTE RIVER BASIN

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 current year.

WATER TEMPERATURES: November 1974 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1971 to current year.

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 micromhos Sept. 1, 1976; minimum daily, 254 micromhos 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 (1,070,000 tonnes) Mar. 21, 1978; minimum daily, 64 tons (58 tonnes) July 19, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,000 micromhos July 19; minimum daily, 254 micromhos Aug. 7.

WATER TEMPERATURES: Maximum, 34.0°C July 12, 13; minimum, 0.0°C on several days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 10,600 mg/L June 16; minimum daily, 85 mg/L Jan. 17.

SEDIMENT LOADS: Maximum daily, 242,000 tons (220,000 tonnes) Aug. 6; minimum daily, 240 tons (218 tonnes) July 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- VANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
OCT											
06...	1300	1590	832	8.5	16.0	34	--	--	K10	K36	200
NOV											
17...	1030	3750	549	7.6	2.0	37	13.9	17	K71	K67	160
DEC											
09...	1020	3120	630	8.3	.5	22	13.4	15	1100	180	190
JAN											
12...	1340	3700	705	8.2	.0	17	14.0	20	K150	K20	210
FEB											
12...	1145	2460	968	8.2	.0	7.5	12.9	19	K46	K60	260
MAR											
09...	1100	5140	538	8.3	6.0	40	12.4	8	K20	K47	190
APR											
14...	1055	4220	519	8.6	12.0	39	11.8	34	K100	180	180
MAY											
19...	1145	7940	635	8.1	15.0	1200	10.4	--	K40000	K135000	130
JUN											
09...	0935	1660	845	8.6	22.5	120	8.0	46	770	320	190
JUL											
08...	1030	2320	--	8.5	26.5	700	7.7	100	K8900	1060	160
AUG											
24...	1130	2540	525	8.6	23.5	29	9.0	72	1300	560	140
SEP											
02...	1000	2670	428	8.6	18.5	21	9.5	--	230	100	170

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 1980 TO SEPTEMBER 1981

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)
OCT 06...	27	54	15	100	3.1	11	170	110	110	.5
NOV 17...	6.0	46	10	50	1.7	8.4	150	54	44	.3
DEC 09...	21	55	13	55	1.7	7.7	170	73	46	.3
JAN 12...	25	59	14	64	1.9	8.5	180	98	59	.5
FEB 12...	45	74	17	91	2.5	9.8	210	130	83	.4
MAR 09...	46	53	13	39	1.2	7.7	140	91	20	.3
APR 14...	32	53	12	35	1.1	8.3	150	78	17	.4
MAY 19...	12	38	9.0	69	2.6	7.6	120	62	82	.3
JUN 09...	31	55	13	98	3.1	10	160	90	130	.3
JUL 08...	11	48	10	84	2.9	12	150	26	120	.4
AUG 24...	14	42	9.6	52	2.0	9.3	130	62	53	.3
SEP 02...	23	51	11	31	1.0	8.8	150	57	27	.3

DATE	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, TOTAL (MG/L) (00500)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED TOTAL (MG/L AS N) (00608)
OCT 06...	33	544	536	.74	2340	--	.00	.00	.010	.020
NOV 17...	41	347	347	.47	3510	433	.68	.68	.150	.070
DEC 09...	42	405	398	.55	3410	446	.99	.92	.150	--
JAN 12...	44	456	460	.62	4560	668	1.1	1.1	.220	.250
FEB 12...	48	593	585	.81	3940	634	1.3	1.3	.320	.320
MAR 09...	37	356	350	.48	4940	478	.99	1.0	.060	.060
APR 14...	32	--	326	.44	3710	516	.10	.01	.040	.040
MAY 19...	22	375	365	.51	8040	--	.76	.65	.480	.420
JUN 09...	25	524	521	.71	2350	859	.71	.72	.100	.080
JUL 08...	29	451	422	.61	2830	1500	.61	.59	.280	.070
AUG 24...	35	339	342	.46	2330	1860	.00	.00	.040	.050
SEP 02...	33	301	310	.41	2170	--	.12	.11	.080	.060

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 06...	1.6	.71	1.60	.86	.74	1.6	.74	.260	.230	10
NOV 17...	.73	.46	.88	.35	.53	1.6	1.2	.340	.240	10
DEC 09...	3.2	--	3.30	2.3	1.0	4.3	1.9	.310	.330	9.3
JAN 12...	.69	.43	.91	.23	.68	2.0	1.8	.310	.230	3.6
FEB 12...	.98	.98	1.30	.00	1.3	2.6	2.6	.420	.390	5.5
MAR 09...	1.0	.68	1.10	.36	.74	2.1	1.7	.330	.210	6.7
APR 14...	2.1	1.1	2.10	1.0	1.1	2.2	1.1	.340	.120	15
MAY 19...	3.2	.68	3.70	2.6	1.1	4.5	1.8	3.30	.190	69
JUN 09...	1.7	.57	1.80	1.2	.65	2.5	1.4	.630	.300	14
JUL 08...	3.0	.76	3.30	2.5	.83	3.9	1.4	.950	.470	31
AUG 24...	1.9	.69	1.90	1.2	.74	1.9	.74	.350	.330	6.7
SEP 02...	1.2	.91	1.30	.33	.97	1.4	1.1	.400	.160	9.0

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA) (01006)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR) (01031)
OCT 06...	1300	--	--	6	--	--	100	--	--	1	--	--
NOV 17...	1030	8	2	6	100	0	100	1	--	<1	0	0
FEB 12...	1145	8	0	8	200	0	200	0	0	1	0	--
MAY 19...	1145	20	12	8	700	600	100	1	0	1	50	40
AUG 24...	1130	9	0	10	100	90	9	0	--	<1	0	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO) (01036)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
OCT 06...	0	--	--	--	--	--	3	--	--	<10	--
NOV 17...	0	2	--	<3	11	7	4	2000	2000	30	6
FEB 12...	--	0	--	<3	7	1	6	970	--	<10	6
MAY 19...	10	14	13	1	45	38	7	41000	41000	80	43
AUG 24...	--	2	--	<3	9	0	10	2400	2400	11	7

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI) (01066)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
OCT 06...	--	0	--	--	4	--	--	1.0	--	--	--
NOV 17...	2	4	150	140	10	.0	.0	.0	8	6	2
FEB 12...	6	0	80	50	30	.0	.0	.1	5	3	2
MAY 19...	38	5	1500	1400	110	.2	.0	.2	46	39	7
AUG 24...	3	4	200	200	3	.1	.1	.0	6	6	0

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG) (01076)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)
OCT 06...	--	--	1	--	--	0	--	--	3	--	--
NOV 17...	1	0	1	0	0	0	100	90	7	6.9	1.5
FEB 12...	2	0	2	0	0	0	20	10	7	5.4	.8
MAY 19...	3	2	1	0	0	1	200	200	0	8.4	52
AUG 24...	1	0	1	0	0	0	30	20	13	5.9	2.1

[illegible][illegible]

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 17,80 1130	MAR 9,81 1100	MAY 19,81 1145	JUN 9,81 0935				
TOTAL CELLS/ML	9300	12000	39000	140000				
DIVERSITY: DIVISION	1.6	1.0	1.5	1.5				
..CLASS	1.6	1.0	1.5	1.5				
...ORDER	2.0	2.6	3.1	2.0				
....FAMILY	2.4	3.1	3.3	2.7				
.....GENUS	2.6	3.6	3.5	3.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)								
..BACILLARIOPHYCEAE								
...ACHNANTHALES								
....ACHNANTHACEAE								
.....ACHNANTHES	--	-	420	4	*	0	950	1
.....COCCONEIS	--	-	60	1	*	0	--	-
..BACILLARIALES								
...NITZSCHIA	470	5	1000	9	9300#	24	2500	2
..EPITHEMIALES								
....EPITHEMIA	--	-	--	-	*	0	--	-
...EUPODISCALES								
....COSCINODISCAEAE								
.....CYCLOTELLA	1500#	16	1700	14	4700	12	9900	7
.....MELOSIRA	300	3	1300	11	700	2	2500	2
..FRAGILARIALES								
...FRAGILARIA	67	1	3100#	27	2400	6	6400	5
....OPEPHORA	--	-	120	1	*	0	--	-
....SYNEDRA	--	-	60	1	*	0	*	0
..NAVICULALES								
...CYMBELLACEAE								
....AMPHORA	--	-	120	1	*	0	--	-
...ENTOMONEIDACEAE								
.....ENTOMONEIS	--	-	--	-	350	1	*	0
...GOMPHONEMACEAE								
....GOMPHONEMA	--	-	120	1	--	-	--	-
..NAVICULACEAE								
...CALONEIS	--	-	--	-	350	1	--	-
...NAVICULA	*	0	360	3	1200	3	--	-
..SURIRELLALES								
...SURIRELLACEAE								
....SURIRELLA	--	-	300	3	1000	3	--	-
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHLOROCOCCACEAE								
.....POLYEDRIOPSIS	--	-	--	-	--	-	--	-
.....SCHROEDERIA	--	-	60	1	--	-	--	-
.....TETRAEDRON	--	-	--	-	--	-	--	-
...DICTYOSPHAERTIAEAE								
.....DICTYOSPHAERIUM	770	8	600	5	700	2	7600	6
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	4800	4
...MICRACTINIACEAE								
.....GOLENKINIA	--	-	--	-	--	-	--	-
.....MICRACTINIUM	130	1	480	4	--	-	--	-
...OOCYSTACEAE								
.....ANKISTRODESMUS	*	0	240	2	--	-	2900	2
.....CHODATELLA	--	-	--	-	--	-	--	-
.....KIRCHNERIELLA	--	-	240	2	--	-	1300	1
.....OOCYSTIS	--	-	--	-	1000	3	1600	1
...SELENASTRUM	*	0	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	*	0
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	8900	7
....COELASTRUM	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	1300	1
....GLOEOACTINIUM	--	-	--	-	--	-	6400	5
...SCENEDESMUS	1800#	19	540	5	350	1	22000#	16
...TETRASTRUM	270	3	--	-	--	-	1300	1
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	170	2	120	1	350	1	950	1
...PHACOTACEAE								
....PTEROMONAS	*	0	--	-	--	-	--	-
...VOLVOCAEAE								
....PANDORINA	--	-	--	-	2800	7	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	NOV 17,80 1130		MAR 9,81 1100		MAY 19,81 1145		JUN 9,81 0935	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	700	2	2200	2
...NOSTOCALES								
....NOSTOCACEAE								
.....ANABAENA	--	-	--	-	6800#	17	43000#	31
....ANABAENOPSIS	--	-	--	-	--	-	4800	4
...OSCILLATORIALES								
....OSCILLATORIACEAE								
.....OSCILLATORIA	3700#	40	600	5	4700	12	3200	2
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
.....EUGLENA	*	0	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	350	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUL 8,81 1030	AUG 24,81 1130	SEP 2,81 1000
TOTAL CELLS/ML	27000	270000	8600
DIVERSITY: DIVISION	1.2	1.1	1.0
..CLASS	1.2	1.1	1.0
...ORDER	2.2	1.7	1.3
...FAMILY	2.8	2.3	2.1
....GENUS	3.2	2.9	2.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
BACILLARIOPHYTA (DIATOMS)						
..BACILLARIOPHYCEAE						
...ACHNANTHALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-
..BACILLARIALES						
...NITZSCHIA	2000	8	4100	2	110	1
...NITZSCHIA						
...EPITHEMIALES						
...EPITHEMIA	--	-	--	-	--	-
...EUPODISCALES						
...EUPODISCAEAE						
....CYCLOTELLA	4800#	18	*	0	180	2
....MELOSIRA	1200	4	1400	1	110	1
..FRAGILARIALES						
...FRAGILARIAEAE						
....ASTERIONELLA	--	-	--	-	--	-
....DIATOMA	--	-	--	-	--	-
....FRAGILARIA	7700#	29	3100	1	--	-
....OPEPHORA	--	-	--	-	--	-
....SYNEDRA	*	0	*	0	--	-
..NAVICULALES						
...CYMBELLACEAE						
....AMPHORA	--	-	--	-	--	-
...ENTOMONEIDACEAE						
....ENTOMONEIS	--	-	--	-	--	-
...GOMPHONEMACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....CALONEIS	--	-	--	-	--	-
....NAVICULA	350	1	*	0	--	-
..SURIRELLALES						
...SURIRELLACEAE						
....SURIRELLA	140	1	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...CHLOROCOCCACEAE						
....POLYEDRIOPSIS	*	0	--	-	--	-
....SCHROEDERIA	*	0	--	-	--	-
....TETRAEDRON	--	-	--	-	*	0
...DICTYOSPHAERIAEAE						
....DICTYOSPHAERIUM	1200	4	25000	9	1700#	20
...HYDRODICTYACEAE						
....PEDIASTRUM	2100	8	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	*	0
....MICRACTINIUM	--	-	7900	3	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	6900	3	90	1
....CHODATELLA	--	-	*	0	--	-
....KIRCHNERIELLA	--	-	--	-	--	-
....OOCYSTIS	350	1	--	-	72	1
...SELENASTRUM	--	-	1400	1	--	-
...TREUBARIA	--	-	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	280	1	14000	5	720	8
....COELASTRUM	620	2	2800	1	220	2
....CRUCIGENIA	--	-	2800	1	--	-
...GLOEONACTINIUM	--	-	--	-	*	0
...SCENEDESMUS	3600	13	24000	9	3700#	42
...TETRASTRUM	280	1	--	-	72	1
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	210	1	*	0	--	-
...PHACOTACEAE						
....PTEROMONAS	--	-	--	-	--	-
...VOLVOCAEAE						
....PANDORINA	--	-	4100	2	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1980 TO SEPTEMBER 1981

DATE TIME	JUL 8,81 1030		AUG 24,81 1130		SEP 2,81 1000	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOMONADACEAE						
.....CRYPTOMONAS	--	-	* 0		--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
.....AGMENELLUM	--	-	110000# 41		580	7
....ANACYSTIS	--	-	25000 9		--	-
...NOSTOCALES						
....NOSTOCACEAE						
.....ANABAENA	--	-	--	-	290	3
....ANABAENOPSIS	--	-	--	-	220	2
...OSCILLATORIALES						
....OSCILLATORIA	1700	6	30000 11		540	6
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
.....EUGLENA	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	695	358	602	458	1120	609	538	721	795	834	1660	1050
2	691	409	599	562	1100	638	595	712	682	861	1590	610
3	628	402	643	530	955	689	589	748	720	1050	1540	548
4	649	375	758	535	905	709	547	734	610	991	1630	734
5	535	394	610	558	745	730	548	727	641	801	1650	797
6	518	420	652	623	765	729	580	730	665	845	1880	705
7	654	440	479	735	745	795	553	822	560	849	1960	827
8	664	457	447	846	662	698	545	725	640	959	2000	813
9	547	446	430	1140	734	677	543	780	685	1120	2050	915
10	658	438	438	1090	754	650	554	804	720	1030	2190	1210
11	520	464	452	1040	840	598	559	802	760	1040	2130	675
12	695	496	467	1170	820	578	618	769	747	1030	590	736
13	736	423	548	1100	820	575	642	800	630	1040	915	1190
14	597	432	579	920	777	615	667	768	650	1030	1080	803
15	604	479	562	811	725	668	758	755	645	1130	880	774
16	662	499	583	842	700	553	705	749	557	1220	915	789
17	577	532	619	639	750	550	705	723	628	1320	437	735
18	653	470	920	595	758	567	825	758	670	1160	447	768
19	510	502	1290	839	748	625	788	689	800	1230	409	805
20	528	443	1120	832	748	648	800	697	738	1290	466	768
21	507	558	1090	831	745	602	753	703	690	1280	654	928
22	475	400	910	541	623	633	740	707	720	1350	680	900
23	522	410	843	561	550	618	687	732	685	1480	785	736
24	433	450	762	568	508	617	758	755	650	1510	775	787
25	524	461	647	580	543	582	735	799	660	1570	767	828
26	555	469	509	590	535	585	735	858	700	1630	845	826
27	507	458	507	628	515	504	770	823	692	2190	872	888
28	557	465	498	659	518	550	749	555	740	1190	868	758
29	626	491	510	656	556	595	755	551	741	1420	937	729
30	587	595	502	644	---	582	740	637	815	1750	1100	702
31	337	---	541	911	---	558	---	710	---	1470	1150	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	719	532	652	627	763	660	505	646	638	440	622	688
2	818	597	621	499	941	645	530	741	1080	328	920	649
3	785	595	768	448	1000	615	575	779	597	306	572	640
4	875	547	951	495	1240	632	629	835	550	408	499	809
5	895	564	1160	855	1250	729	580	462	609	476	408	682
6	909	594	819	658	1190	660	618	500	609	694	463	761
7	845	583	928	1010	1110	590	600	581	761	662	254	745
8	884	665	811	1020	1160	599	702	565	860	662	296	974
9	921	631	630	702	970	670	828	575	737	649	346	389
10	658	621	649	909	915	672	730	698	700	584	358	666
11	845	648	721	864	865	637	783	559	868	1070	369	448
12	925	532	734	705	1020	640	810	758	945	781	402	691
13	815	691	708	742	1180	698	790	846	948	900	439	770
14	794	607	678	737	936	719	519	529	894	1040	450	476
15	785	528	571	738	676	670	542	506	845	1210	476	978
16	687	579	518	879	667	740	659	633	450	1500	478	732
17	479	499	536	893	679	640	720	457	421	1040	480	791
18	444	571	498	678	442	725	685	419	480	1440	560	735
19	511	562	441	719	463	749	721	364	545	3000	480	759
20	502	581	514	738	488	762	770	386	669	1080	540	930
21	454	631	879	633	359	707	892	353	669	1400	526	759
22	502	547	1360	632	355	700	703	372	570	1440	554	939
23	532	571	1260	662	381	650	788	381	737	1010	602	738
24	629	592	1370	623	519	618	543	423	885	1040	525	897
25	592	552	1420	588	588	620	540	472	702	907	496	1830
26	578	602	1430	521	693	730	530	474	680	986	446	470
27	631	638	1410	531	672	783	701	501	787	700	419	452
28	723	578	1290	542	622	845	746	549	970	582	430	551
29	503	521	889	522	---	742	616	525	790	410	441	520
30	538	538	825	728	---	620	780	517	865	376	459	457
31	503	---	651	534	---	527	---	590	---	366	493	---

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	10.5	3.0	1.0	.0	5.0	15.0	18.0	24.0	27.0	27.0	21.5
2	15.5	9.0	.0	1.5	.0	7.0	18.0	22.0	23.0	27.0	23.0	23.0
3	14.0	11.5	1.0	.5	1.5	4.0	19.0	20.0	25.0	25.0	28.0	25.0
4	15.5	10.0	.5	.0	1.0	3.5	10.5	17.5	26.0	25.0	29.0	24.0
5	12.0	12.5	2.0	1.5	2.0	5.0	9.5	18.0	28.0	29.0	26.5	25.0
6	19.5	14.5	1.0	1.0	2.0	5.5	9.0	18.0	29.0	28.0	28.0	22.0
7	16.5	13.0	.5	2.0	2.0	3.0	17.5	14.5	27.5	29.0	23.0	22.0
8	15.0	14.0	.0	1.5	.0	5.0	17.5	14.0	28.0	30.5	27.0	21.5
9	19.0	10.0	.5	1.0	.5	7.5	18.5	14.0	26.0	29.0	26.5	26.5
10	17.5	10.0	1.5	.0	.5	9.0	19.0	13.5	28.0	27.5	23.0	29.0
11	16.0	9.0	.5	.5	.0	10.0	20.5	12.5	27.0	31.0	24.5	27.5
12	11.0	10.5	3.5	.5	2.0	10.0	18.5	13.5	28.5	34.0	28.0	26.5
13	14.0	7.5	3.0	1.5	3.0	11.0	19.5	12.5	29.5	34.0	21.5	25.0
14	15.0	5.0	1.5	1.0	2.5	11.5	12.5	14.5	29.0	33.0	27.0	25.0
15	14.0	5.0	3.0	1.0	1.0	10.0	13.5	15.0	21.0	31.0	29.0	22.0
16	15.5	2.5	2.5	.5	2.5	13.0	13.0	15.0	24.0	31.0	25.0	17.5
17	13.5	4.5	4.0	1.0	5.0	10.0	19.5	14.5	24.5	30.0	22.0	18.5
18	11.0	4.0	2.5	2.0	4.5	8.0	18.0	11.5	25.0	26.5	22.5	20.5
19	7.5	5.0	.5	2.5	5.0	8.0	16.0	14.5	25.0	25.5	23.0	20.0
20	13.5	5.5	.5	2.0	7.0	6.5	14.0	18.0	26.5	28.5	26.5	25.0
21	15.0	2.0	.5	1.5	6.0	5.5	13.0	19.0	25.0	29.0	24.0	24.5
22	11.5	5.0	.5	3.0	4.0	6.5	14.5	19.0	26.0	26.5	25.5	20.5
23	10.5	5.0	1.5	2.5	3.0	12.0	18.5	23.0	29.0	26.0	22.0	24.0
24	10.0	2.0	2.0	3.0	9.0	14.5	21.0	20.0	27.5	23.5	26.0	20.0
25	9.0	3.0	.0	2.0	8.5	15.0	23.0	23.0	23.0	25.0	27.0	23.5
26	5.5	2.5	1.0	2.5	6.5	15.0	25.0	24.0	27.0	22.0	24.5	22.5
27	4.0	2.5	1.5	3.0	7.5	17.0	21.0	25.0	28.0	19.0	23.0	23.5
28	5.5	4.0	1.0	2.0	5.0	19.0	22.0	24.0	30.0	23.0	22.0	20.0
29	5.5	4.5	1.5	1.5	---	14.0	20.5	28.0	25.0	20.0	24.5	27.0
30	6.5	4.0	1.5	.5	---	18.0	21.5	25.5	22.5	22.0	23.5	21.0
31	7.0	---	1.0	.0	---	13.0	---	27.0	---	25.0	26.0	---

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	1870	325	1640	3660	275	2720	3300	480	4280
2	1770	360	1720	3330	285	2560	2800	340	2570
3	1690	360	1640	3390	250	2290	2200	220	1310
4	1670	300	1350	3550	250	2400	2000	350	1890
5	1630	300	1320	3260	225	1980	1950	280	1470
6	1660	270	1210	2920	245	1930	2790	425	3200
7	1770	290	1390	3450	320	2980	2440	290	1910
8	1690	325	1480	2770	260	1940	3130	125	1060
9	1870	430	2170	3140	250	2120	3180	200	1720
10	2280	620	3820	3210	200	1730	3470	320	3000
11	1710	615	2840	2850	220	1690	3610	315	3070
12	1670	450	2030	3860	300	3130	3610	300	2920
13	1800	350	1700	2850	250	1920	3320	240	2150
14	1840	335	1660	3470	310	2900	3690	300	2990
15	1850	280	1400	3840	300	3110	4760	370	4760
16	2610	1170	8240	3340	230	2070	5390	430	6260
17	6550	2000	35400	4000	320	3460	6620	520	9290
18	4320	1380	16100	3850	280	2610	6750	530	9660
19	3090	2020	16900	3500	210	1980	4000	350	3780
20	3390	1580	14500	3120	235	1980	2000	210	1130
21	3960	575	6150	3320	200	1790	1600	130	562
22	3430	250	2320	3350	200	1810	1550	100	418
23	2950	240	1910	3320	200	1790	3000	250	2020
24	2730	245	1810	3300	250	2230	2700	220	1600
25	2450	225	1490	3570	240	2310	3100	235	1970
26	2620	235	1660	3220	210	1830	3300	170	1510
27	3050	250	2060	2930	220	1740	3600	350	3400
28	3910	330	3480	3460	300	2800	3800	350	3590
29	3440	250	2320	3740	375	3790	4000	400	4320
30	3450	300	2790	3450	365	3400	4200	340	3860
31	3560	350	3360	---	---	---	4500	315	3830
TOTAL	82280	---	147860	100620	---	70990	106360	---	95500
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	5000	670	9040	3500	240	2270	5530	370	5520
2	4800	5250	68000	2000	170	918	5860	350	5540
3	4400	6460	76700	1600	160	691	5580	325	4900
4	3700	3270	32700	1650	140	624	5400	230	3350
5	3800	300	3080	1700	200	918	5810	285	4470
6	3900	105	1110	1700	215	987	6020	290	4710
7	3800	120	1230	1700	240	1100	5790	300	4690
8	3700	120	1200	1650	290	1290	5570	385	5790
9	3500	140	1320	1600	230	994	5480	280	4140
10	3400	175	1610	1600	275	1190	5400	370	5390
11	3600	140	1360	2000	330	1780	5400	400	5830
12	3700	150	1500	2500	400	2700	5050	380	5180
13	3600	160	1560	2800	330	2490	5220	400	5640
14	3500	150	1420	3500	550	5200	4840	350	4570
15	3400	285	2620	4000	960	10400	4970	380	5100
16	3300	200	1780	4600	270	3350	4800	320	4150
17	3300	85	757	4740	240	3070	5050	330	4500
18	3600	230	2240	8030	1460	31700	4440	275	3300
19	3500	365	3450	8830	1730	41200	4560	320	3940
20	3400	315	2890	12100	1840	60100	4520	280	3420
21	3300	285	2540	15700	2070	87700	4640	320	4010
22	3200	235	2030	13000	905	31800	4720	290	3700
23	3500	440	4160	8960	470	11400	4880	310	4080
24	4100	625	6920	7320	500	9880	5680	430	6590
25	4700	2420	30700	6440	420	7300	5360	400	5790
26	5200	1340	18800	5720	420	6490	4880	440	5800
27	5800	715	11200	5090	400	5500	4640	380	4760
28	6200	540	9040	5310	350	5020	4520	285	3480
29	6400	2260	39100	---	---	---	4600	330	4100
30	5600	1580	23900	---	---	---	5130	500	6930
31	4600	375	4660	---	---	---	8180	2700	59600
TOTAL	127500	---	368617	139340	---	338062	162520	---	202970

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	7440	1360	27300	2870	130	1010	2780	500	3750
2	6220	640	10700	2810	140	1060	3590	670	6490
3	5470	440	6500	2580	260	1810	4390	840	9960
4	5500	480	7130	4500	1350	16400	4090	730	8060
5	4300	380	4410	5290	2580	36900	2980	470	3780
6	3660	330	3260	4050	798	8730	3170	450	3850
7	4430	360	4310	3280	560	4960	2710	415	3040
8	4130	335	3740	3460	630	5890	1940	410	2150
9	3490	210	1980	3070	680	5640	2570	625	4340
10	3100	220	1840	2600	400	2810	2500	620	4180
11	3080	225	1870	3010	300	2440	1800	460	2240
12	2880	160	1240	2370	295	1890	1870	545	2750
13	2690	265	1920	2780	415	3110	1970	580	3090
14	4340	580	6800	3280	430	3810	1870	520	2630
15	3520	525	4990	3230	380	3310	1850	520	2600
16	3020	405	3300	2570	295	2050	4810	10600	138000
17	3010	230	1870	3580	550	5320	3720	5720	57500
18	3390	300	2750	4280	124	14300	2600	2550	17900
19	2950	400	3190	6670	1860	33500	2300	2020	12500
20	2950	340	2710	6070	1450	23800	2110	1630	9290
21	2710	270	1980	7820	2020	42700	2410	1960	12800
22	3920	480	5080	7280	1650	32400	2310	2280	14200
23	3880	430	4500	6400	1350	23300	1950	2410	12700
24	3960	430	4600	5850	1150	18200	2360	3260	20800
25	4020	505	5480	5260	900	12800	1930	2780	14500
26	3880	370	3880	5030	880	12000	1870	2060	10400
27	3570	285	2750	4480	790	9560	1680	1330	6030
28	3210	270	2340	4190	670	7580	1640	1020	4520
29	3710	265	2650	3990	495	5330	1510	820	3340
30	2750	160	1190	3960	505	5400	1500	800	3240
31	---	---	---	3020	475	3870	---	---	---
TOTAL	115180	---	136260	129630	---	351880	74780	---	400630
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	3170	4440	38000	3530	1200	11400	3260	240	2110
2	6250	6110	103000	10200	3070	84500	2830	200	1530
3	3920	3230	34200	7290	2130	41900	2510	170	1150
4	2490	2000	13400	5900	1590	25300	2770	165	1230
5	2210	1680	10000	12300	2160	71700	2480	125	837
6	2040	1460	8040	23000	3890	242000	2560	140	968
7	2230	1750	10500	25600	3010	208000	2900	180	1410
8	2150	1450	8420	12200	2010	66200	3180	220	1890
9	2090	1190	6720	8040	1630	35400	3470	265	2480
10	1840	900	4470	6570	1090	19300	2510	240	1630
11	1280	570	1970	4880	420	5530	3420	170	1570
12	1420	680	2610	4640	265	3320	2760	170	1270
13	1260	590	2010	4700	325	4120	2580	180	1250
14	1210	755	2470	4440	380	4560	3090	280	2340
15	1100	680	2020	4470	520	6280	2250	130	790
16	965	670	1750	4170	380	4280	2570	240	1670
17	874	530	1250	3840	150	1560	2160	180	1050
18	802	480	1040	3200	160	1380	2360	230	1470
19	844	810	1850	3440	150	1390	2460	190	1260
20	743	540	1080	2810	120	910	2400	130	842
21	670	195	353	2560	110	760	2580	160	1110
22	683	130	240	2510	180	1220	2240	190	1150
23	752	210	426	2630	250	1780	2470	170	1130
24	999	350	944	2800	660	4990	2500	220	1480
25	1230	450	1490	2780	1330	9980	3960	470	5030
26	1310	500	1770	4200	1680	19100	3820	480	4950
27	1860	680	3410	5120	1780	24600	3140	350	2970
28	2390	760	4900	4190	1620	18300	2700	200	1460
29	3190	1000	8610	3970	1160	12400	2800	220	1660
30	3940	1070	11400	3730	380	3830	2880	230	1790
31	4110	1000	11100	3610	300	2920	---	---	---
TOTAL	60022	---	299443	193320	---	938910	83610	---	51477

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCT							
06...	1245	1590	16.0	152	652	--	--
23...	1100	2570	8.0	181	1260	--	--
NOV							
17...	1030	3750	2.0	218	2210	--	--
25...	1430	3880	3.5	262	2740	--	--
DEC							
09...	1020	3120	.5	180	1520	--	--
FEB							
12...	1145	2460	.0	312	2070	--	--
25...	1130	6960	8.0	414	7780	--	--
MAR							
09...	1100	5140	6.0	265	3680	--	--
APR							
02...	1045	6170	15.0	623	10400	--	--
14...	1055	4220	12.0	343	3910	--	--
29...	1030	3840	23.0	178	1850	--	--
MAY							
19...	1145	7940	15.0	2240	48000	39	40
27...	1000	4350	21.0	746	8760	12	12
JUN							
09...	0935	1660	22.5	364	1630	--	--
16...	1110	5870	21.5	14100	223000	66	78
25...	1000	1960	27.0	2900	15300	68	82
JUL							
08...	1030	2320	26.5	1280	8020	71	80
23...	1120	682	25.0	156	287	--	--
AUG							
07...	1400	19900	24.0	2440	131000	52	59
14...	1120	4140	25.0	326	3640	--	--
25...	1130	2540	23.5	1320	9050	--	--
SEP							
11...	1130	3590	26.0	164	1590	--	--

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)
------	---	---	---	---	---	---

OCT						
06...	--	72	80	95	100	--
23...	--	85	90	97	100	--
NOV						
17...	--	75	75	91	100	--
25...	--	90	93	97	100	--
DEC						
09...	--	49	58	83	99	100
FEB						
12...	--	13	16	27	50	81
25...	--	54	62	86	100	--
MAR						
09...	--	52	58	74	99	100
APR						
02...	--	91	92	97	100	--
14...	--	67	73	88	100	--
29...	--	90	91	98	100	--
MAY						
19...	62	90	92	96	100	--
27...	16	30	--	--	--	--
JUN						
09...	--	94	97	99	100	--
16...	95	99	99	100	--	--
25...	96	99	100	--	--	--
JUL						
08...	87	91	92	96	100	--
23...	--	92	93	99	100	--
AUG						
07...	69	89	93	97	100	--
14...	--	71	75	91	100	--
25...	--	10	14	19	46	100
SEP						
11...	--	80	82	87	99	100

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
OCT												
23...	1100	2570	2	--	0	5	27	62	74	91	99	100
NOV												
17...	1030	3750	3	0	1	32	55	71	80	91	96	--
DEC												
09...	1020	3120	2	--	0	2	35	73	83	94	98	100
FEB												
12...	1145	2460	1	--	0	1	9	44	62	81	96	--
25...	1130	6960	4	--	0	25	53	84	95	99	100	--
MAR												
09...	1100	5140	3	--	0	9	42	83	92	96	96	96
APR												
02...	1045	6170	3	2	14	47	74	94	98	100	--	--
14...	1055	4220	4	0	1	16	38	72	86	95	99	100
29...	1030	3840	4	0	3	35	73	84	92	98	100	--
MAY												
19...	1145	7940	3	0	1	31	78	91	95	98	100	--
27...	1000	4350	3	0	1	19	59	80	89	96	99	100
JUN												
09...	0935	1660	5	0	1	30	76	95	98	100	--	--
16...	1110	5870	3	--	0	20	57	81	91	98	100	--
25...	1000	1960	4	--	0	21	69	91	97	99	100	--
JUL												
08...	1030	2320	3	--	0	7	35	61	76	93	100	--
23...	1120	682	4	0	1	27	76	90	96	99	100	--
AUG												
07...	1400	19900	6	6	7	23	55	81	93	100	--	--
14...	1120	4140	3	0	1	34	76	90	97	99	100	--
25...	1130	2540	3	--	0	16	45	70	86	96	99	100
SEP												
11...	1130	3590	4	--	0	22	67	90	96	99	100	--

WEEPING WATER CREEK BASIN

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06806500 WEEPING WATER CREEK AT UNION, NE

LOCATION.--Lat 40°47'35", long 95°54'40", in SW1/4NW1/4 sec.36, T.10 N., R.13 E., Cass County, Hydrologic Unit 10240001, on left bank near downstream side of bridge on U.S. Highways 73 and 75, 1.5 mi (2.4 km) southeast of Union and 2.8 mi (4.5 km) downstream from South Branch Weeping Water Creek.

DRAINAGE AREA.--241 mi² (624 km²).

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 (282.464 m) (revised) National Geodetic Vertical Datum of 1929. Prior to May 14, 1951, nonrecording gage at site 2 mi (3 km) upstream at different datum. May 15, 1951, to Aug. 22, 1968, water-stage recorder for stages above 7.9 ft (2.41 m) and nonrecording gage, Aug. 23, 1968 to Aug. 22, 1980, water-stage recorder on downstream side of bridge pier, and Aug. 23, 1980 to Nov. 4, 1980 at present site, all at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--31 years, 82.5 ft³/s (2.336 m³/s), 59,770 acre-ft/yr (73.7 hm³/yr); median of yearly mean discharges, 69 ft³/s (1.954 m³/s), 50,000 acre-ft/yr (61.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft³/s (1,710 m³/s) May 9, 1950, gage height, 29.80 ft (9.083 m), from floodmark, present site and datum, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of measurement of peak flow through bridges and over highway embankment; minimum daily, 0.1 ft³/s (0.003 m³/s) Sept. 10-12, 14, 15, 17, 18, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,510 ft³/s (0.16 m³/s) Aug. 5 at 1130, gage height, 21.88 ft (6.669 m), no other peak above base of 3,000 ft³/s (85.0 m³/s); minimum daily, 2.8 ft³/s (0.079 m³/s) June 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	13	19	17	21	18	12	10	3.8	5.2	9.4
2	11	14	11	16	15	20	17	13	12	3.8	479	8.0
3	13	14	13	14	13	18	16	14	16	4.4	41	7.5
4	12	14	13	13	15	23	16	18	13	5.1	32	7.5
5	10	13	15	14	17	35	15	17	11	4.5	2250	7.3
6	10	12	22	13	19	30	14	15	11	4.1	272	7.1
7	10	12	18	12	19	29	14	13	10	3.8	64	218
8	11	11	17	13	16	23	15	13	9.1	4.0	23	18
9	11	11	16	13	16	21	15	13	7.6	6.4	15	10
10	11	12	18	11	14	18	14	13	7.1	4.7	12	8.5
11	10	14	17	12	11	19	15	11	7.9	4.0	9.7	8.0
12	10	14	15	12	16	20	15	12	7.4	3.6	8.7	7.3
13	11	14	16	14	22	20	15	13	7.1	3.2	9.0	7.1
14	12	15	15	14	30	19	20	15	8.6	3.1	11	6.6
15	13	14	14	13	60	18	19	14	21	7.8	10	5.9
16	13	14	15	12	155	17	17	11	9.6	8.8	8.5	5.7
17	15	14	14	11	140	18	16	13	7.7	8.6	7.8	5.5
18	13	13	14	13	70	17	16	45	6.8	6.8	7.6	5.7
19	13	13	11	16	38	16	18	100	5.9	7.6	7.4	5.8
20	13	13	12	16	33	16	19	34	6.2	7.1	7.2	5.6
21	13	13	13	15	31	18	17	26	5.8	5.6	7.0	5.4
22	13	14	14	14	29	26	22	21	5.3	5.1	6.7	4.9
23	13	14	14	15	26	23	28	17	5.8	34	8.7	4.8
24	16	13	12	15	23	21	20	13	4.5	11	17	5.5
25	15	12	13	15	22	19	17	12	3.7	8.4	65	8.7
26	14	14	15	15	22	17	16	11	2.8	13	173	7.6
27	17	14	15	18	22	16	15	10	3.8	12	48	6.2
28	21	14	15	17	22	17	13	9.9	3.7	9.5	28	5.8
29	17	14	14	16	---	19	13	11	3.5	7.6	17	5.6
30	15	14	14	15	---	20	11	10	4.0	6.5	13	5.4
31	14	---	16	18	---	18	---	11	---	5.4	15	---
TOTAL	401	401	454	444	933	632	496	560.9	237.9	223.3	3678.5	424.4
MEAN	12.9	13.4	14.6	14.3	33.3	20.4	16.5	18.1	7.93	7.20	119	14.1
MAX	21	15	22	19	155	35	28	100	21	34	2250	218
MIN	10	11	11	11	11	16	11	9.9	2.8	3.1	5.2	4.8
AC-FT	795	795	901	881	1850	1250	984	1110	472	443	7300	842
CAL YR 1980	TOTAL	22301.8	MEAN	60.9	MAX	3520	MIN	4.6	AC-FT	44240		
WTR YR 1981	TOTAL	8886.0	MEAN	24.3	MAX	2250	MIN	2.8	AC-FT	17630		

MISSOURI RIVER MAIN STEM

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 (1.1 km) upstream from Waubonsie Highway Bridge at Nebraska City, and at mi 562.6 (905.2 km).

DRAINAGE AREA.--410,000 mi² (1,062,000 km²), approximately. The 3,959 mi² (10,254 km²) 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 (275.954 m) National Geodetic Vertical Datum of 1929, supplementary adjustment of 1954. See WSP 1918 or 1919 for history of changes prior to Apr. 1, 1963.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--52 years, 35,630 ft³/s (1,009 m³/s), 25,810,000 acre-ft/yr (31.8 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 414,000 ft³/s (11,700 m³/s) Apr. 19, 1952; maximum gage height, 27.66 ft (8.431 m) Apr. 18, 1952; minimum discharge, 1,600 ft³/s (45.3 m³/s) Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft (-0.085 m) Dec. 24, 1960, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 61,200 ft³/s (1,730 m³/s) Aug. 7, gage height, 13.58 ft (4.139 m); minimum daily, 13,700 ft³/s (388 m³/s) Feb. 12; minimum gage height, 2.10 ft (0.640 m) Feb. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40600	39700	30400	20900	19600	23500	45000	37800	35500	40100	36000	37400
2	40700	39900	28500	22800	18000	23200	43000	37600	35700	40200	41300	37500
3	40200	40800	25400	22600	17000	22300	41000	37800	36400	39800	42000	37400
4	40500	41200	23300	21600	16000	21700	40500	43900	38000	39300	40100	37500
5	40700	40600	22500	20000	14600	21200	39900	44100	38000	40900	43500	37500
6	40500	40100	22400	19400	15700	20900	38900	43500	37300	40800	50400	36800
7	40600	40100	22900	18200	17400	20700	39200	41200	36900	39000	57400	38400
8	40300	40400	22400	19800	18700	20700	38900	38400	36400	37500	48800	37100
9	40200	40200	22700	20100	19000	20800	37900	38300	35700	37100	43200	37600
10	40200	40500	22400	18600	17400	20900	37300	37700	36700	36300	41600	37400
11	40000	40400	22000	19100	13800	20900	37600	37000	35900	35300	39200	36700
12	39800	40200	22000	19100	13700	20900	37800	37400	35700	34600	38600	37200
13	39400	41000	21800	18600	15400	20700	37600	37200	36200	34600	38100	37100
14	39300	41000	22300	19300	15100	21100	38900	37800	36200	34500	38600	37400
15	39500	42700	22900	20000	17200	20200	38900	38300	40500	35600	38400	38100
16	41500	44100	23500	19800	21800	19400	38500	37700	46300	35300	38900	37200
17	42800	44500	24100	19100	22600	20900	38100	37400	46200	35500	38800	37000
18	44100	44800	25000	18800	23400	21100	37600	39100	43400	35300	37800	36800
19	42200	43600	24800	18900	25900	20500	37500	40100	39600	35800	37300	37300
20	41600	43600	23800	19400	25600	22100	37300	40700	37700	35500	37500	37400
21	41700	43500	20100	19700	29600	24700	37500	39400	37100	35600	37500	37600
22	40700	43700	18000	19000	28100	27400	37800	38000	37500	36100	37100	37700
23	40700	44500	18000	18900	25400	29800	38300	38400	36400	36400	37300	37800
24	41000	45200	18900	19500	24200	33300	37500	38200	36100	36400	38400	38400
25	40400	45100	19300	20000	24000	37000	37500	38400	36000	36800	38500	39300
26	40200	43500	19000	21000	23800	39100	37900	38200	35800	37600	39500	40000
27	40100	39300	17300	21600	23800	39900	37700	37500	36100	38300	39700	39000
28	41500	35700	17900	21800	23500	40500	37700	36600	36300	37200	39300	38600
29	41100	34300	19400	22200	---	41900	37900	36500	36900	36900	38300	38000
30	40600	32500	20600	22000	---	42800	38200	36200	41100	36600	38400	38000
31	39800	---	21000	20900	---	44900	---	36200	---	36300	37900	---
TOTAL	1262500	1236700	684600	622700	570300	825000	1159400	1196600	1133600	1147200	1249400	1131200
MEAN	40730	41220	22080	20090	20370	26610	38650	38600	37790	37010	40300	37710
MAX	44100	45200	30400	22800	29600	44900	45000	44100	46300	40900	57400	40000
MIN	39300	32500	17300	18200	13700	19400	37300	36200	35500	34500	36000	36700
AC-FT	2504000	2453000	1358000	1235000	1131000	1636000	2300000	2373000	2248000	2275000	2478000	2244000
CAL YR 1980 TOTAL	13775600			MEAN 37640	MAX 64300	MIN 17300	AC-FT 27320000					
WTR YR 1981 TOTAL	12219200			MEAN 33480	MAX 57400	MIN 13700	AC-FT 24240000					

LITTLE NEMAHA RIVER BASIN

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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 (2 km) downstream from Longs Creek and Willow Creek and 1 mi (2 km) east of Auburn.

DRAINAGE AREA.--793 mi² (2,054 km²).

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 (271.232 m) National Geodetic Vertical Datum of 1929. See WSP 2119 for history of changes prior to July 24, 1967.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--32 years, 273 ft³/s (7.731 m³/s), 197,800 acre-ft/yr (0.244 km³/yr); median of yearly mean discharges, 190 ft³/s (5.381 m³/s), 138,000 acre-ft/yr (0.170 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 164,000 ft³/s (4,640 m³/s) May 9, 1950, gage height, 27.65 ft (8.428 m), from floodmark, from rating curve extended above 49,000 ft³/s (1,390 m³/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 (7.608 m) and 27.65 ft (8.428 m); minimum daily, 0.87 ft³/s (0.025 m³/s) July 6-8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,400 ft³/s (39.6 m³/s) Aug. 3, gage height, 7.61 ft (2.320 m), no peak above base of 5,000 ft³/s (142 m³/s); minimum daily, 8.0 ft³/s (0.23 m³/s) July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	48	58	86	48	65	48	35	33	21	31	46
2	37	47	47	70	45	72	44	34	33	19	297	41
3	36	46	59	72	43	68	44	32	34	22	812	38
4	38	43	76	68	45	99	42	35	44	37	234	36
5	39	44	84	64	43	131	46	37	39	25	432	34
6	38	44	72	60	47	124	48	38	32	22	563	33
7	38	46	101	62	50	100	45	35	28	18	293	217
8	37	47	140	62	47	84	41	38	27	18	136	476
9	36	46	96	56	48	76	40	36	26	19	83	139
10	33	45	77	52	43	71	40	37	25	14	62	72
11	31	45	71	50	35	67	41	34	25	12	51	52
12	31	48	69	58	60	65	42	38	24	10	44	42
13	34	47	66	60	80	61	69	43	23	8.0	46	38
14	33	49	63	60	110	60	112	47	21	8.0	50	34
15	33	51	62	54	150	58	70	44	28	9.0	45	32
16	66	51	62	48	180	55	56	40	31	12	39	30
17	68	53	62	45	225	54	49	44	26	17	36	31
18	64	54	60	47	215	52	45	77	21	16	34	30
19	50	56	45	48	162	53	52	174	19	18	31	29
20	44	57	40	49	128	52	52	142	21	18	28	28
21	41	56	45	56	112	56	50	89	21	17	26	26
22	41	59	46	62	99	71	54	70	18	15	24	27
23	40	57	43	68	88	71	58	59	17	39	29	26
24	50	56	41	74	78	63	59	50	16	44	30	29
25	57	49	43	84	71	55	48	45	18	50	226	64
26	51	54	56	79	67	54	42	41	19	92	888	118
27	67	60	80	69	69	53	40	39	20	94	310	103
28	82	60	90	61	67	52	37	38	19	75	149	56
29	75	59	92	50	---	57	35	38	18	55	91	43
30	60	60	92	47	---	65	35	36	26	42	64	36
31	52	---	88	50	---	59	---	34	---	36	51	---
TOTAL	1441	1537	2126	1871	2455	2123	1484	1579	752	902.0	5235	2006
MEAN	46.5	51.2	68.6	60.4	87.7	68.5	49.5	50.9	25.1	29.1	169	66.9
MAX	82	60	140	86	225	131	112	174	44	94	888	476
MIN	31	43	40	45	35	52	35	32	16	8.0	24	26
AC-FT	2860	3050	4220	3710	4870	4210	2940	3130	1490	1790	10380	3980
CAL YR 1980	TOTAL	55418.0	MEAN	151	MAX	2930	MIN	20	AC-FT	109900		
WTR YR 1981	TOTAL	23511.0	MEAN	64.4	MAX	888	MIN	8.0	AC-FT	46630		

LITTLE NEMHA RIVER BASIN

06811500 LITTLE NEMHA RIVER AT AUBURN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
OCT											
31...	1150	52	653	8.2	9.0	13.0	15	K7200	1300	270	80
NOV											
25...	1400	46	670	8.3	2.5	12.3	17	K8500	1800	270	75
DEC											
22...	1445	46	780	7.9	.0	13.4	62	K16000	4000	310	90
JAN											
20...	1320	49	610	8.3	1.0	14.4	40	K3600	650	270	77
FEB											
17...	0900	221	434	7.9	2.0	12.6	41	1100	9000	170	49
MAR											
12...	1115	61	605	8.3	8.0	12.2	18	440	K28	260	75
APR											
07...	1340	47	585	8.1	20.0	10.7	28	K4600	1100	260	74
MAY											
06...	1320	40	582	8.2	20.0	9.0	13	K4800	2700	250	73
JUN											
26...	1200	20	593	8.5	25.0	10.2	--	4000	580	230	67
JUL											
21...	1300	17	610	8.3	26.0	9.8	27	K21000	3900	240	66
AUG											
18...	1230	35	605	8.1	23.5	9.5	49	K6300	1100	250	73
SEP											
03...	0900	35	605	8.5	18.0	8.2	35	2000	1100	250	74

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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...	18	60	27	413	.89	.270	1.6	1.90	2.8	.390	22
NOV											
25...	19	70	20	449	.87	.250	.95	1.20	2.1	.280	4.1
DEC											
22...	21	79	25	496	1.7	.260	1.5	1.80	3.5	.510	11
JAN											
20...	18	63	13	386	1.4	.330	1.4	1.70	3.1	.280	16
FEB											
17...	12	43	12	431	2.0	.410	1.1	1.50	3.5	.460	19
MAR											
12...	18	65	17	410	.68	.020	.90	.92	1.6	.320	7.9
APR											
07...	19	61	16	436	.05	.120	1.3	1.40	1.5	.390	7.9
MAY											
06...	17	60	14	460	.12	.170	1.5	1.70	1.8	.510	7.1
JUN											
26...	16	65	21	423	.13	.190	1.0	1.20	1.3	.450	20
JUL											
21...	18	63	25	426	.13	.390	.81	1.20	1.3	.390	9.8
AUG											
18...	16	63	23	438	.18	.270	.83	1.10	1.3	.340	5.9
SEP											
03...	17	58	17	442	.35	.110	.89	1.00	1.4	.450	5.9

LITTLE NEMAH RIVER BASIN

06811500 LITTLE NEMAH RIVER AT AUBURN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 25...	1400	6.0	40	1.1	2.8	260	.3	14	402
FEB 17...	0900	12	27	.9	4.7	160	.2	14	267
APR 07...	1340	--	--	--	--	--	.3	--	--
MAY 06...	1320	.00	40	1.1	3.6	270	.3	19	390
AUG 18...	1230	.00	38	1.1	5.5	250	.3	20	390

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 25...	.55	49.9	.87	.300	3	100	100	<1	0
FEB 17...	.22	98.5	2.0	.310	--	--	20	--	--
APR 07...	--	--	--	--	--	--	--	--	--
MAY 06...	.53	42.1	.07	.330	8	100	70	<1	0
AUG 18...	.53	36.9	.17	.350	--	--	70	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 25...	8	<10	1	430	.0	2	0	9
FEB 17...	--	40	--	120	--	--	--	--
APR 07...	--	--	--	--	--	--	--	--
MAY 06...	3	10	0	90	.9	0	0	7
AUG 18...	--	<10	--	67	--	--	--	--

MISSOURI RIVER MAIN STEM

06813500 MISSOURI RIVER AT RULO, NE

LOCATION.--Lat 40°03'14", long 95°25'12", in NW1/4NW1/4 sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on downstream end of middle pier of bridge on U.S. Highway 159 at Rulo, 3.2 mi (5.1 km) upstream from Big Nemaha River, and at mi 498.0 (801.3 km).

DRAINAGE AREA.--414,900 mi² (1,075,000 km²), approximately. The 3,959 mi² (10,254 km²) 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 (24 m) 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 Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft (255.188 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1950, nonrecording gage at site 80 ft (24 m) upstream at same datum.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--32 years, 39,530 ft³/s (1,119 m³/s), 28,640,000 acre-ft/yr (35.3 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s (10,100 m³/s) Apr. 22, 1952, gage height, 25.60 ft (7.803 m); minimum daily, 4,420 ft³/s (125 m³/s) Jan. 13, 1957; minimum gage height, 0.65 ft (0.198 m) Jan. 7, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft (6.98 m), from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63,200 ft³/s (1,790 m³/s) Aug. 7, gage height, 14.43 ft (4.398 m); minimum daily, 13,500 ft³/s (382 m³/s) Feb. 6; minimum gage height, 3.10 ft (0.945 m) Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40500	39700	30500	22500	20000	23700	44700	38600	37000	41600	36000	39000
2	40600	39400	28300	22700	18400	23300	44400	38600	37200	39400	38000	38800
3	40700	40000	26100	26000	16800	22900	42100	38600	38000	40300	46200	38600
4	40700	41000	23700	24500	16000	22500	41300	40400	38700	39400	41000	38000
5	40700	41400	22600	22100	14500	22000	40900	47000	39300	40200	41600	38300
6	40800	40900	22500	20500	13500	21800	39600	43000	37800	42000	48000	38400
7	40300	40300	23400	19100	14800	21500	38800	40400	37200	40200	56100	39600
8	40500	40900	23900	18400	16700	21300	38700	39000	37500	38000	51000	40100
9	40600	40900	23100	20800	18300	21200	38100	37800	36800	37700	43200	38000
10	40700	40700	22800	20200	19300	21000	37800	37800	36700	37900	40300	37900
11	41200	40600	22600	19200	17800	21000	41100	37800	37700	36000	39700	37400
12	40600	40600	22600	19900	14500	21200	40800	37700	36900	34800	38600	37500
13	40200	41600	22500	19200	15200	21200	37900	38100	37400	34400	38400	37600
14	39900	41500	22500	18700	15400	21200	39100	38500	37900	34300	38400	38000
15	39600	42500	23300	19400	15400	21200	39000	38800	39800	35000	38300	38400
16	40800	43500	23700	20000	19000	20200	37900	38200	44500	37000	38400	38700
17	43700	44500	24100	19900	24200	19700	38000	36800	49500	35600	38600	38400
18	45000	45500	24800	19100	25600	20900	37500	38200	45200	36100	38400	38000
19	43600	44000	25000	18800	27700	21200	37300	40800	41100	37300	38000	38200
20	41700	44000	24600	18700	29400	20900	37500	40200	38300	39500	37800	38500
21	41400	44000	22500	19300	30200	22900	37600	39500	37700	37000	37600	38200
22	41200	44000	19300	19600	30500	26600	37900	39500	38600	36700	37400	38500
23	40500	44000	18100	19000	27100	29100	38600	38700	39200	37000	37200	38400
24	41200	44500	18300	19100	25400	30600	38200	39800	38300	37000	38600	38500
25	41500	44900	18900	19900	24700	34000	37600	39000	38100	36300	38400	41300
26	41000	44200	19700	20700	24300	36000	38000	39200	37900	38300	40100	42500
27	41000	41000	18900	22100	24000	37800	38400	38800	38100	40500	41800	40800
28	41000	37200	17900	22300	23800	39200	38400	37900	37900	39400	40900	39500
29	40800	35100	18700	22200	---	41000	38600	37200	38100	37300	40200	39100
30	40200	32900	19700	22200	---	42600	38900	37000	39000	36900	39900	38900
31	39700	---	21900	21700	---	44400	---	37100	---	36300	39500	---
TOTAL	1271900	1245300	696500	637800	582500	814100	1174700	1210000	1167400	1169400	1257600	1163100
MEAN	41030	41510	22470	20570	20800	26260	39160	39030	38910	37720	40570	38770
MAX	45000	45500	30500	26000	30500	44400	44700	47000	49500	42000	56100	42500
MIN	39600	32900	17900	18400	13500	19700	37300	36800	36700	34300	36000	37400
AC-FT	2523000	2470000	1382000	1265000	1155000	1615000	2330000	2400000	2316000	2320000	2494000	2307000
CAL YR 1980 TOTAL	14146200			MEAN 38650	MAX 73600	MIN 17900	AC-FT 28060000					
WTR YR 1981 TOTAL	12390300			MEAN 33950	MAX 56100	MIN 13500	AC-FT 24580000					

06814000 TURKEY CREEK NEAR SENECA, KS

LOCATION.--Lat 39°56'52", long 96°06'30", in SW1/4NW1/4SW1/4 sec.20, T.1 S., R.12 E., Nemaha County, Hydrologic Unit 10240007, at downstream side of highway bridge, 2.0 mi (3.2 km) downstream from Clear Creek, 5.0 mi (8.0 km) upstream from Big Nemaha River, and 8.0 mi (12.9 km) northwest of Seneca.

DRAINAGE AREA.--276 mi² (715 km²).

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 (316.239 m), 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 (120 m) south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi (1.9 km) upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, Oct. 13 to Nov. 4, which are poor.

AVERAGE DISCHARGE.--33 years, 123 ft³/s (3,483 m³/s), 89,110 acre-ft/yr (0.110 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s (606 m³/s) Oct. 11, 1973, gage height, 24.77 ft (7.550 m); no flow at times in 1956-57, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft³/s (87.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Aug. 6	1900	*3300 93.5	18.24 5.560
Sept. 25	1000	3190 90.3	17.92 5.462

Minimum discharge, 0.06 ft³/s (0.002 m³/s) June 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	3.0	3.9	5.0	4.5	6.6	5.1	.74	1.1	2.7	6.9	27
2	.14	2.5	4.0	5.0	4.0	6.3	4.9	1.9	1.3	1.9	499	22
3	.30	2.5	4.5	4.5	4.0	6.1	4.1	1.0	1.3	1.7	194	11
4	.36	2.3	4.4	4.0	5.0	8.6	4.1	1.9	1.1	3.5	64	8.2
5	.36	2.1	5.0	4.0	6.0	11	3.3	2.0	1.1	1.9	312	6.9
6	.36	2.1	4.6	4.5	7.0	11	3.1	1.4	.89	1.4	2040	8.2
7	.41	2.0	10	4.5	7.0	9.8	2.7	1.5	.41	.97	888	16
8	.37	2.8	21	4.5	6.0	8.3	2.4	1.3	.29	.66	202	21
9	.26	2.5	19	4.0	4.5	7.1	2.5	1.5	.17	.49	118	11
10	.18	1.7	15	3.5	4.5	6.3	2.3	2.1	3.8	.71	83	8.3
11	.45	1.9	11	3.0	4.0	5.7	2.4	1.9	3.0	.90	62	5.9
12	.24	2.1	9.4	3.0	5.0	5.5	2.8	1.9	64	.21	49	6.9
13	.40	2.2	7.7	3.0	7.0	5.0	8.4	2.1	26	.15	44	5.2
14	.60	2.5	6.7	3.5	10	4.7	6.7	3.4	8.0	.12	48	4.7
15	1.3	2.5	5.8	3.5	15	4.8	4.5	3.2	4.6	.12	43	4.1
16	3.0	2.5	5.1	3.0	30	4.5	3.6	3.1	4.4	.12	32	3.8
17	4.0	2.5	4.7	3.0	45	4.6	3.2	4.9	2.8	29	27	3.9
18	7.0	2.7	4.2	3.5	55	4.4	2.8	37	1.5	138	24	3.9
19	5.0	3.7	3.0	4.0	40	4.1	4.4	84	.93	21	22	3.9
20	3.0	3.0	2.5	4.5	21	3.9	4.8	48	4.2	8.6	20	4.0
21	2.0	3.4	2.5	4.5	15	3.9	5.8	22	2.0	6.4	18	3.4
22	1.0	3.3	3.0	4.5	13	4.4	5.6	11	2.9	3.8	17	3.5
23	2.0	3.0	3.0	5.5	11	4.7	4.8	6.8	2.1	1.8	15	3.3
24	2.5	3.2	2.5	7.0	10	4.8	4.0	4.8	1.1	.55	16	4.0
25	2.0	3.7	2.0	8.0	8.7	5.0	3.5	3.5	.45	4.8	82	2170
26	3.5	4.1	2.5	8.0	7.6	5.2	3.0	2.3	.32	38	136	404
27	10	3.8	3.0	7.0	7.4	4.8	2.2	1.9	13	366	40	134
28	40	3.8	3.5	7.0	6.9	5.0	2.1	1.3	13	362	23	76
29	30	3.7	3.5	6.0	---	5.9	1.9	1.7	4.3	75	18	53
30	7.0	3.9	4.0	5.0	---	6.8	.98	2.0	4.6	28	15	38
31	4.0	---	4.5	4.5	---	5.9	---	2.0	---	13	12	---
TOTAL	132.09	85.0	185.5	144.5	364.1	184.7	111.98	264.14	174.66	1113.50	5169.9	3075.1
MEAN	4.26	2.83	5.98	4.66	13.0	5.96	3.73	8.52	5.82	35.9	167	103
MAX	40	4.1	21	8.0	55	11	8.4	84	64	366	2040	2170
MIN	.14	1.7	2.0	3.0	4.0	3.9	.98	.74	.17	.12	6.9	3.3
AC-FT	262	169	368	287	722	366	222	524	346	2210	10250	6100
CAL YR 1980	TOTAL	41604.23	MEAN	114	MAX	6970	MIN	.14	AC-FT	82520		
WTR YR 1981	TOTAL	11005.17	MEAN	30.2	MAX	2170	MIN	.12	AC-FT	21830		

BIG NEMAH RIVER BASIN

06814500 NORTH FORK BIG NEMAH RIVER AT HUMBOLDT, NE

LOCATION.--Lat 40°09'25"N, long 95°56'40"W, 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 (244 m) downstream from Long Branch Creek.

DRAINAGE AREA.--548 mi² (1,419 km²).

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 6.8 ft (2.07 m); nonrecording gage read twice daily. Datum of gage is 944.44 ft (287.865 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1968, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--29 years, 191 ft³/s (5.409 m³/s), 138,400 acre-ft/yr (0.171 km³/yr); median of yearly mean discharges, 115 ft³/s (3.257 m³/s), 83,300 acre-ft/yr (0.103 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft³/s (1,440 m³/s) July 10, 1958, gage height, 31.70 ft (9.662 m); minimum daily, 0.07 ft³/s (0.002 m³/s) July 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,640 ft³/s (74.8 m³/s) Sept. 25, gage height, 7.80 ft (2.377 m), no peak above base of 5,000 ft³/s (142 m³/s); minimum daily, 1.7 ft³/s (0.048 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	30	29	39	31	28	32	23	23	11	28	33
2	15	33	23	33	30	27	32	22	23	11	32	28
3	17	31	24	31	29	27	32	21	24	13	300	28
4	17	31	28	30	29	36	28	24	23	18	112	28
5	18	30	33	33	34	55	28	25	23	18	69	27
6	19	31	32	36	37	40	28	23	22	13	659	26
7	20	32	49	36	36	34	30	23	21	10	317	51
8	21	30	58	35	35	31	30	23	20	7.7	140	231
9	19	28	49	35	36	32	28	23	20	8.1	115	89
10	18	27	39	33	33	31	30	25	18	6.9	110	49
11	21	30	34	31	30	32	51	21	20	3.4	105	35
12	19	30	33	30	45	28	30	23	20	3.0	107	34
13	19	34	31	34	62	32	27	23	18	2.4	71	30
14	20	30	28	40	80	30	43	30	17	1.7	71	30
15	25	30	31	41	92	30	30	27	23	2.1	55	30
16	31	30	31	40	110	31	26	25	20	1.9	38	28
17	27	28	31	37	150	30	25	27	15	8.5	23	28
18	25	29	29	33	128	29	25	51	15	11	21	28
19	26	31	24	36	74	28	30	131	16	26	21	28
20	27	29	23	38	48	30	28	60	20	18	20	28
21	30	29	26	37	43	31	26	34	18	9.5	20	28
22	28	28	31	34	39	35	27	32	18	12	18	28
23	30	28	29	38	32	33	27	28	13	15	21	27
24	33	30	25	41	34	34	26	27	12	15	42	28
25	33	29	23	38	30	33	25	25	13	22	683	860
26	38	28	30	38	28	33	26	27	11	264	906	89
27	40	30	37	37	32	35	23	24	18	389	200	36
28	51	31	41	36	33	34	23	27	13	100	87	29
29	38	31	42	36	---	36	26	26	12	51	58	26
30	35	30	41	36	---	36	23	23	14	36	44	22
31	35	---	40	32	---	36	---	25	---	32	38	---
TOTAL	813	898	1024	1104	1420	1017	865	948	543	1140.2	4531	2062
MEAN	26.2	29.9	33.0	35.6	50.7	32.8	28.8	30.6	18.1	36.8	146	68.7
MAX	51	34	58	41	150	55	51	131	24	389	906	860
MIN	15	27	23	30	28	27	23	21	11	1.7	18	22
AC-FT	1610	1780	2030	2190	2820	2020	1720	1880	1080	2260	8990	4090
CAL YR 1980 TOTAL	52704.4			144	6830	4.4	AC-FT	104500				
WTR YR 1981 TOTAL	16365.2			44.8	906	1.7	AC-FT	32460				

BIG NEMAHA RIVER BASIN

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06815000 BIG NEMAHA RIVER AT FALLS CITY, NE

LOCATION.--Lat 40°02'00", long 95°35'30", on line between secs.22 and 23, T.1 N., R.16 E., Richardson County, Hydrologic Unit 10240008, near right bank on downstream side of pier of bridge on U.S. Highway 73, 1 mi (2 km) south of Falls City and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--1,340 mi² (3,471 km²).

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 for stages above 6.1 ft (1.86 m); nonrecording gage read twice daily. Datum of gage is 861.24 ft (262.506 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 16, 1952, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--37 years, 575 ft³/s (16.28 m³/s), 416,600 acre-ft/yr (0.514 km³/yr); median of yearly mean discharges, 400 ft³/s (11.33 m³/s), 290,000 acre-ft/yr (0.358 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,600 ft³/s (2,030 m³/s) Oct. 11, 1973, gage height, 31.40 ft (9.571 m); minimum daily discharge, 3.0 ft³/s (0.085 m³/s) July 9, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,960 ft³/s (225 m³/s) Aug. 7, gage height, 11.30 ft (3.444 m), no peak above base of 15,000 ft³/s (425 m³/s); minimum daily, 5.0 ft³/s (0.14 m³/s) July 14, temporary crossing installed for bridge construction.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	71	50	102	56	81	65	43	44	44	175	94
2	53	66	36	88	58	74	62	40	44	39	887	107
3	52	63	44	82	56	74	65	39	44	30	1600	125
4	51	61	52	80	58	102	65	41	39	44	660	89
5	52	58	72	84	62	123	61	49	44	32	452	78
6	51	58	67	90	64	129	61	44	43	36	3320	75
7	50	58	64	80	62	107	57	45	52	29	5040	100
8	50	57	62	78	60	89	55	46	37	24	995	295
9	52	57	56	80	58	86	51	49	31	19	523	405
10	53	57	58	76	68	81	52	46	25	22	380	180
11	46	57	60	74	58	76	76	44	30	16	370	137
12	51	58	64	76	54	74	97	44	33	11	198	105
13	53	57	62	82	70	74	72	49	33	7.0	175	90
14	52	64	66	82	100	74	62	51	71	5.0	158	84
15	57	62	75	80	130	74	84	61	81	6.0	175	71
16	83	59	70	78	180	66	72	58	55	7.0	141	68
17	73	63	67	76	390	64	69	56	50	18	122	60
18	77	57	45	80	337	62	57	133	48	35	111	57
19	71	53	28	86	267	60	81	689	34	127	87	61
20	63	57	45	88	191	61	87	452	42	137	81	60
21	59	57	50	92	156	62	89	158	55	76	84	56
22	59	57	56	94	131	65	78	133	62	56	68	55
23	62	61	56	104	112	62	69	120	40	57	66	55
24	70	57	58	86	98	65	69	100	33	50	74	55
25	63	50	58	93	92	65	62	82	32	69	109	1700
26	67	63	60	80	82	60	57	57	29	1870	745	2510
27	87	58	60	76	86	64	51	52	29	1730	584	580
28	98	58	64	66	86	66	46	57	30	1910	272	245
29	104	58	68	60	---	75	46	54	127	702	143	196
30	93	58	78	54	---	72	44	51	75	310	135	171
31	76	---	90	50	---	75	---	46	---	125	116	---
TOTAL	1980	1770	1841	2497	3222	2362	1962	2989	1392	7643.0	18046	7964
MEAN	63.9	59.0	59.4	80.5	115	76.2	65.4	96.4	46.4	247	582	265
MAX	104	71	90	104	390	129	97	689	127	1910	5040	2510
MIN	46	50	28	50	54	60	44	39	25	5.0	66	55
AC-FT	3930	3510	3650	4950	6390	4690	3890	5930	2760	15160	35790	15800
CAI YR 1980	TOTAL	158791.0	MEAN	434	MAX	18500	MIN	28	AC-FT	315000		
WTR YR 1981	TOTAL	53668.0	MEAN	147	MAX	5040	MIN	5.0	AC-FT	106500		

BIG NEMAH RIVER BASIN

06815000 BIG NEMAH 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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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...	0830	77	745	8.3	5.5	12.0	15	1300	3800	310	88
NOV 25...	1230	45	741	8.4	1.0	15.0	16	K67	K110	310	85
DEC 22...	1640	55	990	7.9	.0	11.9	40	130	940	390	110
JAN 20...	1510	88	680	8.2	.0	14.0	34	280	140	310	89
FEB 17...	0800	231	572	8.0	1.0	12.7	31	300	K35000	230	67
MAR 12...	0845	75	680	8.3	5.5	12.0	20	K12	K12	280	78
APR 07...	1540	54	680	8.3	22.0	9.2	24	140	K20	310	85
MAY 06...	1615	43	655	8.2	25.0	9.1	6	110	160	290	80
JUN 26...	0940	27	703	8.3	26.0	8.7	24	K230	120	270	72
JUL 21...	1445	64	465	8.1	26.0	7.0	62	K11000	K28000	190	54
AUG 18...	1600	100	645	8.2	26.0	11.8	51	K580	420	270	77
SEP 03...	1045	103	550	8.6	19.0	8.2	44	K620	540	240	70

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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...	22	83	34	475	.56	.070	1.1	1.20	1.8	.280	12
NOV 25...	23	96	30	474	.39	.030	.56	.59	.98	.120	3.0
DEC 22...	28	130	37	618	1.7	.180	1.2	1.40	3.1	.250	9.3
JAN 20...	22	98	20	456	1.0	.150	.48	.63	1.6	.190	12
FEB 17...	16	74	18	406	1.7	.390	.20	.59	2.3	.370	10
MAR 12...	21	94	31	455	.21	.000	2.4	2.40	2.6	.200	12
APR 07...	23	100	30	467	.02	.030	1.1	1.10	1.1	.230	9.5
MAY 06...	22	93	29	494	.09	.070	.76	.83	.92	.410	6.2
JUN 26...	21	110	54	502	.03	.000	1.3	1.30	1.3	.280	12
JUL 21...	14	59	--	--	1.2	.310	2.1	2.40	3.6	.770	13
AUG 18...	18	80	31	521	.11	.100	1.2	1.30	1.4	.230	9.7
SEP 03...	17	67	27	519	.01	.070	1.5	1.60	1.6	.370	11

BIG NEMAHA RIVER BASIN

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 25...	1230	47	40	1.0	3.8	260	.3	6.1	442
FEB 17...	0800	43	29	.8	4.2	190	.2	12	343
APR 07...	1540	--	--	--	--	--	.3	--	--
MAY 06...	1615	40	46	1.2	4.4	250	.3	11	436
AUG 18...	1600	36	33	.9	6.6	230	.3	16	400

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 25...	.60	53.7	.38	.120	4	100	100	<1	0
FEB 17...	.30	137	1.7	.260	4	100	40	<1	10
APR 07...	--	--	--	--	--	--	--	--	--
MAY 06...	.59	50.6	.05	.220	7	100	90	<1	0
AUG 18...	.54	108	.00	.150	7	160	80	<1	0

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 25...	8	20	4	110	.3	1	0	<3
FEB 17...	5	30	1	60	.1	2	0	10
APR 07...	--	--	--	--	--	--	--	--
MAY 06...	2	10	3	30	.2	1	0	7
AUG 18...	3	<10	4	17	.0	2	1	<3

KANSAS RIVER BASIN

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 left bank 57 ft (17 m) downstream from bridge on U.S. Highway 34, 1.3 mi (2.1 km) upstream from Burlington Northern Inc. bridge, 1.8 mi (2.9 km) upstream from confluence with North Fork Republican River, 2 mi (3 km) northwest of Haigler, and 3.2 mi (5.1 km) downstream from Kansas-Nebraska State line.

DRAINAGE AREA.--1,640 mi² (4,250 km²), approximately, of which about 980 mi² (2,540 km²) 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. Datum of gage is 3,250.98 ft (990.899 m) National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Sept. 29, 1964.

REMARKS.--Records fair. Natural flow affected by ground-water withdrawals and diversions for irrigation of about 1,500 ft³/s (42.5 m³/s) in Colorado and by return flow from Pioneer Canal.

AVERAGE DISCHARGE.--50 years, 23.3 ft³/s (0.660 m³/s), 16,880 acre-ft/yr (20.8 hm³/yr); median of yearly mean discharges, 19 ft³/s (0.538 m³/s), 13,800 acre-ft/yr (17.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s (1,420 m³/s) May 31, 1935, gage height, 11.2 ft (3.41 m), site and datum then in use, from floodmarks, from rating curve extended above 3,800 ft³/s (108 m³/s) on basis of slope-area measurement of peak flow; no flow for some periods in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 365 ft³/s (10.3 m³/s) Aug. 17, gage height, 7.77 ft (2.368 m), no peak above base of 800 ft³/s (22.7 m³/s); minimum daily, 0.86 ft³/s (0.024 m³/s) Nov. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	2.1	7.1	8.8	7.5	9.8	30	34	39	5.2	13	13
2	12	2.1	3.0	8.8	7.7	13	29	33	36	35	16	14
3	14	1.8	1.4	9.6	8.1	13	27	32	33	33	19	14
4	15	1.6	3.9	15	8.6	55	34	35	33	23	13	12
5	18	1.6	14	16	9.1	44	27	36	31	29	14	13
6	20	1.6	6.8	13	9.6	36	27	36	29	21	19	14
7	6.1	1.4	3.6	17	12	17	25	39	29	12	16	14
8	10	1.4	1.9	13	11	55	23	41	26	8.5	8.8	13
9	19	1.4	2.2	10	9.5	55	24	39	33	17	9.6	12
10	13	1.4	9.2	6.8	9.5	35	22	36	27	18	19	12
11	12	1.6	5.5	9.3	8.0	34	23	34	22	15	14	12
12	14	1.4	9.5	11	6.4	36	23	29	31	8.4	10	12
13	14	1.3	9.3	13	4.8	42	21	53	28	6.8	12	11
14	14	1.6	8.6	14	6.0	44	19	55	22	12	13	9.0
15	12	1.5	11	19	18	48	19	42	27	14	9.7	3.7
16	15	1.2	11	15	26	39	25	43	26	10	13	6.0
17	19	.88	8.7	16	32	33	43	79	23	35	107	7.9
18	14	.86	8.5	13	30	27	42	126	19	11	16	7.4
19	12	.89	8.3	15	17	26	55	95	18	8.5	18	4.7
20	12	1.4	3.4	18	13	25	70	65	10	38	13	9.9
21	12	7.1	1.4	19	11	26	60	51	3.4	5.6	8.4	12
22	14	7.9	2.2	13	9.6	33	50	40	3.5	5.5	12	10
23	14	7.7	16	18	11	35	45	37	2.0	3.9	9.0	9.0
24	8.3	6.3	18	22	11	31	45	33	2.3	7.5	13	8.9
25	4.6	4.1	8.3	18	10	32	40	32	2.9	9.1	8.8	8.2
26	3.8	3.4	15	20	9.6	29	40	32	3.2	15	7.5	8.3
27	3.4	3.7	15	16	9.6	27	38	146	2.1	13	11	7.5
28	3.1	9.7	11	15	9.2	37	36	76	3.8	19	13	6.1
29	2.7	8.6	8.3	19	---	63	36	52	7.6	25	13	5.1
30	2.7	9.1	9.5	8.1	---	47	35	43	3.7	17	12	4.8
31	2.4	---	9.6	7.3	---	36	---	38	---	20	12	---
TOTAL	341.4	96.63	251.2	436.7	334.8	1082.8	1033	1562	576.5	501.0	492.8	294.5
MEAN	11.0	3.22	8.10	14.1	12.0	34.9	34.4	50.4	19.2	16.2	15.9	9.82
MAX	20	9.7	18	22	32	63	70	146	39	38	107	14
MIN	2.4	.86	1.4	6.8	4.8	9.8	19	29	2.0	3.9	7.5	3.7
AC-FT	677	192	498	866	664	2150	2050	3100	1140	994	977	584
CAL YR 1980	TOTAL	5783.59	MEAN	15.8	MAX	198	MIN	.14	AC-FT	11470		
WTR YR 1981	TOTAL	7003.33	MEAN	19.2	MAX	146	MIN	.86	AC-FT	13890		

KANSAS RIVER BASIN

279

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 (30 m) east of Colorado-Nebraska State line and 9.5 mi (15.3 km) upstream from confluence with Arikaree River.

DRAINAGE AREA.--1,360 mi² (3,520 km²), approximately, of which about 100 mi² (260 km²) 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 (1,016.840 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1934, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by diversion in Pioneer Canal for irrigation of about 2,700 acres (10.9 km²) in Colorado and Nebraska.

AVERAGE DISCHARGE.--51 years, 47.4 ft³/s (1.342 m³/s), 34,340 acre-ft/yr (42.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s (59.8 m³/s) Apr. 28, 1947, gage height, 5.92 ft (1.804 m), from rating curve extended above 800 ft³/s (22.7 m³/s) on basis of slope-area measurement of peak flow; no flow Aug. 25, 26, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 110 ft³/s (3.12 m³/s) Mar. 29, gage height, 1.66 ft (0.506 m), maximum gage height, 2.68 ft (0.817 m) Feb. 10, backwater from ice; no peak above base of 130 ft³/s (3.68 m³/s); minimum daily, 2.5 ft³/s (0.071 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	48	53	51	52	58	62	24	33	5.6	34	22
2	15	48	50	51	48	60	62	23	31	6.6	35	20
3	17	50	51	50	48	60	61	37	28	18	27	21
4	15	50	53	51	50	80	66	36	31	10	26	25
5	14	51	53	52	54	77	62	24	32	6.0	17	26
6	23	51	53	52	56	68	61	24	32	15	29	23
7	43	46	54	51	57	69	59	45	32	15	33	23
8	17	46	52	51	55	66	58	46	29	15	33	23
9	15	47	52	50	56	65	59	43	16	10	30	24
10	14	49	51	50	50	66	58	43	13	5.7	25	24
11	12	50	52	50	46	66	60	43	19	3.5	32	23
12	12	52	53	50	48	66	57	40	13	3.9	31	23
13	12	54	52	50	52	67	58	52	11	3.8	36	24
14	12	55	52	52	56	69	60	53	10	4.7	36	24
15	10	55	52	53	57	75	58	47	9.2	3.0	35	25
16	11	56	52	53	57	70	21	43	8.2	2.5	45	27
17	11	55	53	49	57	66	17	52	7.2	2.8	53	27
18	9.2	55	52	50	56	62	20	73	6.9	3.0	44	29
19	11	55	51	54	57	62	42	68	7.2	3.4	36	36
20	16	54	50	54	57	62	97	58	6.5	3.9	43	27
21	17	54	51	52	56	64	93	53	6.6	3.7	38	24
22	15	55	51	52	56	66	72	49	6.0	4.8	36	23
23	22	55	53	53	55	65	55	47	5.9	4.5	38	23
24	45	54	51	55	57	62	47	46	5.7	4.3	30	24
25	48	54	50	54	57	62	45	47	6.1	8.3	33	24
26	49	54	52	54	57	62	44	47	6.2	13	33	24
27	49	53	52	55	57	59	44	48	5.5	33	26	24
28	49	53	51	54	56	61	35	49	7.0	24	25	30
29	49	53	51	57	---	98	36	48	8.2	21	24	37
30	49	53	51	56	---	83	33	47	6.9	24	22	37
31	50	---	51	57	---	69	---	40	---	24	22	---
TOTAL	741.2	1565	1605	1623	1520	2085	1602	1395	439.3	306.0	1007	766
MEAN	23.9	52.2	51.8	52.4	54.3	67.3	53.4	45.0	14.6	9.87	32.5	25.5
MAX	50	56	54	57	57	98	97	73	33	33	53	37
MIN	9.2	46	50	49	46	58	17	23	5.5	2.5	17	20
AC-FT	1470	3100	3180	3220	3010	4140	3180	2770	871	607	2000	1520
CAL YR 1980	TOTAL	15063.9	MEAN	41.2	MAX	170	MIN	3.0	AC-FT	29880		
WTR YR 1981	TOTAL	14654.5	MEAN	40.1	MAX	98	MIN	2.5	AC-FT	29070		

KANSAS RIVER BASIN

06823500 BUFFALO CREEK NEAR HAIGLER, NE

LOCATION (REVISED).--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 (3 m) upstream from county highway bridge, 0.4 mi (0.6 km) upstream from mouth, and 4 mi (6 km) northeast of Haigler.

DRAINAGE AREA.--260 mi² (670 km²), approximately, of which about 13 mi² (34 km²) 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 (971.977 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1980, at site 0.5 mi (0.8 km) upstream at datum 15.67 ft (4.776 m) higher.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by diversion about 1 mi (2 km) upstream for irrigation of 880 acres (3.56 km²).

AVERAGE DISCHARGE.--41 years, 7.58 ft³/s (0.215 m³/s), 5,490 acre-ft/yr (6.77 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 140 ft³/s (3.96 m³/s) June 27, 1948, gage height, 4.37 ft (1.332 m), site and datum then in use; maximum gage height, 5.93 ft (1.807 m) Jan. 3, 1976, site and datum then in use, backwater from ice; no flow at times in 1955, 1968, 1973-80.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 12	1200	ice jam	*3.74 1.140	May 26	2000	*29 0.8	3.51 1.070
Apr. 19	1730	20 0.6	3.19 0.972				

Minimum daily discharge, 0.02 ft³/s (0.0005 m³/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	7.4	7.4	8.2	5.0	7.9	9.0	9.4	8.9	3.5	.40	.04
2	5.5	7.4	5.0	8.5	4.6	8.7	8.9	9.1	8.9	4.4	.40	.02
3	5.5	7.4	4.5	8.3	5.0	8.9	9.1	8.9	8.8	5.6	.35	1.1
4	5.6	7.2	6.5	8.1	5.4	12	9.7	9.5	8.9	4.1	.35	2.7
5	6.0	7.2	8.1	8.1	5.8	12	9.1	9.4	8.8	6.2	.30	2.5
6	6.2	7.4	7.8	8.1	6.0	12	8.9	9.4	8.3	4.9	.30	2.4
7	6.2	7.4	7.7	8.3	6.5	4.0	8.9	9.9	8.1	1.5	.25	3.8
8	6.1	7.4	5.0	8.4	7.6	10	8.8	10	8.1	1.3	.25	5.6
9	6.1	7.2	5.5	8.0	8.0	14	8.6	10	8.1	1.2	.25	5.6
10	6.1	7.2	6.5	8.8	3.0	10	8.5	9.4	7.8	1.2	.25	6.0
11	6.1	7.2	8.0	8.9	4.0	10	8.7	9.0	8.1	.99	.21	6.3
12	6.1	7.3	8.3	9.1	6.0	10	8.7	9.1	8.2	.91	.13	6.5
13	6.3	7.4	8.4	9.9	7.5	10	8.8	11	7.9	.79	.35	6.6
14	6.7	7.4	8.7	8.3	9.0	11	8.7	11	7.4	.72	1.9	6.8
15	6.7	7.4	8.4	8.5	10	12	8.5	10	7.3	.65	1.9	7.5
16	6.8	7.4	7.0	8.6	9.2	12	8.6	9.9	7.2	.62	1.7	7.7
17	7.0	6.8	7.7	6.8	8.1	12	8.7	12	6.9	2.0	1.6	7.9
18	7.2	6.9	8.5	6.2	7.9	11	8.9	17	5.2	1.5	1.6	7.6
19	7.2	7.1	7.8	7.0	7.9	10	14	14	6.6	1.0	2.0	7.4
20	7.2	7.1	6.0	7.9	7.8	9.8	17	12	6.3	.80	2.9	7.6
21	7.2	6.7	5.6	8.3	7.8	10	14	10	6.2	.60	2.9	7.0
22	7.2	6.9	5.8	9.5	7.6	11	13	9.7	6.1	.50	2.8	7.2
23	7.2	7.2	6.6	8.1	7.6	11	11	9.5	5.7	.50	3.0	7.2
24	7.2	7.2	6.4	7.9	7.6	10	10	9.3	3.7	.25	2.6	7.3
25	5.8	8.0	5.8	7.9	7.6	10	10	9.1	.13	1.5	1.2	7.6
26	6.7	7.9	7.0	7.8	7.9	9.7	9.8	9.7	.05	2.5	.86	7.6
27	7.0	7.8	8.4	8.1	8.1	9.2	9.7	9.9	.04	2.5	.70	7.6
28	7.2	7.8	9.8	7.9	7.8	9.6	9.5	9.9	.67	2.0	.60	7.7
29	7.4	7.6	8.9	6.3	---	12	9.3	9.8	10	.50	.41	7.8
30	7.4	7.6	8.4	5.8	---	11	9.4	9.4	6.2	.50	.08	7.9
31	7.4	---	8.2	5.4	---	9.8	---	9.2	---	.50	.04	---
TOTAL	203.8	219.9	223.7	247.0	196.3	320.6	295.8	315.5	194.59	55.73	32.58	176.56
MEAN	6.57	7.33	7.22	7.97	7.01	10.3	9.86	10.2	6.49	1.80	1.05	5.89
MAX	7.4	8.0	9.8	9.9	10	14	17	17	10	6.2	3.0	7.9
MIN	5.5	6.7	4.5	5.4	3.0	4.0	8.5	8.9	.04	.25	.04	.02
AC-FT	404	436	444	490	389	636	587	626	386	111	65	350
CAL YR 1980	TOTAL	2217.08	MEAN	6.06	MAX	24	MIN	.00	AC-FT	4400		
WTR YR 1981	TOTAL	2482.06	MEAN	6.80	MAX	17	MIN	.02	AC-FT	4920		

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 (30 m) downstream from county road bridge and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--20 mi² (52 km²), approximately, of which about 17 mi² (44 km²) 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 (942.853 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. One diversion about 2 mi (3 km) above station for irrigation of 215 acres (870,000 m²); flow regulated at times by reservoir at State fish hatchery 7 mi (11 km) upstream.

AVERAGE DISCHARGE.--41 years, 14.0 ft³/s (0.396 m³/s), 10,140 acre-ft/yr (12.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 493 ft³/s (14.0 m³/s) July 5, 1965, gage height, 6.00 ft (1.829 m), from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-conveyance study; minimum daily, 2.6 ft³/s (0.074 m³/s) Nov. 19, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25 ft³/s (0.71 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 19	2045	*37 1.0	2.64 0.805	May 18	1700	30 0.8	2.46 0.750
Apr. 24	2000	28 0.8	2.39 0.728				

Minimum daily discharge, 8.2 ft³/s (0.23 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	12	13	11	12	12	10	15	16	12	11
2	11	11	11	13	10	12	12	8.9	14	15	11	11
3	11	11	12	13	10	12	13	9.0	14	20	11	11
4	11	11	12	13	11	17	14	9.2	14	20	11	11
5	11	11	11	13	11	19	15	9.2	14	17	11	11
6	11	11	11	13	12	16	12	9.3	13	15	11	10
7	11	11	11	13	13	18	11	10	13	13	11	11
8	11	11	11	12	13	18	11	11	13	12	10	10
9	11	12	12	12	13	16	13	11	13	12	10	10
10	11	12	11	12	12	15	14	12	13	11	11	9.8
11	11	12	11	12	10	14	15	13	13	9.9	11	9.4
12	12	12	11	13	11	14	15	13	14	9.5	11	9.4
13	12	12	11	13	12	13	15	15	13	9.1	11	9.4
14	12	12	11	13	13	13	14	15	13	8.8	11	9.3
15	12	12	12	13	14	15	14	14	12	8.5	11	11
16	12	12	12	13	13	14	14	14	12	8.3	11	11
17	11	12	12	11	13	13	14	17	12	8.2	11	10
18	11	12	12	12	13	12	15	27	12	8.6	11	10
19	11	12	12	13	13	12	23	26	11	8.7	11	10
20	11	12	10	13	12	12	29	21	11	8.8	11	10
21	11	12	11	13	12	12	22	18	11	8.8	11	10
22	11	12	13	13	12	13	21	16	11	8.9	11	10
23	11	12	13	13	12	13	19	15	11	8.9	11	10
24	11	12	11	13	12	12	24	14	11	9.0	11	10
25	11	12	10	13	12	13	25	14	11	9.8	11	11
26	12	12	13	13	12	13	18	13	11	11	11	10
27	12	12	13	13	12	12	15	15	10	12	11	10
28	12	12	13	13	12	12	14	17	11	13	11	10
29	11	12	13	13	---	13	14	17	13	13	11	10
30	11	12	13	12	---	13	13	16	16	13	11	10
31	11	---	12	13	---	13	---	15	---	12	11	---
TOTAL	349	352	363	395	336	426	480	444.6	375	358.8	340	306.3
MEAN	11.3	11.7	11.7	12.7	12.0	13.7	16.0	14.3	12.5	11.6	11.0	10.2
MAX	12	12	13	13	14	19	29	27	16	20	12	11
MIN	11	11	10	11	10	12	11	8.9	10	8.2	10	9.3
AC-FT	692	698	720	783	666	845	952	882	744	712	674	608
CAL YR 1980	TOTAL	4524.5	MEAN 12.4	MAX 22	MIN 8.9	AC-FT 8970						
WTR YR 1981	TOTAL	4525.7	MEAN 12.4	MAX 29	MIN 8.2	AC-FT 8980						

KANSAS RIVER BASIN

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., Dundys County, Hydrologic Unit 10250002, on left bank at downstream side of bridge on U.S. Highway 34, 0.6 mi (1.0 km) south of Eurlington Northern Inc. track, 1 mi (2 km) southwest of Benkelman, 2 mi (3 km) upstream from South Fork Republican River, and 11 mi (18 km) downstream from Rock Creek.

DRAINAGE AREA.--4,830 mi² (12,500 km²), approximately, of which about 1,230 mi² (3,190 km²) 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. Datum of gage is 2,975.34 ft (906.884 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1946, nonrecording gages at several sites within 1.5 mi (2.4 km) 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 (46 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--40 years, 87.6 ft³/s (2.481 m³/s), 63,470 acre-ft/yr (78.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,040 ft³/s (171 m³/s) Sept. 7, 1951, gage height, 7.58 ft (2.310 m); maximum gage height, 7.80 ft (2.377 m) Aug. 9, 1950; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 13.1 ft (3.99 m) May 31, 1935, from elevations furnished by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 550 ft³/s (15.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 17	1500	ice jam	*5.10 1.554	May 28	0630	*1450 41.1	4.64 1.414
Apr. 19	1830	615 17.4	4.10 1.250				

Minimum daily discharge, 9.0 ft³/s (0.25 m³/s) June 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	80	75	100	70	90	150	113	120	31	47	33
2	21	78	36	100	62	93	147	105	112	29	53	34
3	26	78	31	94	62	99	138	98	100	151	53	40
4	32	80	45	98	65	154	133	105	100	77	41	48
5	37	80	50	100	65	162	132	102	102	49	36	44
6	39	80	52	100	68	150	126	84	93	38	26	40
7	40	78	45	96	72	117	121	99	85	36	25	39
8	45	78	55	92	76	111	118	116	80	32	31	42
9	40	76	69	88	80	154	120	110	76	29	38	37
10	40	74	68	80	76	141	121	105	66	26	48	35
11	36	72	95	84	65	141	115	108	61	22	48	41
12	39	70	85	88	68	141	120	113	61	17	51	40
13	43	70	67	96	78	147	116	142	57	14	50	40
14	37	70	74	98	85	162	107	145	44	11	39	40
15	32	72	80	102	92	174	99	132	37	10	39	45
16	31	70	90	80	102	180	98	125	38	13	45	40
17	33	66	96	70	120	170	97	206	36	14	60	40
18	38	67	96	60	135	144	98	431	31	33	191	38
19	41	66	96	70	123	135	296	418	26	26	83	32
20	42	62	88	84	120	132	495	258	23	21	63	38
21	43	67	80	100	108	126	432	200	22	30	54	36
22	43	72	90	130	96	132	333	167	20	20	57	40
23	43	75	96	133	102	144	231	145	19	18	68	42
24	50	76	80	127	102	138	193	132	15	16	55	41
25	51	74	74	115	96	141	190	123	12	52	42	43
26	51	68	80	108	93	144	163	129	11	61	34	45
27	57	69	92	100	90	138	151	224	9.0	53	36	46
28	70	73	110	100	93	147	140	549	10	65	42	45
29	71	81	108	96	---	154	131	186	68	67	44	40
30	76	80	106	80	---	202	118	154	52	64	34	37
31	81	---	104	76	---	170	---	133	---	48	34	---
TOTAL	1352	2202	2413	2945	2464	4433	5029	5257	1586.0	1173	1567	1201
MEAN	43.6	73.4	77.8	95.0	88.0	143	168	170	52.9	37.8	50.5	40.0
MAX	81	81	110	133	135	202	495	549	120	151	191	48
MIN	21	62	31	60	62	90	97	84	9.0	10	25	32
AC-FT	2680	4370	4790	5840	4890	8790	9980	10430	3150	2330	3110	2380
CAL YR 1980	TOTAL	29842.4	MEAN 81.5	MAX 503	MIN 3.0	AC-FT	59190					
WTR YR 1981	TOTAL	31622.0	MEAN 86.6	MAX 549	MIN 9.0	AC-FT	62720					

KANSAS RIVER BASIN

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06824500 REPUBLICAN RIVER AT BENKELMAN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-73, October 1980 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
16...	0900	30	625	8.2	9.0	10.0	14	K25	200	230	59
NOV											
13...	1200	66	630	8.0	7.0	10.8	16	69	210	210	57
DEC											
10...	0940	51	760	7.9	4.0	13.1	10	1280	108	250	64
JAN											
13...	0920	96	550	8.0	3.0	12.7	18	34	880	220	57
FEB											
10...	0930	81	560	8.3	1.0	12.5	15	36	140	240	63
MAR											
09...	1340	206	630	8.3	6.0	11.6	23	K1300	1000	250	65
APR											
06...	1015	100	710	8.0	10.0	9.4	--	280	K19	270	72
MAY											
11...	1400	108	680	8.0	18.0	8.6	5	140	58	260	67
JUN											
09...	1200	82	630	8.0	27.0	7.2	25	K100	460	270	70
30...	1130	56	590	7.9	22.0	7.6	53	K10000	7600	230	60
AUG											
10...	1130	59	580	8.1	25.0	8.4	--	K2200	580	--	--
SEP											
09...	1330	42	615	8.9	25.0	8.2	36	240	240	220	58

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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...	19	81	6.6	431	.51	.020	1.2	1.20	1.7	.080	7.4
NOV											
13...	17	69	6.7	366	.92	.010	.49	.50	1.4	.030	9.0
DEC											
10...	21	76	6.2	436	1.4	.110	.85	.96	2.4	.060	7.0
JAN											
13...	18	68	6.6	365	1.3	.130	.97	1.10	2.4	.180	12
FEB											
10...	20	72	7.5	404	.95	.050	1.2	1.20	2.2	.060	--
MAR											
09...	21	110	11	1090	.81	.030	1.7	1.70	2.5	.360	13
APR											
06...	22	100	23	520	.69	.120	.85	.97	1.7	.130	--
MAY											
11...	22	120	8.8	554	.99	.080	.82	.90	1.9	.080	5.3
JUN											
09...	22	100	8.6	661	.04	.190	--	--	--	.200	7.8
30...	20	160	8.1	778	--	.110	1.8	1.90	--	.320	21
AUG											
10...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	19	88	9.5	546	.42	.060	--	1.10	1.5	.120	4.7

KANSAS RIVER BASIN

06824500 REPUBLICAN RIVER AT BENKELMAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 13...	1200	12	24	.7	11	200	1.1	48	358
JAN 13...	0920	6.0	24	.7	10	210	1.3	50	367
MAY 11...	1400	28	36	1.0	12	230	1.1	42	451
JUN 09...	1200	36	38	1.0	12	230	1.1	42	433
30...	1130	82	35	1.0	13	150	.8	33	421
SEP 09...	1330	23	31	1.0	15	200	1.1	50	392

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 13...	.50	65.5	.92	.030	12	200	90	0	0
JAN 13...	.50	95.1	1.3	.050	--	--	80	--	--
MAY 11...	.61	132	.78	.060	12	200	90	<1	0
JUN 09...	.59	95.9	--	--	15	400	100	--	0
30...	.57	63.7	.84	.100	13	300	100	1	0
SEP 09...	.53	44.5	--	--	12	160	90	<1	10

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 13...	10	50	5	8	.0	2	0	10
JAN 13...	--	40	--	8	--	--	--	--
MAY 11...	2	20	1	7	.3	2	0	50
JUN 09...	6	40	2	30	.3	2	0	70
30...	6	40	68	6	.3	2	0	8
SEP 09...	3	76	0	12	.0	2	0	15

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 (30 m) upstream from bridge on State Highway 61, 1 mi (2 km) downstream from Kansas-Nebraska State line, 2.5 mi (4.0 km) southwest of Benkelman, and 4 mi (6 km) upstream from mouth.

DRAINAGE AREA.--2,740 mi² (7,100 km²), approximately, of which about 2,190 mi² (5,670 km²) 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 (911.629 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 10, 1947, nonrecording gages at several sites within 3.5 mi (5.6 km) of present site at various datums. Dec. 10, 1947, to Sept. 28, 1966, water-stage recorder 130 ft (40 m) downstream at datum 2.00 ft (0.610 m) higher, and Sept. 29, 1966, to Mar. 7, 1968, at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station, and since July 6, 1950, by storage in Bonny Reservoir.

AVERAGE DISCHARGE.--51 years, 51.5 ft³/s (1.458 m³/s), 37,310 acre-ft/yr (46.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 19,600 ft³/s (555 m³/s) Aug. 16, 1958, gage height, 8.70 ft (2.652 m), 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 (3.08 m) May 31, 1935, from floodmarks at site 0.2 mi (0.3 km) downstream, at datum 2.00 ft (0.610 m) higher, discharge, 150,000 ft³/s (4,250 m³/s), by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,740 ft³/s (106 m³/s) May 28, gage height, 6.48 ft (1.975 m); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	4.0	18	16	12	45	73	62	121	12	23	.00
2	.00	6.0	15	16	12	43	69	60	105	16	19	.00
3	.00	10	10	18	12	44	69	58	96	96	20	.01
4	.00	10	12	18	14	82	72	63	89	57	13	.00
5	.00	10	15	16	14	77	67	63	80	23	16	.00
6	.00	11	15	16	16	64	64	66	74	14	7.8	.00
7	.00	11	10	16	22	45	63	94	68	7.8	7.2	.00
8	.00	11	7.0	16	24	41	61	99	62	7.3	5.3	.00
9	.00	12	7.8	16	26	72	59	94	57	6.9	6.4	.00
10	.00	12	8.0	10	22	63	57	91	53	6.0	7.3	.00
11	.00	12	10	12	20	62	56	89	51	5.0	6.4	.00
12	.00	12	15	14	20	61	54	92	49	2.4	6.8	.00
13	.00	14	18	18	25	53	50	110	39	1.9	5.6	.00
14	.00	18	23	20	30	67	48	110	38	1.9	3.6	.00
15	.00	18	26	20	45	71	51	103	38	1.2	2.6	.00
16	.00	17	28	16	55	71	49	88	39	3.3	9.4	.00
17	.00	10	25	9.0	60	70	48	106	39	11	9.3	.00
18	.00	10	24	10	61	60	46	233	39	32	11	.00
19	.00	12	22	12	53	58	116	229	35	21	5.5	.00
20	.00	15	12	14	49	62	250	153	26	16	3.1	.00
21	.00	18	10	19	48	68	147	127	26	15	1.4	.00
22	.00	20	12	25	47	72	131	112	25	16	1.1	.00
23	.00	21	15	28	40	81	112	103	21	14	4.6	.00
24	.00	20	15	28	41	80	97	93	16	11	3.1	.00
25	.00	20	10	25	45	78	88	87	14	20	1.5	.00
26	.00	20	12	23	46	75	81	102	13	55	.44	.00
27	.00	18	15	20	44	74	74	645	15	70	.13	.00
28	.50	17	18	18	44	83	77	1040	15	48	.04	.00
29	1.0	21	18	16	---	99	77	260	13	32	.00	.00
30	1.5	20	16	14	---	95	66	176	10	68	.00	.00
31	3.0	---	16	13	---	82	---	140	---	49	.00	---
TOTAL	6.00	430.0	477.8	532.0	947	2098	2372	4948	1366	739.7	200.61	.01
MEAN	.19	14.3	15.4	17.2	33.8	67.7	79.1	160	45.5	23.9	6.47	.000
MAX	3.0	21	28	28	61	99	250	1040	121	96	23	.01
MIN	.00	4.0	7.0	9.0	12	41	46	58	10	1.2	.00	.00
AC-FT	12	853	948	1060	1880	4160	4700	9810	2710	1470	398	.02

CAL YR 1980 TOTAL 10838.15 MEAN 29.6 MAX 360 MIN .00 AC-FT 21500
WTR YR 1981 TOTAL 14117.12 MEAN 38.7 MAX 1040 MIN .00 AC-FT 28000

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 (0.8 km) south of Stratton, 0.2 mi (0.3 km) downstream from Huddy Creek, 10 mi (16 km) upstream from Trenton Dam, and 19 mi (31 km) downstream from South Fork Republican River.

DRAINAGE AREA.--8,450 mi² (21,900 km²), approximately, of which about 3,800 mi² (9,840 km²) 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. Datum of gage is 2,775.49 ft (845.969 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 1, 1967, at site 0.3 mi (0.5 km) downstream at present datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir (station 06826000).

AVERAGE DISCHARGE.--31 years, 130 ft³/s (3.682 m³/s), 94,180 acre-ft/yr (0.116 km³/yr); median of yearly mean discharges, 116 ft³/s (3.285 m³/s), 84,000 acre-ft/yr (0.104 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,800 ft³/s (759 m³/s) July 31, 1962, gage height, 9.34 ft (2.847 m), 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 (5,660 m³/s), based on slope-area measurement at Max.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) May 28, gage height, 8.84 ft (2.694 m); maximum gage height, 9.92 ft (3.024 m) Jan. 28, backwater from ice; no flow Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	60	58	104	74	120	191	172	316	43	98	11
2	.82	60	54	101	70	124	169	164	276	31	88	18
3	.00	58	38	98	70	131	161	148	246	106	87	19
4	.04	58	45	107	72	276	170	171	225	230	71	30
5	5.8	61	50	107	74	316	172	163	215	92	58	31
6	10	60	52	107	76	230	176	144	195	58	57	25
7	12	59	45	104	80	230	168	194	186	43	48	21
8	13	60	56	95	84	134	148	225	181	32	42	19
9	15	58	66	98	92	195	140	209	158	35	54	18
10	11	59	60	82	85	253	139	181	152	31	61	12
11	12	60	68	86	70	212	132	191	146	18	55	10
12	15	64	86	86	75	212	132	190	142	11	50	9.4
13	16	68	82	88	90	220	132	225	117	4.6	63	13
14	18	70	78	96	100	234	124	240	117	12	55	13
15	17	73	86	100	105	240	123	240	117	2.5	50	13
16	14	75	94	90	120	277	127	240	117	6.6	53	21
17	11	73	101	76	130	248	128	300	120	24	61	19
18	12	70	101	70	150	218	114	640	110	220	90	20
19	16	68	101	78	128	204	261	580	98	133	111	22
20	17	66	94	90	128	186	761	490	58	48	63	20
21	18	70	82	104	120	208	537	372	48	39	47	18
22	20	68	90	140	110	237	570	308	46	45	44	20
23	21	68	100	150	117	269	447	264	48	33	66	22
24	25	68	82	135	117	261	339	230	35	28	56	22
25	31	68	76	125	131	231	283	220	30	57	48	25
26	34	68	88	118	124	203	261	382	25	120	40	26
27	39	63	100	112	124	185	220	967	25	171	36	25
28	44	63	120	106	124	222	217	1320	30	150	29	28
29	51	66	117	102	---	263	211	672	70	123	26	26
30	56	61	114	90	---	284	186	480	75	99	24	23
31	59	---	110	82	---	237	---	380	---	149	14	---
TOTAL	619.46	1943	2494	3127	2840	6860	6939	10702	3724	2194.7	1745	599.4
MEAN	20.0	64.8	80.5	101	101	221	231	345	124	70.8	56.3	20.0
MAX	59	75	120	150	150	316	761	1320	316	230	111	31
MIN	.00	58	38	70	70	120	114	144	25	2.5	14	9.4
AC-FT	1230	3850	4950	6200	5630	13610	13760	21230	7390	4350	3460	1190
CAL YR 1980	TOTAL	39025.09	MEAN	107	MAX	755	MIN	.00	AC-FT	77410		
WTR YR 1981	TOTAL	43787.56	MEAN	120	MAX	1320	MIN	.00	AC-FT	86850		

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 (4.0 km) west of Trenton.

DRAINAGE AREA.--8,620 mi² (22,300 km²), approximately, of which about 3,940 mi² (10,200 km²) 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 (0.143 km³) between elevations 2,710.0 ft (826 m), sill of outlet gates, and 2,752.0 ft (839 m), top of storage pool. Top of flood-control pool is at elevation 2,773.0 ft (845 m), capacity, 254,000 acre-ft (0.313 km³). Top of superstorage flood-control pool at elevation 2,785.0 ft (849 m), capacity, 361,600 acre-ft (0.446 km³). Dead storage, 4,100 acre-ft (5.06 hm³). 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 (0.184 km³) Aug. 2, 3, 1962, elevation, 2,757.42 ft (840.462 m); minimum since operation of reservoir began, 19,950 acre-ft (24.6 hm³) Oct. 24, 1954, elevation, 2,722.61 ft (829.852 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 122,900 acre-ft (0.152 km³) June 14-17, elevation, 2,752.54 ft (838.974 m); minimum contents, 52,610 acre-ft (64.9 hm³) Oct. 28-30, elevation, 2,735.72 ft (833.847 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

2,735	50,280	2,750	110,500
2,740	67,730	2,755	135,600
2,745	87,930		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53160	52670	54960	59290	64140	70140	84250	98460	119900	117500	104200	97130
2	53130	52710	54960	59430	63990	70340	84620	98780	120200	117100	104200	92690
3	53130	52740	54990	59640	64140	70650	85000	99050	120500	116700	104000	92430
4	53100	52740	55060	59710	64290	71540	85340	99410	120900	116600	103700	92160
5	53030	52770	55190	59920	64400	72170	85670	99680	121200	116400	103300	91950
6	52970	52870	55430	60030	64620	72600	86010	99900	121400	115800	102900	91770
7	53000	52930	55530	60200	64810	73340	86230	100500	121800	115200	102300	91560
8	53000	52970	55630	60340	64990	73700	86650	101000	121900	114200	101700	91300
9	52970	53030	55730	60420	65140	74090	86910	101600	122000	113300	101300	91080
10	52930	53100	55770	60560	65250	74570	87080	102000	122200	112100	100700	90770
11	52900	53130	55870	60700	65370	74970	87500	102400	122600	111200	100300	90510
12	52900	53160	55900	60850	65370	75400	87720	103000	122700	110100	99810	90300
13	52870	53160	56180	60990	65520	75800	87970	103600	122800	109100	99590	90080
14	52870	53160	56310	61100	65630	76320	88190	104000	122900	108100	99230	89860
15	52840	53260	56550	61200	65890	76690	88360	104400	122900	107100	98870	89650
16	52840	53790	56790	61380	66190	77130	88660	104900	122900	106200	98510	89480
17	52800	54050	56920	61450	66640	77530	88790	106000	122700	105200	98190	89130
18	52800	54150	57100	61560	67280	77940	89220	108200	122000	107800	97880	88880
19	52770	54250	57200	61700	67650	78300	90340	109600	121800	107700	97750	88830
20	52710	54320	57240	61810	68000	78460	91860	110400	121500	107100	97480	88700
21	52710	54420	57270	61990	68260	79110	93220	111100	121100	106500	97120	88660
22	52740	54460	57370	62170	68530	79560	94450	111600	120900	106100	96890	88570
23	52710	54490	57550	62390	68720	80010	95200	112100	120600	105600	96670	88490
24	52670	54490	57690	62640	68950	80550	95780	112400	120200	104900	96400	88450
25	52670	54560	57820	62900	69140	80960	96230	112900	119700	104700	96050	88400
26	52640	54660	57930	63150	69450	81290	96670	113600	118900	104400	95650	88360
27	52640	54660	58170	63370	69640	81790	97120	115100	118300	104400	95200	88230
28	52610	54720	58450	63480	69870	82410	97570	117300	118000	104400	94760	88190
29	52610	54860	58660	63740	---	82830	97880	118300	118200	104400	94450	88190
30	52610	54920	58940	63770	---	83530	98240	118800	117700	104400	94010	88140
31	52640	---	59080	63950	---	83950	---	119300	---	104400	93570	---
MAX	53160	54920	59080	63950	69870	83950	98240	119300	122900	117500	104200	97130
MIN	52610	52670	54960	59290	63990	70140	84250	98460	117700	104400	93570	88140
Δ	2735.73	2736.42	2737.63	2738.99	2740.56	2744.06	2747.35	2751.83	2751.50	2748.70	2746.30	2745.05
Δ	-520	+2280	+4160	+4870	+5920	+14080	+14290	+21060	-1600	-13300	-10830	-5430
CAL YR 1980	MAX	96540	MIN	43100	+16010							
WTR YR 1981	MAX	122900	MIN	52610	+34980							

Δ Elevation, in feet, at end of month.

Δ 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 (91 m) upstream from Elm Creek, 0.9 mi (1.4 km) downstream from centerline of spillway of Trenton Dam, and 1.5 mi (2.4 km) southwest of Trenton.

DRAINAGE AREA.--8,620 mi² (22,300 km²), approximately, of which about 3,940 mi² (10,200 km²) 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 (814.139 m) National Geodetic Vertical Datum of 1929. See WSP 2119 for history of changes prior to Oct. 1, 1959.

REMARKS.--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 (66.4 km²).

AVERAGE DISCHARGE.--35 years, 84.5 ft³/s (2.393 m³/s), 61,220 acre-ft/yr (75.5 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s (476 m³/s) June 16, 1948, gage height, 5.64 ft (1.719 m), 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 (5,660 m³/s). Discharge of 21,100 ft³/s (598 m³/s) was measured July 3, 1946, gage height, 6.0 ft (1.83 m), former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) Sept. 18, gage height, 7.56 ft (2.304 m); maximum gage height, 8.28 ft (2.524 m) July 18, backwater from Elm Creek; minimum daily discharge, 0.58 ft³/s (0.016 m³/s) Mar. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.79	.80	.86	.74	.83	.86	.75	.70	47	1.4	1.2
2	.61	.78	.82	.85	.72	.85	.76	.76	.70	50	1.4	1.3
3	.60	.77	.84	.86	.67	.94	.79	.79	.70	72	1.2	1.2
4	.63	.73	.85	.80	.67	1.9	.87	.87	.70	50	1.2	1.3
5	.67	.78	.84	.80	.68	1.1	.82	.81	.70	49	1.3	1.3
6	.67	.87	.89	.81	.70	1.0	.89	.73	.70	49	1.4	1.3
7	.66	.97	.89	.79	.69	1.2	.68	.89	.70	49	1.3	1.2
8	.65	.85	.90	.79	.67	1.1	.65	.92	.70	80	1.2	1.2
9	.66	.71	.88	.79	.70	1.0	.77	1.1	.70	100	1.2	1.3
10	.64	.73	.87	.81	.66	.98	.85	.89	.76	121	1.2	1.3
11	.64	.76	.86	.81	.65	.88	.81	.86	.76	134	1.2	1.2
12	.67	.76	.85	.81	.73	.87	.89	.93	.76	134	1.2	1.3
13	.71	.82	.84	.83	.75	.77	.98	1.3	.76	132	1.3	1.4
14	.71	.78	.84	.83	.79	.78	.97	1.1	.76	130	1.2	1.3
15	.71	.76	.84	.83	.81	.68	.95	1.0	.76	130	1.2	1.3
16	.70	.75	.84	.83	.82	.66	.99	1.1	.76	129	1.3	1.3
17	.66	.80	.84	.79	.87	.65	.91	2.0	.76	105	1.3	1.3
18	.68	.79	.84	.82	.87	.63	.88	4.2	.75	60	1.4	229
19	.71	.78	.75	.86	.91	.58	2.2	3.4	160	22	1.4	2.5
20	.73	.78	.76	.77	.89	.59	3.2	2.0	140	75	1.2	1.6
21	.76	.78	.73	.77	.90	.67	1.7	1.5	139	123	1.3	1.4
22	.75	.78	.80	.77	.84	.65	3.3	1.3	101	54	1.3	1.4
23	.75	.80	.82	.78	.76	.64	1.5	1.2	73	27	1.3	1.4
24	.73	.78	.78	.78	.82	.67	1.2	1.1	76	24	1.3	1.3
25	.80	.77	.80	.79	.84	.66	.98	1.0	76	22	1.2	1.3
26	.78	.84	.84	.76	.80	.61	.83	1.2	137	36	1.2	1.3
27	.83	.82	.83	.78	.89	.75	.79	1.5	172	14	1.2	1.3
28	.84	.84	.84	.78	.84	.72	.78	1.3	171	1.9	1.3	1.3
29	.81	.84	.85	.79	---	.63	.80	1.0	138	1.6	1.4	1.3
30	.84	.86	.85	.78	---	.82	.77	.89	116	1.6	1.3	1.3
31	.83	---	.85	.78	---	.86	---	.78	---	1.4	1.2	---
TOTAL	22.05	23.87	25.83	24.90	21.68	25.67	33.37	39.17	1512.13	2024.5	39.5	268.1
MEAN	.71	.80	.83	.80	.77	.83	1.11	1.26	50.4	65.3	1.27	8.94
MAX	.84	.97	.90	.86	.91	1.9	3.3	4.2	172	134	1.4	229
MIN	.60	.71	.73	.76	.65	.58	.65	.73	.70	1.4	1.2	1.2
AC-FT	44	47	51	49	43	51	66	78	3000	4020	78	532
CAL YR 1980	TOTAL	5259.49	MEAN	14.4	MAX	151	MIN	.44	AC-FT	10430		
WTR YR 1981	TOTAL	4060.77	MEAN	11.1	MAX	229	MIN	.58	AC-FT	8050		

KANSAS RIVER BASIN

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06829500 REPUBLICAN RIVER AT TRENTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)					
OCT 16...	1145	.76	805	8.3	14.0	--					
NOV 12...	1000	.77	820	7.7	8.0	11.9					
DEC 10...	1210	.87	840	7.7	5.0	13.8					
MAR 09...	0930	1.0	800	7.8	6.0	12.7					
JUL 01...	1245	13	610	8.3	25.0	9.7					
AUG 20...	0930	1.0	705	7.5	22.0	4.8					
SEP 16...	1000	1.0	740	7.4	15.0	5.4					

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 09...	0930	5	260	20	66	23	63	1.7	13	240	130
AUG 20...	0930	0	250	9.0	60	24	59	1.8	17	240	110

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 09...	19	1.1	36	501	.68	1.4	1.2	.040	150	30	170
AUG 20...	21	1.2	35	474	.64	1.3	.37	.070	160	100	280

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 (0.3 km) downstream from bridge on county highway, 5.8 mi (9.3 km) upstream from Enders Dam, and 6.1 mi (9.8 km) south of Imperial.

DRAINAGE AREA.--880 mi² (2,280 km²), approximately, of which about 720 mi² (1,860 km²) 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. Prior to Mar. 7, 1941, nonrecording gage at bridge 0.2 mi (0.3 km) upstream at different datum. Mar. 7, 1941, to Sept. 30, 1958, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 4.35 ft (1.326 m) lower.

REMARKS.--Records good except those for winter period, which are fair. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--41 years, 64.0 ft³/s (1.812 m³/s), 46,370 acre-ft/yr (57.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,340 ft³/s (66.3 m³/s) Mar. 22, 1960, gage height, 8.43 ft (2.569 m); minimum daily, 4.8 ft³/s (0.14 m³/s) Mar. 12, 1977, backwater from ice.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1940, reached a stage of 12.4 ft (3.78 m), 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.--Maximum discharge, 84 ft³/s (2.38 m³/s) May 26, gage height, 1.75 ft (0.533 m), no peak above base of 150 ft³/s (4.25 m³/s); minimum daily, 19 ft³/s (0.54 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	26	28	29	26	30	34	35	45	37	35	24
2	23	27	26	29	24	34	35	34	42	38	32	24
3	23	27	29	29	23	33	34	35	40	36	30	25
4	24	27	29	30	24	47	37	39	40	35	28	26
5	24	27	29	29	25	46	35	40	40	33	27	25
6	24	27	29	29	27	40	34	38	40	31	26	26
7	24	27	29	29	28	41	34	43	40	29	25	25
8	24	27	29	29	27	38	33	45	41	29	25	24
9	24	26	29	29	25	36	33	44	39	28	25	22
10	24	26	29	26	19	35	33	40	37	29	28	23
11	24	26	29	29	24	34	33	42	37	29	27	23
12	25	27	29	30	29	33	33	44	38	28	27	23
13	25	28	29	30	33	33	33	50	37	26	29	24
14	25	28	30	29	31	33	33	47	35	24	29	24
15	26	28	30	29	31	34	32	43	35	33	28	24
16	28	28	30	30	31	33	34	43	35	33	29	23
17	27	28	29	25	30	33	33	51	35	31	30	23
18	27	28	30	29	30	31	32	73	34	45	32	24
19	27	28	29	31	29	31	41	74	34	44	30	24
20	27	28	26	31	29	31	60	64	34	37	29	24
21	27	27	27	30	29	34	62	55	33	32	27	24
22	28	27	29	30	28	35	67	52	33	31	27	24
23	28	27	28	31	29	34	67	48	32	31	28	24
24	27	26	27	31	29	32	61	44	32	31	27	24
25	27	26	27	30	29	33	50	43	32	33	26	25
26	27	26	33	30	29	32	42	49	30	52	25	25
27	28	26	30	30	30	31	39	63	31	68	25	24
28	29	28	30	30	28	36	38	69	32	70	25	25
29	29	27	30	30	---	56	37	60	44	44	25	24
30	28	28	30	30	---	48	36	53	40	38	25	24
31	27	---	29	29	---	42	---	48	---	37	25	---
TOTAL	803	812	897	912	776	1119	1205	1508	1097	1122	856	723
MEAN	25.9	27.1	28.9	29.4	27.7	36.1	40.2	48.6	36.6	36.2	27.6	24.1
MAX	29	28	33	31	33	56	67	74	45	70	35	26
MIN	23	26	26	25	19	30	32	34	30	24	25	22
AC-FT	1590	1610	1780	1810	1540	2220	2390	2990	2180	2230	1700	1430
CAL YR 1980	TOTAL	10757	MEAN	29.4	MAX	66	MIN	13	AC-FT	21340		
WTR YR 1981	TOTAL	11830	MEAN	32.4	MAX	74	MIN	19	AC-FT	23460		

KANSAS RIVER BASIN

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 (3.5 km) southeast of Enders.

DRAINAGE AREA.--950 mi² (2,460 km²), approximately, of which about 790 mi² (2,050 km²) 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 (44.4 hm³) between elevations 3,080.0 ft (939 m), sill of outlet gates, and 3,112.3 ft (949 m), top of storage pool. Top of flood-control pool at elevation 3,127.0 ft (953 m), capacity, 74,520 acre-ft (91.9 hm³). Top of superstorage flood-control pool at elevation 3,129.5 ft (954 m), capacity, 80,730 acre-ft (99.5 hm³). Dead storage, 8,470 acre-ft (10.4 hm³). 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 (68.2 hm³) Mar. 25, 1960, elevation, 3,118.20 ft (950.427 m); minimum since operation of reservoir began, 8,870 acre-ft (10.9 hm³) Aug. 28, 1978, elevation, 3,080.67 ft (938.988 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,030 acre-ft (37.0 hm³) June 23, elevation, 3,102.72 ft (945.709 m); minimum, 13,140 ft³/s (372 m³/s) Oct. 1, elevation, 3,086.80 ft (940.857 m).

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 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13190	15090	17060	19050	20940	22620	25100	26780	29380	29190	22590	15350
2	13240	15170	17110	19130	20990	22700	25190	26840	29410	29020	22570	15430
3	13280	15260	17190	19180	21060	22830	25190	26910	29450	28810	22480	15480
4	13350	15330	17270	19250	21120	23040	25250	26920	29500	28610	22310	15550
5	13400	15400	17320	19370	21190	23150	25310	27010	29540	28380	22130	15620
6	13470	15490	17390	19350	21270	23230	25370	27080	29610	28150	21920	15690
7	13530	15570	17440	19430	21330	23370	25440	27180	29670	27860	21720	15740
8	13580	15610	17510	19500	21380	23440	25470	27250	29710	27540	21490	15810
9	13650	15650	17570	19540	21440	23510	25510	27300	29740	27230	21250	15870
10	13690	15710	17640	19590	21440	23570	25540	27320	29750	26890	20960	15950
11	13740	15780	17750	19650	21520	23640	25590	27420	29810	26590	20650	15970
12	13810	15840	17810	19730	21600	23710	25620	27540	29850	26240	20350	16040
13	13860	15880	17880	19790	21670	23780	25620	27610	29870	25860	20080	16100
14	13930	15960	17930	19850	21740	23850	25620	27690	29870	25470	19840	16160
15	14000	16010	18000	19890	21820	23920	25630	27750	29860	25120	19670	16220
16	14060	16090	18070	19950	21880	24000	25650	27840	29890	24700	19450	16270
17	14110	16150	18140	20000	21940	24000	25660	28000	29900	24360	19220	16330
18	14160	16230	18150	20100	22020	24060	25700	28210	29900	24180	19000	16380
19	14230	16290	18210	20150	22060	24120	25920	28300	29870	23930	18760	16430
20	14300	16340	18270	20190	22120	24170	26090	28360	29990	23700	18500	16480
21	14360	16430	18340	20260	22180	24240	26250	28450	29990	23480	18250	16530
22	14430	16500	18440	20350	22220	24300	26320	28530	30020	23240	17970	16590
23	14460	16550	18470	20420	22280	24380	26390	28580	30000	23040	17700	16630
24	14550	16610	18520	20470	22330	24460	26470	28660	29890	22810	17340	16700
25	14590	16670	18590	20530	22400	24540	26530	28720	29790	22670	16960	16820
26	14660	16740	18680	20580	22460	24590	26590	28850	29700	22570	16550	16840
27	14730	16790	18770	20640	22490	24660	26630	29000	29660	22580	16170	16890
28	14790	16870	18810	20700	22550	24840	26670	29090	29620	22600	15800	16980
29	14850	16960	18880	20750	---	24900	26690	29190	29530	22610	15470	17040
30	14930	17030	18960	20830	---	25020	26730	29250	29360	22620	15250	17080
31	15000	---	19010	20870	---	25050	---	29330	---	22640	15290	---
MAX	15000	17030	19010	20870	22550	25050	26730	29330	30020	29190	22590	17080
MIN	13190	15090	17060	19050	20940	22620	25100	26780	29360	22570	15250	15350
Δ	3089.05	3091.30	3093.32	3095.11	3096.63	3098.78	3100.15	3102.19	3102.21	3096.71	3089.38	3091.35
#	+1860	+2030	+1980	+1860	+1680	+2500	+1680	+2600	+30	-6720	-7350	+1790
CA1 YR 1980	MAX	30940	MIN	9810	-1200							
WTF YR 1981	MAX	30020	MIN	13190	+3940							

Δ Elevation, in feet, at end of month.

Change in contents, in acre-feet.

KANSAS RIVER BASIN

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 (0.3 km) downstream from Enders Dam and 2.5 mi (4.0 km) southeast of Enders.

DRAINAGE AREA.--950 mi² (2,460 km²), approximately, of which about 790 mi² (2,050 km²) 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 (922.392 m) National Geodetic Vertical Datum of 1929. Prior to June 14, 1948, at site 800 ft (240 m) upstream at datum 6.03 ft (1.838 m) higher. June 14, 1948, to Sept. 14, 1972, at present site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good except those below 5.0 ft³/s (0.14 m³/s), which are poor. Flow regulated by Enders Reservoir (station 06832000).

AVERAGE DISCHARGE.--35 years, 62.6 ft³/s (1.773 m³/s), 45,350 acre-ft/yr (55.9 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 763 ft³/s (21.6 m³/s) Aug. 20, 1953, gage height, 11.31 ft (3.447 m), present datum; maximum gage height, 11.65 ft (3.551 m), present datum, July 18, 1958, backwater from downstream tributary; no flow for many days in 1972-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 244 ft³/s (6.91 m³/s) Aug. 26, 27, gage height, 7.68 ft (2.341 m); no flow for many days.

CORRECTIONS.--The maximum gage height for water year 1980 is 8.26 ft (2.518 m); the previously published figure of 3.26 ft (0.994 m) was in error.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.43	.10	124	53	4.3
2	.00	.00	.00	.00	.00	.00	.00	.16	.12	137	54	4.2
3	.00	.00	.00	.00	.00	.00	.00	.06	.16	144	77	4.3
4	.00	.00	.00	.00	.00	.00	.00	.12	.18	144	104	4.3
5	.02	.00	.00	.00	.00	.00	.00	.12	.18	147	118	4.3
6	.00	.00	.00	.00	.00	.00	.00	.12	.18	147	126	4.3
7	.00	.00	.00	.00	.00	.00	.00	.12	.22	149	113	4.4
8	.00	.00	.00	.00	.00	.00	.70	.12	.17	161	134	4.6
9	.00	.03	.00	.00	.00	.00	5.4	.12	.27	177	165	4.6
10	.00	.00	.00	.00	.00	.00	5.5	.12	.33	188	180	4.5
11	.00	.00	.00	.00	.00	.00	5.2	.12	.43	202	192	4.3
12	.00	.00	.00	.00	.00	.00	5.2	.06	.43	211	197	4.3
13	.00	.00	.00	.00	.00	.00	5.2	.06	.35	217	179	4.3
14	.00	.00	.00	.00	.00	.00	5.3	.06	.34	227	158	4.3
15	.00	.00	.00	.00	.00	.00	5.4	.06	.37	230	160	4.2
16	.00	.00	.00	.00	.00	.00	4.9	.06	.50	235	160	4.2
17	.00	.00	.00	.00	.00	.00	5.2	.18	.55	231	147	4.2
18	.00	.00	.00	.00	.00	.00	5.3	.30	.60	176	144	4.0
19	.00	.00	.00	.00	.00	.00	6.4	.18	.73	165	144	4.0
20	.00	.00	.00	.00	.00	.00	6.0	.06	.74	155	157	4.0
21	.00	.00	.00	.00	.00	.00	5.8	.06	.73	146	165	4.0
22	.00	.00	.00	.00	.00	.00	5.4	.06	.76	143	169	3.8
23	.00	.00	.00	.00	.00	.00	5.8	.06	.42	142	189	3.8
24	.00	.00	.00	.00	.00	.00	5.5	.06	.60	151	205	2.0
25	.00	.00	.00	.00	.00	.00	5.7	.06	.56	157	230	.00
26	.00	.00	.00	.00	.00	.00	5.7	.06	.54	147	248	.00
27	.00	.00	.00	.00	.00	.00	5.6	.12	.52	82	236	.00
28	.00	.00	.00	.00	.00	.00	5.6	.12	.75	50	222	.00
29	.00	.00	.00	.00	---	.00	5.6	.06	.95	51	219	.00
30	.00	.00	.00	.00	---	.00	3.7	.04	104	25	158	.00
31	.00	---	.00	.00	---	.00	---	.05	---	37	4.8	---
TOTAL	.02	.03	.00	.00	.00	.00	120.10	3.38	546.44	4698	4807.8	99.20
MEAN	.001	.001	.000	.000	.000	.000	4.00	.11	18.2	152	155	3.31
MAX	.02	.03	.00	.00	.00	.00	6.4	.43	104	235	248	4.6
MIN	.00	.00	.00	.00	.00	.00	.00	.04	.10	25	4.8	.00
AC-FT	.04	.06	.00	.00	.00	.00	238	6.7	1080	9320	9540	197
CAL YR 1980	TOTAL	12407.38	MEAN 33.9	MAX 308	MIN .00	AC-FT 24610						
WTR YR 1981	TOTAL	10274.97	MEAN 28.2	MAX 248	MIN .00	AC-FT 20380						

KANSAS RIVER BASIN

293

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 (1.1 km) west of Palisade, and 1.5 mi (2.4 km) upstream from Stinking Water Creek.

DRAINAGE AREA.--1,110 mi² (2,870 km²), approximately, of which about 950 mi² (2,460 km²) 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 1965 to September 1972.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,743.49 ft (836.216 m) 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 (600 m) upstream at datum 4.0 ft (1.22 m) higher.

REMARKS.--Records good except those for winter period, 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.--33 years, 84.9 ft³/s (2.404 m³/s), 61,510 acre-ft/yr (75.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft³/s (157 m³/s) June 17, 1956, gage height, 8.79 ft (2.679 m), site and datum then in use; minimum daily, 11 ft³/s (0.31 m³/s) Sept. 11, 12, 14, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 379 ft³/s (10.7 m³/s) June 29, gage height, 5.87 ft (1.789 m); minimum daily, 15 ft³/s (0.42 m³/s) Oct. 2, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	24	24	24	17	28	26	33	30	86	66	92
2	15	25	20	27	16	28	25	31	29	142	79	66
3	16	24	21	26	16	27	24	30	28	140	77	55
4	17	24	25	29	18	28	24	31	27	125	78	51
5	18	24	28	28	22	36	25	29	27	126	92	45
6	18	23	24	29	25	32	25	28	26	126	109	41
7	18	23	23	28	23	34	25	28	27	125	121	37
8	17	24	19	27	21	32	25	30	28	131	118	35
9	17	24	20	26	20	29	24	30	26	140	124	32
10	16	24	22	25	19	27	24	27	25	152	153	29
11	16	23	27	25	20	27	26	27	27	161	163	26
12	16	23	23	26	22	27	27	27	25	168	174	27
13	18	23	21	28	25	27	27	31	23	171	187	25
14	18	24	22	27	27	25	27	31	22	179	177	25
15	17	23	20	27	30	26	26	30	21	186	164	25
16	16	24	23	23	32	27	26	30	19	189	166	24
17	15	25	22	22	30	28	27	33	19	194	169	24
18	17	25	20	23	28	26	27	39	18	235	163	23
19	16	23	18	21	27	27	31	42	18	185	157	23
20	16	22	18	20	28	27	43	40	17	171	157	22
21	16	22	19	20	29	27	48	37	17	161	160	22
22	17	24	23	23	29	28	67	36	17	154	170	21
23	17	21	21	27	28	29	48	35	16	152	173	21
24	18	21	20	32	27	28	43	34	16	148	184	21
25	19	19	24	31	27	27	40	33	37	152	190	22
26	21	23	27	31	27	27	39	33	51	215	205	22
27	26	22	30	30	28	27	38	53	52	189	217	20
28	27	23	30	28	28	44	36	57	58	149	216	20
29	26	24	26	27	---	37	35	41	156	104	206	20
30	25	25	26	25	---	32	34	34	90	95	205	20
31	23	---	25	18	---	29	---	32	---	86	176	---
TOTAL	569	698	711	803	689	903	962	1052	992	4737	4796	936
MEAN	18.4	23.3	22.9	25.9	24.6	29.1	32.1	33.9	33.1	153	155	31.2
MAX	27	25	30	32	32	44	67	57	156	235	217	92
MIN	15	19	18	18	16	25	24	27	16	86	66	20
AC-FT	1130	1380	1410	1590	1370	1790	1910	2090	1970	9400	9510	1860
CAL YR 1980	TOTAL	19574	MEAN 53.5	MAX 263	MIN 14	AC-FT	38830					
WTR YR 1981	TOTAL	17848	MEAN 48.9	MAX 235	MIN 15	AC-FT	35400					

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 (8 m) downstream from county bridge, 1.2 mi (1.9 km) upstream from mouth, and 1.8 mi (2.9 km) northwest of Palisade.

DRAINAGE AREA.--1,500 mi² (3,890 km²), approximately, of which about 380 mi² (980 km²) 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 (835.454 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--32 years, 40.8 ft³/s (1.155 m³/s), 29,560 acre-ft/yr (36.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,030 ft³/s (85.8 m³/s) June 17, 1956, gage height, 11.30 ft (3.444 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 6.0 ft³/s (0.17 m³/s) Aug. 4, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 5	1730	187 5.3	5.08 1.548
Aug. 7	0530	*200 5.7	5.20 1.585

Minimum daily discharge, 14 ft³/s (0.40 m³/s) Aug. 31 to Sept. 3, Sept. 12-19, 21, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	22	26	29	25	33	47	33	37	29	22	14
2	15	22	22	29	27	33	41	33	34	33	22	14
3	15	22	24	28	30	36	35	32	33	94	21	14
4	16	21	25	29	33	45	35	31	32	46	20	15
5	16	21	26	28	35	67	36	32	31	30	19	16
6	16	21	25	28	35	70	36	34	30	27	32	16
7	16	21	25	27	31	63	35	35	30	24	107	15
8	16	21	25	27	29	56	35	38	29	22	33	15
9	16	22	25	27	28	47	34	40	29	22	34	15
10	16	22	27	26	26	43	34	40	28	22	34	15
11	17	22	27	28	27	43	34	38	28	21	25	15
12	17	23	27	27	28	43	33	37	27	20	22	14
13	18	23	27	26	29	43	32	41	27	20	23	14
14	18	22	27	26	30	47	32	50	26	19	23	14
15	18	22	27	25	31	47	31	52	25	17	21	14
16	18	22	27	24	35	45	31	48	24	17	21	14
17	19	22	28	23	35	43	32	48	24	17	20	14
18	19	20	28	24	35	40	32	60	23	17	20	14
19	19	21	27	25	34	37	35	90	23	17	20	14
20	19	22	24	27	34	35	45	95	22	17	20	15
21	20	24	25	27	35	35	69	74	22	17	20	14
22	20	24	32	28	35	35	93	63	22	17	19	15
23	20	25	28	29	35	36	71	52	21	17	19	14
24	19	25	27	30	34	36	61	46	21	17	19	14
25	19	24	26	31	33	35	53	43	20	18	20	15
26	20	25	29	30	34	34	44	40	20	50	19	15
27	21	25	29	28	34	33	39	48	20	58	17	16
28	21	25	29	27	33	41	37	50	27	50	17	16
29	21	26	29	26	---	38	36	54	45	32	16	16
30	22	26	29	25	---	46	34	46	33	28	15	16
31	22	---	29	25	---	50	---	41	---	25	14	---
TOTAL	564	683	831	839	890	1335	1242	1464	813	860	754	442
MEAN	18.2	22.8	26.8	27.1	31.8	43.1	41.4	47.2	27.1	27.7	24.3	14.7
MAX	22	26	32	31	35	70	93	95	45	94	107	16
MIN	15	20	22	23	25	33	31	31	20	17	14	14
AC-FT	1120	1350	1650	1660	1770	2650	2460	2900	1610	1710	1500	877
CAL YR 1980	TOTAL	10849	MEAN 29.6	MAX 240	MIN 10	AC-FT 21520						
WTR YR 1981	TOTAL	10717	MEAN 29.4	MAX 107	MIN 14	AC-FT 21260						

KANSAS RIVER BASIN

295

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 19 ft (6 m) upstream from bridge on U.S. Highways 6 and 34, 2 mi (3 km) west of Culbertson, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--2,770 mi² (7,170 km²), approximately, of which about 1,470 mi² (3,810 km²) 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.

GAGE.--Water-stage recorder. Datum of gage is 2,583.44 ft (787.433 m) National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Nov. 2, 1950.

REMARKS.--Records good except those for winter period, 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 (84.2 km²).

AVERAGE DISCHARGE.--51 years, 104 ft³/s (2.945 m³/s), 75,350 acre-ft/yr (92.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s), estimated, May 31, 1935, gage height, 14.8 ft (4.51 m), from floodmarks, present site and datum; no flow Aug. 7, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 581 ft³/s (16.5 m³/s) July 18, gage height, 6.61 ft (2.015 m); minimum daily, 3.9 ft³/s (0.11 m³/s) July 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	50	59	71	45	78	44	30	33	32	30	67
2	32	49	56	71	35	78	41	29	29	21	27	84
3	33	49	47	71	38	73	39	27	28	47	24	61
4	35	47	57	71	42	82	36	27	27	71	21	58
5	36	47	65	71	50	93	35	27	27	30	20	55
6	33	47	63	70	60	105	35	27	26	18	18	52
7	33	49	62	68	65	106	34	29	26	14	38	47
8	34	51	58	68	60	100	32	29	26	12	41	48
9	34	50	54	69	50	94	32	30	26	11	21	51
10	33	49	54	69	40	89	31	29	25	9.6	27	49
11	36	51	58	60	40	84	31	27	25	8.2	28	46
12	36	51	68	67	45	84	31	29	26	8.2	20	43
13	34	51	66	69	50	83	30	29	25	6.6	18	42
14	35	49	65	70	60	85	29	29	25	7.0	18	42
15	36	53	65	70	80	87	29	32	24	5.5	14	42
16	37	53	66	65	96	85	29	31	24	4.8	13	41
17	37	54	66	57	95	82	28	33	25	3.9	16	43
18	41	52	66	50	91	77	27	39	25	350	18	44
19	41	52	63	53	87	75	32	48	25	97	18	44
20	39	52	58	57	86	76	39	59	22	40	16	45
21	39	53	52	62	84	75	48	57	21	39	15	44
22	41	56	59	67	82	75	102	49	19	30	17	44
23	42	56	75	72	80	73	78	42	18	29	20	45
24	42	56	70	75	80	58	58	36	15	24	17	44
25	44	57	58	74	80	52	48	33	13	26	19	44
26	44	56	66	73	79	46	41	32	14	45	14	45
27	44	57	78	71	79	43	36	33	11	99	19	44
28	43	57	75	68	78	41	34	45	11	119	18	44
29	45	58	73	68	---	54	32	49	107	67	19	45
30	46	59	73	60	---	47	31	44	70	45	16	43
31	47	---	72	52	---	47	---	38	---	34	14	---
TOTAL	1184	1571	1967	2059	1857	2327	1172	1098	818	1353.8	634	1446
MEAN	38.2	52.4	63.5	66.4	66.3	75.1	39.1	35.4	27.3	43.7	20.5	48.2
MAX	47	59	78	75	96	106	102	59	107	350	41	84
MIN	32	47	47	50	35	41	27	27	11	3.9	13	41
AC-FT	2350	3120	3900	4080	3680	4620	2320	2180	1620	2690	1260	2870
CAL YR 1980	TOTAL	17845.31	MEAN	48.8	MAX	213	MIN	.00	AC-FT	35400		
WTR YR 1981	TOTAL	17486.80	MEAN	47.9	MAX	350	MIN	3.9	AC-FT	34690		

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)					
OCT											
16...	1340	37	620	8.1	14.0	--					
NOV											
13...	1530	45	660	7.9	10.0	11.2					
DEC											
10...	1410	60	540	7.7	3.0	12.7					
MAR											
09...	1520	78	550	8.5	6.0	12.5					
JUL											
01...	1330	2.0	440	8.9	25.0	7.3					
AUG											
20...	1130	22	670	8.2	21.0	9.8					
SEP											
16...	0915	43	500	8.0	13.0	9.4					

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- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAR											
09...	1520	50	220	18	61	16	23	.7	14	200	62
AUG											
20...	1130	0	260	.00	67	22	33	1.0	20	260	67

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											
09...	9.2	.8	44	360	.49	75.8	2.1	.090	70	60	10
AUG											
20...	9.3	1.0	56	449	.61	26.7	3.8	.060	140	33	33

KANSAS RIVER BASIN

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 (152 m) upstream from bridge on U.S. Highways 6 and 34, 0.2 mi (0.3 km) north of Burlington Northern Inc. bridge, 1 mi (2 km) east of Culbertson, and 1.8 mi (2.9 km) upstream from mouth.

DRAINAGE AREA.--320 mi² (830 km²), approximately, of which about 270 mi² (700 km²) 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 (778.840 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1967, at site 0.2 mi (0.3 km) downstream at present datum and Oct. 1, 1967, to Aug. 28, 1968, at site 0.8 mi (1.3 km) downstream at datum 8.96 ft (2.731 m) lower.

REMARKS.--Records good. Natural flow affected by irrigation development above station, return flow from irrigated areas, and waste from Culbertson Canal.

AVERAGE DISCHARGE.--35 years, 6.31 ft³/s (0.179 m³/s), 4,570 acre-ft/yr (5.63 hm³/yr); median of yearly mean discharges, 5.5 ft³/s (0.156 m³/s), 4,000 acre-ft/yr (4.93 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) June 17, 1955, gage height, 14.64 ft (4.462 m), 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 (7.32 m), at site 0.2 mi (0.3 km) downstream, at present datum, from floodmarks, discharge, about 5,300 ft³/s (150 m³/s), from information by Nebraska Department of Roads.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 22	1315	200 5.7	5.26 1.603
July 18	0930	*465 13.2	8.39 2.557

Minimum daily discharge, 0.61 ft³/s (0.017 m³/s) Mar. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	1.0	.88	1.1	.86	.79	11	14	2.3	4.1	12	18
2	.64	.94	.86	1.1	.80	.79	8.2	4.0	2.4	3.6	12	13
3	.61	.90	.86	1.3	.74	.79	4.3	3.7	2.4	2.8	15	5.2
4	.64	.93	.99	1.1	.73	1.1	2.8	3.9	2.3	4.3	10	1.8
5	.66	.95	1.0	1.0	.73	.85	3.8	4.7	2.3	3.2	7.0	1.4
6	.61	.94	1.0	1.2	.79	.73	2.7	4.2	2.3	2.8	7.1	1.3
7	.67	.94	1.0	1.1	.86	.73	9.4	4.3	2.3	5.0	6.2	1.2
8	.69	.98	1.0	1.1	.86	.67	4.3	4.5	2.4	3.5	9.5	1.2
9	.63	.94	1.1	1.1	.86	.67	3.6	5.6	2.6	1.5	9.6	1.2
10	.74	.94	.98	1.1	.86	.67	2.6	7.3	2.6	1.9	7.6	1.0
11	.81	.99	1.1	1.1	.84	.67	2.1	5.9	2.7	1.1	8.3	1.0
12	.86	1.0	1.2	1.1	.79	.61	1.6	3.9	2.6	1.5	7.1	.95
13	.86	1.0	1.1	.99	.82	.61	4.2	3.0	2.1	3.1	8.5	.95
14	.76	1.0	1.2	1.0	.99	.67	5.6	2.8	2.0	4.3	9.5	.90
15	.79	1.0	1.3	1.0	.96	.73	7.0	2.5	2.0	3.2	7.3	.85
16	.82	1.0	1.2	1.0	.89	.73	9.2	2.4	1.9	3.2	8.7	.80
17	.89	1.0	1.3	.96	.86	.69	8.5	6.1	1.7	3.6	17	.85
18	.86	.99	1.3	.94	.86	.67	5.9	9.5	1.6	198	15	.85
19	.93	1.0	1.2	.94	.86	.70	6.6	6.9	1.7	17	11	.85
20	.76	1.0	1.2	.94	.86	.73	25	3.3	1.7	14	8.6	.85
21	.74	1.0	1.3	.90	.89	.80	16	3.2	2.2	11	13	.80
22	.79	1.0	1.3	.86	.83	.84	105	3.0	2.0	11	10	.85
23	.85	1.0	1.4	.88	.83	.72	17	4.1	1.8	9.8	11	.85
24	.98	1.0	1.2	.94	.86	.67	7.4	3.7	1.8	6.3	7.2	.80
25	1.1	1.0	1.2	1.0	.86	.72	4.4	3.1	1.8	8.8	5.8	.85
26	.86	.95	1.5	1.0	.86	.73	10	2.9	2.4	68	6.2	.75
27	1.0	.88	1.5	1.1	.86	.76	13	2.8	4.4	37	9.1	.75
28	1.1	.95	1.4	.94	.80	.86	14	2.7	4.7	31	7.9	.85
29	1.1	.94	1.2	.89	---	.86	12	2.5	7.2	11	7.8	.85
30	1.1	.94	1.3	.86	---	.77	10	2.5	13	8.0	7.8	.80
31	1.0	---	1.2	.86	---	2.3	---	2.4	---	9.0	14	---
TOTAL	25.46	29.10	36.27	31.40	23.61	24.63	337.2	135.4	85.2	492.6	296.8	62.30
MEAN	.82	.97	1.17	1.01	.84	.79	11.2	4.37	2.84	15.9	9.57	2.08
MAX	1.1	1.0	1.5	1.3	.99	2.3	105	14	13	198	17	18
MIN	.61	.88	.86	.86	.73	.61	1.6	2.4	1.6	1.1	5.8	.75
AC-FT	50	58	72	62	47	49	669	269	169	977	589	124

CAL YR 1980	TOTAL	978.99	MEAN 2.67	MAX 156	MIN .61	AC-FT 1940
WTR YR 1981	TOTAL	1579.97	MEAN 4.33	MAX 198	MIN .61	AC-FT 3130

06836500 DRIFTWOOD CREEK NEAR MCCOOK, NE

LOCATION.--Lat 40°08'50", long 100°39'55", in SW1/4SW1/4 sec. 12, T.2 N., R.30 W., Red Willow County, Hydrologic Unit 10250004, on right bank 50 ft (15 m) downstream from privately owned bridge, 600 ft (183 m) downstream from siphon and wasteway on Neeker-Driftwood Canal, 4.5 mi (7.2 km) southwest of McCook, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--360 mi² (930 km²), approximately, of which about 350 mi² (910 km²) contributes directly to surface runoff.

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

REVISÉD RECORDS.--WSP 1210: 1950.

GAGE.--Water-stage recorder. Datum of gage is 2,493.78 ft (760.104 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1962, at site 0.2 mi (0.3 km) downstream in old channel at present datum, and Oct. 12, 1962, to Apr. 11, 1963, at site 0.5 mi (0.8 km) downstream at datum 3.75 ft (1.143 m) lower.

REMARKS.--Records good prior to June 18 and poor thereafter. Natural flow affected by waste from Meeker-Driftwood Canal and by irrigation development above station.

AVERAGE DISCHARGE.--35 years, 10.4 ft³/s (0.295 m³/s), 7,530 acre-ft/yr (9.28 hm³/yr); median of yearly mean discharges, 8.1 ft³/s (0.229 m³/s), 5,900 acre-ft/yr (7.27 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,740 ft³/s (134 m³/s) Aug. 7, 1950, gage height, 25.43 ft (7.751 m), at site then in use, from floodmark, from rating curve extended above 3,000 ft³/s (85.0 m³/s); no flow at times in 1946-50, 1952-56.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 140 ft³/s (3.96 m³/s) July 26, gage height, 12.59 ft (3.837 m), backwater from downstream crossing, no peak above base of 300 ft³/s (8.50 m³/s); minimum daily, 2.6 ft³/s (0.074 m³/s) Oct. 5, 9-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	4.1	5.0	4.7	4.3	4.3	3.6	5.2	11	17	8.9	7.1
2	3.4	4.2	4.5	4.5	3.8	4.2	3.6	4.8	8.5	17	8.9	11
3	3.4	4.1	4.6	4.5	3.8	4.1	4.1	4.7	7.7	30	8.6	11
4	3.4	3.8	4.7	4.5	4.1	6.1	4.3	4.9	7.2	11	7.4	11
5	2.6	3.8	5.0	4.5	4.2	6.1	4.1	5.0	7.1	8.6	7.2	11
6	3.2	4.2	6.0	4.5	4.3	4.8	4.3	4.9	7.0	8.9	8.2	12
7	3.2	4.2	6.5	4.0	4.3	4.7	4.1	5.2	6.9	8.6	13	11
8	2.8	3.8	6.1	3.9	4.3	4.7	4.5	5.5	6.8	6.6	12	10
9	2.6	3.7	5.5	3.8	4.7	4.7	4.0	6.5	6.5	3.8	9.6	9.5
10	2.6	3.8	5.4	3.8	4.3	4.6	3.8	7.9	5.6	4.3	13	8.5
11	3.5	3.7	5.7	4.1	4.4	4.5	3.8	6.1	5.1	4.8	11	8.0
12	3.5	3.8	6.1	4.0	4.0	4.5	4.3	5.9	5.0	5.2	11	7.5
13	3.6	4.1	6.0	4.1	3.8	4.5	4.3	6.1	4.8	4.3	11	7.0
14	3.7	4.1	5.7	4.1	3.8	4.4	3.5	6.6	5.0	15	13	6.0
15	3.6	4.1	5.6	4.1	3.8	4.3	3.2	6.1	5.7	11	14	6.0
16	3.3	4.1	5.2	4.1	3.7	4.3	3.6	6.2	5.9	11	16	5.5
17	3.5	4.1	5.2	3.7	3.6	4.3	3.7	8.7	5.7	13	17	5.5
18	3.6	4.3	5.1	4.4	3.8	4.1	3.8	15	6.9	45	12	5.5
19	3.4	4.3	4.5	4.3	3.8	3.8	10	16	7.0	33	11	5.0
20	3.8	4.3	4.5	4.3	3.8	3.9	17	36	7.5	20	10	5.0
21	3.7	4.3	4.4	4.0	4.1	4.1	8.5	30	10	19	9.9	5.0
22	3.6	4.4	4.5	4.1	3.9	4.3	15	16	12	13	11	5.0
23	3.7	4.7	4.6	3.8	3.8	4.3	9.2	9.3	16	10	12	4.8
24	3.8	5.1	4.6	3.8	3.8	4.3	7.1	7.5	16	9.4	11	4.8
25	3.9	5.5	4.6	3.9	3.8	4.3	6.5	7.1	13	11	10	4.8
26	4.1	5.6	5.0	4.1	4.1	4.3	5.8	6.2	12	70	10	4.8
27	4.4	6.7	4.9	4.2	4.3	4.2	5.4	6.8	11	40	9.5	4.6
28	4.5	6.2	4.7	4.2	4.5	4.0	5.4	10	11	30	9.0	4.6
29	4.5	5.4	4.7	4.1	---	4.3	5.3	10	13	15	8.0	4.6
30	4.5	5.6	4.7	4.1	---	4.3	5.2	7.8	19	13	7.5	4.6
31	4.3	---	4.7	4.2	---	4.5	---	11	---	11	7.5	---
TOTAL	111.1	134.1	158.3	128.4	112.9	137.8	171.0	289.0	265.9	519.5	328.2	210.7
MEAN	3.58	4.47	5.11	4.14	4.03	4.45	5.70	9.32	8.86	16.8	10.6	7.02
MAX	4.5	6.7	6.5	4.7	4.7	6.1	17	36	19	70	17	12
MIN	2.6	3.7	4.4	3.7	3.6	3.8	3.2	4.7	4.8	3.8	7.2	4.6
AC-FT	220	266	314	255	224	273	339	573	527	1030	651	418
CAL YR 1980	TOTAL	2392.1		MEAN 6.54	MAX 128	MIN 2.3	AC-FT 4740					
WTR YR 1981	TOTAL	2566.9		MEAN 7.03	MAX 70	MIN 2.6	AC-FT 5090					

KANSAS RIVER BASIN

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 (8 m) downstream from bridge on U.S. Highway 83 at south edge of McCook, 2.5 mi (4.0 km) downstream from Driftwood Creek, and 10.5 mi (16.9 km) upstream from Red Willow Creek.

DRAINAGE AREA.--12,310 mi² (31,900 km²), approximately, of which about 6,260 mi² (16,200 km²) 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 (748.702 m) National Geodetic Vertical Datum of 1929. October 1930 to June 1932, nonrecording gage on former highway bridge 325 ft (99.1 m) upstream at different datum and October 1954 to Mar. 13, 1959, on highway bridge 25 ft (7.6 m) upstream at present datum.

REMARKS.--Records good except those for winter period, which are 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.--28 years, 184 ft³/s (5.211 m³/s), 133,300 acre-ft/yr (0.164 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,890 ft³/s (167 m³/s) Mar. 21, 1960, gage height, 9.14 ft (2.786 m); 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 (6,940 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,170 ft³/s (61.5 m³/s) July 19, gage height, 7.72 ft (2.353 m); minimum daily, 35 ft³/s (0.99 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	60	71	89	65	92	83	82	92	204	130	66
2	37	61	70	90	56	93	93	77	82	158	120	112
3	39	61	70	88	58	90	80	69	78	132	122	101
4	40	61	85	90	62	110	79	72	76	171	110	94
5	42	63	99	92	62	117	74	69	78	146	104	91
6	42	64	98	94	65	120	70	66	76	113	93	85
7	39	65	87	95	75	131	73	74	77	97	88	84
8	39	65	87	94	75	123	71	83	78	88	104	78
9	39	66	81	92	80	120	66	94	72	95	95	76
10	39	66	80	98	68	117	64	103	69	124	91	74
11	43	65	85	94	52	110	61	88	66	141	91	66
12	46	68	90	93	60	109	60	84	67	160	81	62
13	46	72	93	94	66	110	60	88	67	163	84	63
14	45	74	88	95	80	110	60	84	63	175	88	61
15	48	72	85	97	95	111	59	81	64	182	81	60
16	49	74	83	96	100	112	60	83	63	170	79	60
17	50	74	83	80	100	110	58	107	59	172	93	59
18	50	70	84	75	110	107	54	178	58	743	97	59
19	52	68	85	78	115	100	93	177	60	1140	86	174
20	54	73	82	82	107	104	162	167	140	240	81	86
21	52	74	77	90	100	109	132	168	150	190	77	67
22	55	74	75	100	95	112	272	136	156	203	74	63
23	54	73	80	105	93	112	219	114	135	175	86	60
24	57	74	80	111	92	102	144	102	96	141	81	58
25	57	80	65	105	93	92	123	97	84	154	68	57
26	60	90	80	102	93	83	109	96	78	311	62	59
27	63	79	90	97	94	78	104	102	113	301	63	61
28	60	76	94	93	92	78	99	105	176	304	68	60
29	57	75	93	90	---	87	90	117	207	210	62	57
30	59	72	90	70	---	92	85	104	285	151	64	53
31	60	---	89	70	---	83	---	93	---	130	66	---
TOTAL	1508	2109	2599	2839	2303	3224	2857	3160	2965	6884	2689	2206
MEAN	48.6	70.3	83.8	91.6	82.3	104	95.2	102	98.8	222	86.7	73.5
MAX	63	90	99	111	115	131	272	178	285	1140	130	174
MIN	35	60	65	70	52	78	54	66	58	88	62	53
AC-FT	2990	4180	5160	5630	4570	6390	5670	6270	5880	13650	5330	4380

CAL YR 1980 TOTAL 33379 MEAN 91.2 MAX 1010 MIN 32 AC-FT 66210
WTR YR 1981 TOTAL 35343 MEAN 96.8 MAX 1140 MIN 35 AC-FT 70100

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.

REMARKS.--Because of travel restrictions, the weekly recorder chart was not changed several times during the year resulting in the loss of 92 days of record.

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.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.5	14.0	---	---	---	---	---	---	---	---	---	---
2	20.5	11.0	---	---	3.5	.5	---	---	---	---	10.5	7.0
3	21.0	8.0	---	---	.5	.0	---	---	---	---	8.0	6.5
4	23.5	10.0	12.0	6.0	1.0	.5	---	---	---	---	6.5	4.0
5	20.0	12.0	15.0	6.0	5.0	.0	2.0	1.0	---	---	9.5	1.5
6	23.5	11.5	15.0	7.0	3.0	.5	3.0	1.0	---	---	9.0	4.0
7	24.0	11.0	15.5	8.5	.5	.0	3.0	.5	---	---	6.0	1.5
8	24.0	11.5	15.5	8.5	.5	.0	3.0	1.0	---	---	8.0	1.5
9	23.5	11.0	13.5	6.5	.5	.0	1.0	.5	---	---	9.0	2.0
10	20.0	10.0	11.5	6.0	1.0	.0	2.0	1.0	---	---	10.0	3.5
11	18.5	7.0	9.0	6.5	1.0	.5	1.5	1.0	---	---	11.5	4.0
12	19.0	8.5	9.5	5.5	4.0	.5	1.5	1.0	---	---	12.0	5.0
13	20.5	11.0	8.5	5.0	4.0	.5	3.0	.5	---	---	13.0	6.0
14	20.0	10.0	5.5	4.0	4.5	1.0	4.0	1.0	---	---	13.0	6.0
15	21.5	12.0	6.0	3.5	6.5	1.0	3.0	1.0	---	---	14.0	6.5
16	18.5	12.0	5.0	1.5	8.0	3.5	1.5	1.0	---	---	14.5	6.0
17	16.0	6.5	5.5	1.5	8.5	3.0	1.0	1.0	---	---	13.5	8.0
18	15.5	7.0	4.5	.5	5.5	3.0	1.5	1.0	---	---	11.0	5.0
19	18.0	8.0	5.0	.5	3.0	1.0	1.5	1.0	---	---	12.0	4.5
20	18.5	8.5	5.5	.5	1.0	1.0	3.0	1.5	---	---	9.5	6.0
21	18.0	8.0	6.0	.5	1.5	1.0	1.5	1.0	---	---	8.0	4.0
22	16.5	7.0	6.0	.5	2.0	1.0	1.0	1.0	---	---	10.0	4.0
23	10.5	6.0	6.0	3.0	1.0	.5	5.0	1.0	---	---	13.0	5.5
24	11.5	3.0	4.5	2.0	1.0	.5	5.5	1.5	---	---	11.5	8.0
25	11.0	4.0	5.0	.5	1.0	.5	6.5	3.0	---	---	15.5	7.0
26	---	---	4.5	.5	1.0	.5	5.0	1.5	---	---	18.0	9.0
27	---	---	4.0	.5	5.0	1.0	3.5	1.0	---	---	18.5	10.5
28	---	---	---	---	---	---	1.0	.5	---	---	---	---
29	---	---	---	---	---	---	1.5	1.0	---	---	---	---
30	---	---	---	---	---	---	1.0	1.0	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	13.5	10.0
MONTH	24.0	3.0	15.5	.5	8.5	.0	6.5	.5	---	---	18.5	1.5

KANSAS RIVER BASIN

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06837000 REPUBLICAN RIVER AT MC COOK, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	6.5	---	---	29.5	21.0	26.0	23.5	34.0	29.0	29.5	23.0
2	19.0	9.0	---	---	30.5	20.0	26.5	24.0	31.0	28.0	28.5	22.0
3	18.5	11.0	---	---	28.5	19.0	25.5	23.0	33.0	27.0	28.0	24.0
4	15.0	8.5	19.5	13.0	31.0	19.0	29.0	23.0	33.5	28.5	25.5	21.0
5	16.5	7.0	25.0	12.0	30.0	20.5	30.5	24.0	33.0	28.0	30.0	22.0
6	20.5	8.5	18.5	13.5	30.0	20.5	30.5	24.0	32.0	28.5	30.0	25.0
7	20.5	10.5	13.5	11.5	31.5	21.0	30.5	23.5	30.5	26.5	29.5	24.0
8	17.0	10.0	22.0	11.0	31.0	22.0	31.0	24.0	30.5	24.5	29.5	23.0
9	21.0	9.5	17.0	11.5	31.5	23.0	34.0	21.0	29.5	26.0	30.0	22.0
10	24.5	12.0	21.0	8.5	29.5	21.5	34.0	24.5	29.0	24.5	31.0	23.0
11	---	---	21.5	11.5	28.0	20.0	36.5	24.5	30.5	24.5	30.0	24.5
12	---	---	24.5	13.0	30.5	23.0	34.5	27.0	30.0	25.0	30.5	23.0
13	---	---	19.0	12.0	33.5	22.0	32.0	26.0	31.0	26.0	31.5	23.5
14	---	---	23.5	9.5	28.5	21.5	33.0	33.0	33.0	26.5	29.5	24.0
15	19.0	13.0	21.5	13.0	24.0	18.5	33.5	28.0	31.5	28.0	28.0	23.0
16	24.5	10.5	18.0	14.0	27.0	16.0	32.0	29.0	30.0	27.0	25.5	20.5
17	25.5	13.0	14.5	14.0	29.5	18.0	30.0	26.5	29.0	25.5	24.5	18.5
18	19.5	14.0	14.0	11.5	23.0	18.5	27.0	25.5	30.0	24.5	25.5	18.5
19	16.5	15.0	20.5	10.0	29.0	17.0	27.0	26.0	31.0	25.0	27.0	21.0
20	15.0	12.0	19.0	12.5	---	---	27.0	26.0	31.5	25.5	---	---
21	21.0	11.5	19.5	13.0	---	---	26.5	25.5	31.5	25.5	---	---
22	19.0	15.0	25.0	14.5	---	---	25.5	24.5	30.0	26.0	---	---
23	20.5	12.0	23.5	16.5	---	---	26.0	24.5	31.0	24.5	---	---
24	24.0	14.0	26.0	15.0	---	---	26.0	25.0	31.0	26.0	---	---
25	26.5	15.5	28.5	18.0	---	---	---	---	32.0	25.5	---	---
26	---	---	24.5	19.5	---	---	---	---	31.0	26.5	---	---
27	---	---	22.0	19.0	---	---	---	---	29.5	25.0	---	---
28	---	---	27.0	18.5	---	---	---	---	30.5	24.0	---	---
29	---	---	25.0	19.5	---	---	---	---	32.0	24.5	---	---
30	---	---	28.5	17.0	26.5	24.0	31.0	28.0	34.0	27.0	---	---
31	---	---	---	---	---	---	33.0	27.0	31.5	26.5	---	---
MONTH	26.5	6.5	28.5	8.5	33.5	16.0	36.5	21.0	34.0	24.0	31.5	18.5

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 (305 m) above county road bridge, 7.2 mi (11.6 km) upstream from Red Willow Dam, and 12 mi (19 km) northeast of Culbertson.

DRAINAGE AREA.--600 mi² (1,550 km²), approximately, of which about 200 mi² (520 km²) 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 (790.895 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 23, 1961, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by pump irrigation development above station.

AVERAGE DISCHARGE.--21 years, 28.4 ft³/s (0.804 m³/s), 20,580 acre-ft/yr (25.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft³/s (114 m³/s) June 16, 1972, gage height, 13.27 ft (4.045 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s) on basis of slope-conveyance study; minimum daily, 4.0 ft³/s (0.11 m³/s) July 4, 5, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 22	0515	230 6.5	2.80 0.853	Aug. 9	0315	159 4.5	2.39 0.728
Aug. 6	1245	*255 7.2	3.01 0.917				

Minimum daily discharge, 5.4 ft³/s (0.15 m³/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	19	20	23	15	26	36	25	31	34	64	20
2	10	19	15	24	11	26	32	23	28	36	43	21
3	10	19	22	23	11	25	29	23	26	58	31	25
4	11	19	25	21	12	31	28	23	25	30	24	20
5	11	18	22	20	12	38	28	23	26	22	20	17
6	12	18	21	19	14	53	28	25	25	19	130	16
7	12	18	20	19	16	61	28	29	22	15	75	16
8	12	18	18	20	16	55	28	31	21	12	140	16
9	11	18	16	20	14	44	28	38	20	12	149	17
10	10	18	16	17	12	40	26	35	19	12	132	16
11	11	18	18	18	10	38	26	34	18	12	148	15
12	11	18	19	19	12	40	25	33	16	12	101	15
13	12	18	20	20	14	42	24	32	17	10	88	15
14	12	18	21	22	17	41	24	34	16	10	82	14
15	13	18	22	21	17	37	23	36	16	9.5	57	13
16	13	19	22	20	20	33	23	36	15	9.5	47	13
17	14	20	22	15	24	31	23	41	15	7.0	38	13
18	15	19	23	17	26	29	23	56	14	7.3	30	13
19	15	18	23	22	29	27	24	73	15	11	27	13
20	15	19	17	20	28	26	32	88	15	11	28	13
21	16	20	13	17	28	25	49	67	15	12	29	13
22	16	20	14	18	27	26	107	65	15	9.5	25	13
23	15	19	18	20	27	29	75	44	15	8.3	22	13
24	16	20	17	22	27	30	67	36	15	5.4	21	12
25	16	20	12	22	27	30	46	34	15	9.2	23	13
26	16	19	15	22	27	30	37	31	15	43	20	13
27	17	19	21	21	26	29	32	33	15	74	19	13
28	17	20	24	21	26	28	29	32	14	59	18	14
29	18	20	23	21	---	30	27	34	28	53	19	14
30	18	20	23	16	---	36	26	34	34	54	19	14
31	18	---	23	16	---	38	---	33	---	59	19	---
TOTAL	424	566	605	616	545	1074	1033	1181	581	735.7	1688	453
MEAN	13.7	18.9	19.5	19.9	19.5	34.6	34.4	38.1	19.4	23.7	54.5	15.1
MAX	18	20	25	24	29	61	107	88	34	74	149	25
MIN	10	18	12	15	10	25	23	23	14	5.4	18	12
AC-FT	841	1120	1200	1220	1080	2130	2050	2340	1150	1460	3350	899

CAL YR 1980 TOTAL 7926.4 MEAN 21.7 MAX 112 MIN 4.9 AC-FT 15720
WTR YR 1981 TOTAL 9501.7 MEAN 26.0 MAX 149 MIN 5.4 AC-FT 18850

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 (19 km) north of McCook.

DRAINAGE AREA.--730 mi² (1,890 km²), approximately, of which about 310 mi² (800 km²) 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 (38.8 hm³) between elevations 2,522.0 ft (769 m), sill of outlet works, and 2,581.8 ft (787 m), top of irrigation pool. Top of flood-control pool and crest of main spillway at elevation 2,604.9 ft (794 m), capacity, 86,360 acre-ft (0.106 km³). Top of superstorage flood-control pool at elevation 2,627.8 ft (801 m), capacity, 162,600 acre-ft (0.200 km³). Dead storage, 6,310 acre-ft (7.78 hm³). 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 (51.4 hm³) July 15, 16, 1967, elevation, 2,584.14 ft (787.646 m); minimum since operation of reservoir began, 16,930 acre-ft (20.9 hm³) Sept. 8, 1978, elevation, 2,565.31 ft (781.906 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,040 acre-ft (35.8 hm³) June 9, 10, elevation, 2,575.94 ft (785.147 m); minimum, 19,970 acre-ft (24.6 hm³) Oct. 2, 3, elevation, 2,568.31 ft (782.821 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

2,565	16,630	2,575	27,800
2,570	21,800	2,580	34,910

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19980	20380	21200	21980	22960	23970	25640	27350	28970	28060	26220	26380
2	19970	20420	21180	22010	22980	23970	25690	27360	28990	28050	26260	26260
3	19980	20460	21210	22040	22990	24040	25720	27390	28990	28020	26260	26180
4	19980	20480	21260	22070	22990	24230	25740	27420	28990	28010	26220	26110
5	19990	20500	21290	22100	23010	24270	25760	27430	29000	28000	26220	26060
6	20010	20530	21310	22140	23050	24380	25800	27450	29000	27930	26730	26060
7	20010	20550	21350	22160	23090	24510	25840	27520	29010	27840	26850	26010
8	20020	20560	21360	22180	23100	24620	25850	27570	29030	27720	26970	25970
9	20020	20570	21380	22230	23120	24680	25860	27630	29040	27610	27190	25910
10	20020	20600	21400	22250	23150	24690	25870	27710	28990	27510	27330	25850
11	20020	20630	21440	22280	23190	24750	25900	27760	29000	27450	27530	25790
12	20030	20660	21470	22320	23220	24770	25920	27810	28990	27330	27610	25760
13	20040	20710	21500	22340	23240	24830	25950	27870	28990	27110	27770	25720
14	20040	20720	21540	22370	23300	24910	25970	27930	28950	26910	27870	25670
15	20060	20760	21560	22410	23350	24990	26000	28000	28910	26710	27890	25650
16	20090	20780	21580	22430	23410	25010	26010	28050	28870	26480	27980	25600
17	20100	20800	21620	22460	23480	25050	26020	28120	28860	26330	28000	25560
18	20110	20820	21660	22500	23530	25050	26050	28240	28830	26520	27980	25550
19	20130	20840	21670	22540	23580	25060	26210	28310	28820	26430	27930	25550
20	20150	20880	21670	22550	23640	25090	26270	28430	28790	26380	27840	25550
21	20170	20890	21680	22570	23680	25160	26530	28590	28790	26310	27670	25550
22	20190	20950	21680	22630	23710	25170	26970	28680	28780	26230	27560	25540
23	20200	20950	21710	22670	23740	25230	27070	28720	28720	26170	27440	25500
24	20200	20980	21730	22750	23780	25280	27170	28750	28660	26030	27300	25500
25	20220	21020	21770	22790	23810	25330	27240	28780	28580	26000	27190	25510
26	20230	21060	21800	22790	23860	25350	27280	28820	28470	25950	27050	25510
27	20280	21060	21820	22790	23900	25390	27300	28900	28430	26020	26950	25510
28	20280	21100	21860	22820	23920	25460	27330	28910	28340	26060	26830	25480
29	20310	21130	21890	22830	---	25500	27340	28920	28260	26080	26720	25490
30	20330	21150	21920	22860	---	25550	27350	28940	28170	26120	26640	25510
31	20350	---	21950	22960	---	25600	---	28960	---	26160	26510	---
MAX	20350	21150	21950	22960	23920	25600	27350	28960	29040	28060	28000	26380
MIN	19970	20380	21180	21980	22960	23970	25640	27350	28170	25950	26220	25480
Δ	2568.67	2569.41	2570.13	2571.03	2571.85	2573.25	2574.65	2575.88	2575.28	2573.70	2573.98	2573.18
#	+370	+800	+800	+1010	+960	+1680	+1750	+1610	-790	-2010	+350	-1000
CAI YR 1980	MAX	32570	MIN	19750	-3230							
WTR YR 1981	MAX	29040	MIN	19970	+5530							

Δ 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 (14 m) downstream from bridge on U.S. Highway 83, 3 mi (5 km) downstream from Red Willow Dam and 10 mi (16 km) north of McCook.

DRAINAGE AREA.--740 mi² (1,920 km²), approximately, of which about 320 mi² (830 km²) 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 (757.724 m) National Geodetic Vertical Datum of 1929. October 1940 to September 1947, water-stage recorder at site 45 ft (13.7 m) upstream at datum 9.55 ft (2.911 m) 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 (13.7 m) upstream, present datum.

REMARKS.--Records fair. Natural flow affected by irrigation development above station and, since Sept. 5, 1961, by storage in Hugh Butler Lake (station 06837390).

AVERAGE DISCHARGE.--28 years, 24.4 ft³/s (0.691 m³/s), 17,680 acre-ft/yr (21.8 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) June 22, 1947, gage height, 31.95 ft (9.738 m), present datum, from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 0.60 ft³/s (0.017 m³/s) Sept. 22, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1935, reached a stage of 33.45 ft (10.196 m), from floodmarks, discharge, 45,000 ft³/s (1,270 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 111 ft³/s (3.14 m³/s) July 14, 15, gage height, 9.43 ft (2.874 m); minimum daily, 2.5 ft³/s (0.071 m³/s) May 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.5	3.7	3.7	3.9	4.0	3.9	4.0	2.9	62	22	63
2	3.9	3.5	3.7	3.9	4.0	4.0	4.0	4.0	3.0	67	23	51
3	3.9	3.6	3.7	3.9	4.2	4.0	4.0	4.0	3.0	46	23	33
4	3.9	3.7	3.5	3.9	3.9	4.7	4.0	3.9	3.0	28	23	33
5	3.9	3.8	3.1	3.9	3.9	4.7	3.9	3.9	3.2	28	23	32
6	3.9	3.8	3.1	3.7	4.0	4.2	4.0	3.9	3.2	28	32	31
7	3.9	3.8	3.0	3.7	4.0	4.4	4.2	3.9	3.2	36	25	31
8	3.7	3.6	2.8	3.5	4.0	4.2	4.1	3.9	3.4	45	24	31
9	3.7	3.8	2.9	3.5	4.0	4.4	4.1	3.9	3.4	45	24	32
10	3.7	3.5	2.8	3.5	4.0	4.4	3.8	3.9	3.4	45	24	31
11	3.6	3.5	2.8	3.5	3.9	4.4	3.8	3.9	3.9	45	24	27
12	3.6	3.8	3.1	3.5	3.9	4.3	3.9	3.9	3.9	53	24	24
13	3.5	3.7	3.4	3.5	3.7	4.4	3.9	3.9	3.9	87	24	24
14	3.7	3.7	3.3	3.5	3.7	4.3	3.8	3.9	3.9	110	24	22
15	3.7	3.7	3.8	3.5	3.9	4.3	3.7	3.7	3.9	107	24	19
16	3.7	3.7	3.9	3.5	3.7	4.3	3.6	3.3	3.9	103	24	17
17	3.8	3.7	3.9	3.5	3.9	4.1	3.7	3.9	3.9	85	23	11
18	3.9	3.5	3.9	3.5	3.7	3.4	3.7	4.0	3.9	61	33	4.2
19	3.9	3.6	3.9	3.7	3.7	3.4	4.4	3.7	3.9	36	44	3.8
20	3.9	3.5	3.9	3.7	3.7	3.5	4.3	3.5	3.9	48	80	3.7
21	3.5	3.5	4.0	3.7	3.9	4.0	4.0	3.6	3.9	33	82	3.6
22	3.5	3.6	4.0	3.9	4.0	3.9	4.0	3.4	3.9	29	84	3.5
23	3.4	3.7	4.2	3.7	3.9	4.2	4.0	3.3	14	35	87	3.5
24	3.5	3.5	3.7	3.7	3.9	4.6	4.0	3.0	41	53	79	3.6
25	3.9	3.5	4.2	3.7	3.9	4.5	4.0	2.5	34	55	71	3.6
26	3.7	3.5	3.7	3.5	3.9	4.6	4.0	3.4	46	55	67	3.3
27	3.8	3.5	3.9	3.7	3.9	4.4	4.0	3.4	46	41	65	3.4
28	3.7	3.7	3.9	3.7	3.9	4.6	4.0	3.3	49	22	66	3.4
29	3.5	3.7	3.9	3.5	---	4.6	4.0	2.9	62	23	65	3.4
30	3.5	3.8	3.7	3.5	---	4.0	4.0	2.9	60	23	65	3.3
31	3.6	---	3.7	3.7	---	4.0	---	2.9	---	23	65	---
TOTAL	115.2	109.0	111.1	112.9	109.0	130.8	118.8	111.6	430.5	1557	1363	558.3
MEAN	3.72	3.63	3.58	3.64	3.89	4.22	3.96	3.60	14.4	50.2	44.0	18.6
MAX	3.9	3.8	4.2	3.9	4.2	4.7	4.4	4.0	62	110	87	63
MIN	3.4	3.5	2.8	3.5	3.7	3.4	3.6	2.5	2.9	22	22	3.3
AC-FT	228	216	220	224	216	259	236	221	854	3090	2700	1110
CAL YR 1980	TOTAL	8455.8	MEAN	23.1	MAX	184	MIN	2.8	AC-FT	16770		
WTR YR 1981	TOTAL	4827.2	MEAN	13.2	MAX	110	MIN	2.5	AC-FT	9570		

KANSAS RIVER BASIN

305

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 (revised) bank near downstream side of bridge on U.S. Highways 6 and 34, 0.8 mi (1.3 km) north of Red Willow and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--830 mi² (2,150 km²), approximately, of which about 410 mi² (1,060 km²) 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 (731.105 m) National Geodetic Vertical Datum of 1929. Prior to May 26, 1945, nonrecording gage at bridge 1.2 mi (1.9 km) upstream at datum 11.16 ft (3.402 m) 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.--Records fair except those for winter period, 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 (7.2 km) above station for irrigation of about 4,150 acres (16.8 km²).

AVERAGE DISCHARGE.--42 years, 29.4 ft³/s (0.833 m³/s), 21,300 acre-ft/yr (26.3 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) June 22, 1947, gage height, 18.36 ft (5.596 m), from rating curve extended above 6,800 ft³/s (193 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.33 ft³/s (0.009 m³/s) Sept. 8, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 901 ft³/s (25.5 m³/s) Aug. 6, gage height, 11.22 ft (3.420 m); minimum daily, 3.0 ft³/s (0.085 m³/s) June 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	6.9	7.0	8.5	4.0	8.8	8.7	8.3	8.1	6.2	20	9.5
2	4.8	6.7	4.2	7.8	5.0	9.1	8.7	8.2	7.9	7.3	28	8.7
3	4.5	6.6	4.6	8.0	6.2	9.4	8.5	8.1	7.9	21	13	13
4	4.9	7.1	5.2	8.2	7.5	12	8.9	9.1	8.2	6.2	13	22
5	5.2	8.2	6.0	8.5	7.5	9.9	8.6	8.0	8.0	4.0	14	13
6	4.9	8.2	5.8	9.2	7.8	8.7	8.6	7.6	7.8	3.9	349	10
7	4.9	8.5	4.6	8.8	7.8	11	8.8	8.8	8.5	9.5	45	10
8	5.1	8.2	4.6	8.4	7.5	10	8.4	8.5	8.7	17	22	8.9
9	5.0	7.6	4.4	7.6	6.8	10	8.5	9.4	7.9	16	19	9.1
10	4.9	7.7	4.6	8.2	5.4	10	8.8	9.0	8.0	14	19	9.7
11	5.5	7.8	5.5	8.7	5.0	9.5	8.9	8.0	8.5	11	20	11
12	5.9	7.9	7.0	7.2	5.6	9.1	9.2	8.7	8.3	11	18	10
13	6.1	8.1	6.8	9.7	7.0	8.8	9.4	9.1	7.9	20	14	10
14	5.8	7.9	6.6	9.2	9.0	8.7	9.4	8.3	7.7	22	9.9	11
15	6.0	7.6	7.7	8.4	9.0	8.9	9.3	8.1	7.8	19	11	10
16	6.1	7.7	7.8	7.0	10	8.9	9.6	8.5	8.0	12	12	9.1
17	6.4	7.0	7.9	4.5	11	9.1	9.6	14	7.9	24	13	9.5
18	6.5	6.5	7.9	6.0	12	8.3	9.8	17	6.0	50	10	21
19	6.5	6.5	6.2	9.0	10	7.8	63	10	3.3	6.9	11	9.1
20	6.8	6.6	5.2	8.5	10	7.9	17	9.4	3.0	16	13	8.6
21	6.3	6.6	4.5	7.8	8.2	9.4	11	9.2	3.7	15	29	8.2
22	6.5	6.7	7.2	7.8	8.2	9.1	51	9.3	5.4	12	30	8.1
23	6.4	6.8	7.5	7.8	9.1	7.8	11	9.2	5.6	11	32	7.9
24	6.4	6.9	6.0	8.0	9.4	8.4	9.5	9.1	17	16	34	7.5
25	6.6	7.0	4.5	8.0	8.8	8.7	9.0	8.9	7.0	15	15	8.2
26	6.9	6.8	7.0	7.8	8.5	8.8	8.6	8.5	6.6	25	15	7.8
27	6.8	6.6	9.6	7.0	8.5	8.8	8.2	10	6.2	24	9.1	7.6
28	7.0	6.8	8.9	7.0	8.6	31	8.5	9.4	5.3	11	8.8	7.9
29	6.7	6.8	8.5	5.8	---	34	8.4	9.0	12	8.5	8.7	7.8
30	6.7	7.1	8.5	5.6	---	9.3	8.3	8.5	10	9.2	8.2	7.6
31	6.9	---	8.5	5.6	---	9.0	---	8.2	---	9.8	8.9	---
TOTAL	183.8	217.4	200.3	239.6	223.4	330.2	375.2	285.4	228.2	453.5	872.6	301.8
MEAN	5.93	7.25	6.46	7.73	7.98	10.7	12.5	9.21	7.61	14.6	28.1	10.1
MAX	7.0	8.5	9.6	9.7	12	34	63	17	17	50	349	22
MIN	4.5	6.5	4.2	4.5	4.0	7.8	8.2	7.6	3.0	3.9	8.2	7.5
AC-FT	365	431	397	475	443	655	744	566	453	900	1730	599

CAL YR 1980 TOTAL 5379.4 MEAN 14.7 MAX 134 MIN 1.8 AC-FT 10670
WTR YR 1981 TOTAL 3911.4 MEAN 10.7 MAX 349 MIN 3.0 AC-FT 7760

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 (5 m) upstream from bridge on State Highway 23, 0.5 mi (0.8 km) upstream from mouth, and 1 mi (2 km) east of Curtis.

DRAINAGE AREA.--74 mi² (190 km²), 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 (767.968 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--11 years (1952-58, 1978-81), 7.23 ft³/s (0.205 m³/s), 5,240 acre-ft/yr (6.46 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft³/s (94.6 m³/s) May 31, 1951, gage height, 15.35 ft (4.679 m); minimum daily, 0.71 ft³/s (0.020 m³/s) July 26, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 27.3 ft (8.32 m) June 21, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 500 ft³/s (14.2 m³/s) July 2, backwater from Medicine Creek; maximum gage height, 11.78 ft (3.591 m) July 2, backwater from Medicine Creek; minimum daily, 2.1 ft³/s (0.059 m³/s) Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	5.0	4.6	5.0	4.5	5.4	5.3	4.7	5.3	5.0	9.1	4.5
2	2.1	5.0	4.4	5.7	4.6	5.4	5.3	4.7	5.4	100	50	4.5
3	2.2	4.9	4.4	5.3	4.7	5.6	5.4	4.7	5.1	50	7.1	4.5
4	2.3	4.7	4.4	4.9	4.7	7.2	5.5	4.8	5.1	6.0	6.0	4.5
5	2.4	4.7	4.6	4.7	4.8	6.2	5.4	5.0	5.3	5.4	5.8	4.5
6	2.5	4.6	4.5	4.8	4.9	5.7	5.2	5.3	5.6	5.1	20	4.7
7	2.5	4.4	4.5	4.9	4.9	5.8	5.2	5.5	6.1	4.9	7.0	5.0
8	2.6	4.2	4.6	4.9	4.8	6.0	5.2	5.8	6.1	4.9	6.3	4.6
9	2.6	4.2	4.8	5.0	4.7	5.6	5.2	6.1	5.1	4.8	6.2	4.4
10	2.6	4.2	5.2	5.0	4.5	5.6	5.2	6.4	4.9	4.8	6.0	4.3
11	2.7	4.4	5.8	5.1	4.6	5.7	5.3	6.3	5.1	4.8	6.0	4.2
12	2.9	4.2	4.8	5.2	4.9	5.6	5.2	6.2	4.9	4.8	5.5	4.0
13	3.0	4.4	4.9	5.1	5.1	5.6	5.3	5.7	5.0	4.6	6.0	4.2
14	3.1	4.2	4.8	5.0	5.3	5.7	5.2	5.8	4.8	4.4	5.5	4.4
15	3.2	4.2	4.9	4.7	5.4	5.7	5.2	5.5	4.9	4.4	5.0	4.3
16	3.5	4.4	4.9	4.5	5.6	5.6	5.4	5.6	5.0	4.8	5.0	4.2
17	3.9	4.2	5.0	4.7	5.4	5.5	5.5	7.0	4.9	10	5.0	4.2
18	3.8	4.5	5.0	5.2	5.6	5.5	5.4	12	4.7	7.0	5.5	4.4
19	3.8	4.6	5.1	5.5	5.5	5.3	5.8	6.0	4.8	4.0	5.0	4.3
20	3.8	4.5	4.3	5.5	5.5	5.3	6.5	5.8	4.9	4.2	4.8	4.4
21	3.6	4.7	4.2	6.1	5.5	5.5	6.6	5.6	6.2	3.1	4.8	4.3
22	4.0	4.8	4.5	6.7	5.4	5.6	6.3	5.6	5.4	3.5	4.8	4.3
23	4.6	4.2	4.5	6.4	5.4	5.5	6.0	5.6	5.0	3.4	5.0	4.3
24	4.6	4.2	4.8	5.4	5.4	5.3	5.7	5.5	4.9	3.6	4.8	4.4
25	4.8	4.4	5.3	5.5	5.5	5.3	5.5	5.4	4.7	3.8	4.7	4.5
26	5.0	4.5	5.6	5.4	5.6	5.3	5.4	5.4	4.7	90	4.7	4.5
27	5.3	4.7	5.3	6.4	5.6	5.3	5.3	5.4	5.1	30	4.7	4.5
28	5.3	4.8	5.4	5.9	5.5	6.1	5.1	6.2	5.0	8.1	4.6	4.6
29	5.1	4.8	5.0	5.1	---	6.6	4.9	5.8	15	6.3	4.6	4.6
30	5.2	4.6	5.0	4.8	---	5.8	4.8	5.5	5.5	5.6	4.6	4.6
31	5.1	---	5.1	4.6	---	5.4	---	5.4	---	5.6	4.5	---
TOTAL	110.2	135.2	150.2	163.0	143.9	175.7	163.3	180.3	164.5	406.9	228.6	132.7
MEAN	3.55	4.51	4.85	5.26	5.14	5.67	5.44	5.82	5.48	13.1	7.37	4.42
MAX	5.3	5.0	5.8	6.7	5.6	7.2	6.6	12	15	100	50	5.0
MIN	2.1	4.2	4.2	4.5	4.5	5.3	4.8	4.7	4.7	3.1	4.5	4.0
AC-FT	219	268	298	323	285	349	324	358	326	807	453	263

CAL YR 1980 TOTAL 2177.44 MEAN 5.95 MAX 138 MIN .71 AC-FT 4320
WTR YR 1981 TOTAL 2154.50 MEAN 5.90 MAX 100 MIN 2.1 AC-FT 4270

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 (0.5 km) downstream from top of Harry Strunk Lake flood-control pool, 2.5 mi (4.0 km) upstream from top of irrigation pool, 3.8 mi (6.1 km) southeast of Stockville, and 13.5 mi (21.7 km) upstream from Medicine Creek Dam.

DRAINAGE AREA.--770 mi² (1,990 km²), approximately, of which about 530 mi² (1,370 km²) 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 (725.711 m) National Geodetic Vertical Datum of 1929 (Water and Power Resources Service bench mark).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--31 years, 67.0 ft³/s (1.897 m³/s), 48,540 acre-ft/yr (59.8 hm³/yr); median of yearly mean discharges, 59 ft³/s (1.671 m³/s), 42,700 acre-ft/yr (52.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s (329 m³/s) June 21, 1967, gage height, 20.05 ft (6.111 m); minimum daily, 9.1 ft³/s (0.26 m³/s) Aug. 9, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1874, 24.4 ft (7.44 m) June 22, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) Aug. 6 at 1045, gage height, 13.37 ft (4.075 m), from highwater mark, no other peak above base of 1,200 ft³/s (34.0 m³/s); minimum daily, 25 ft³/s (0.71 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	43	46	47	45	50	60	48	47	72	72	41
2	26	42	43	49	42	50	57	48	46	117	235	40
3	26	42	40	46	40	50	55	49	44	498	125	39
4	27	43	38	45	40	61	54	49	43	170	73	40
5	28	43	41	45	42	72	53	50	41	127	59	44
6	29	43	44	45	45	83	53	52	43	88	711	48
7	29	43	44	44	45	77	53	53	43	59	430	63
8	30	43	40	44	40	62	52	54	43	46	240	50
9	30	42	43	44	35	54	50	55	45	36	194	44
10	29	41	50	44	32	54	49	56	43	31	154	41
11	29	41	55	44	34	56	50	57	42	28	118	40
12	31	43	55	46	38	57	50	57	41	27	87	38
13	32	43	46	45	42	55	50	56	41	27	73	38
14	33	44	47	45	48	54	50	55	40	26	90	37
15	34	44	47	43	54	53	49	55	40	26	76	36
16	36	43	51	40	62	54	50	48	38	25	63	36
17	39	44	49	35	70	54	50	52	37	35	67	36
18	44	44	50	45	66	52	49	112	37	59	72	37
19	41	45	50	60	61	51	52	137	36	74	58	37
20	38	45	49	70	59	51	58	106	36	52	53	37
21	39	45	45	77	57	53	72	83	39	36	48	36
22	39	44	40	76	54	54	85	68	41	30	45	36
23	38	45	45	58	53	56	87	59	40	28	45	36
24	38	45	45	49	52	58	71	54	38	26	47	36
25	38	43	60	48	52	56	61	50	35	26	46	37
26	38	43	65	47	52	55	55	49	33	257	44	37
27	40	44	70	48	52	54	52	49	22	380	42	36
28	40	44	55	49	51	79	50	51	31	213	42	37
29	42	45	49	51	---	119	49	55	44	155	41	37
30	43	46	48	49	---	83	48	52	87	118	41	38
31	43	---	47	45	---	67	---	49	---	85	41	---
TOTAL	1076	1305	1497	1523	1363	1884	1674	1868	1236	2977	3532	1188
MEAN	34.7	43.5	48.3	49.1	48.7	60.8	55.8	60.3	41.2	96.0	114	39.6
MAX	44	46	70	77	70	119	87	137	87	498	711	63
MIN	26	41	38	35	32	50	48	48	22	25	41	36
AC-FT	2130	2590	2970	3020	2700	3740	3320	3710	2450	5900	7010	2360
CAL YR 1980	TOTAL	18043.8	MEAN 49.3	MAX 650	MIN 9.1	AC-FT 35790						
WTR YR 1981	TOTAL	21123.0	MEAN 57.9	MAX 711	MIN 22	AC-FT 41900						

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 (11 km) northwest of Cambridge.

DRAINAGE AREA.--880 mi² (2,280 km²), approximately, of which about 640 mi² (1,660 km²) 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 (39.7 hm³) between elevation 2,335.0 ft (712 m), sill of outlet gates, and 2,366.1 ft (721 m), 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 (727 m), capacity, 89,310 acre-ft (0.110 km³). Top of superstorage flood-control pool at elevation 2,400.0 ft (732 m), capacity, 147,400 acre-ft (0.182 km³). Maximum water-surface elevation, 2,408.9 ft (734 m), 196,000 acre-ft (0.242 km³). Dead storage, 4,910 acre-ft (6.05 hm³). 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 (68.7 hm³) Mar. 23, 1960, elevation, 2,374.10 ft (723.626 m); minimum since operation of reservoir began, 7,840 acre-ft (9.67 hm³) Sept. 7, 1978, elevation, 2,340.39 ft (713.351 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,270 acre-ft (49.7 hm³) Aug. 11, 12, elevation, 2,367.74 ft (721.687 m); minimum, 12,260 acre-ft (15.1 hm³) Oct. 1, elevation, 2,346.60 ft (715.244 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

2,345	11,000	2,360	27,100
2,350	15,250	2,365	35,140
2,355	20,550	2,370	44,890

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12300	14090	16350	18880	21460	24080	27810	30800	34440	35120	35600	35610
2	12330	14170	16370	18990	21510	24150	27880	30910	34460	35500	36280	35520
3	12350	14230	16440	19050	21570	24300	28000	31010	34510	36460	36570	35300
4	12400	14280	16560	19130	21640	24590	28080	31060	34570	36880	36680	35210
5	12460	14380	16630	19230	21740	24720	28120	31110	34650	37120	36680	35450
6	12500	14460	16720	19310	21840	24890	28220	31200	34710	37210	39020	35580
7	12550	14520	16820	19400	21910	25100	28310	31380	34760	37270	39800	35890
8	12590	14610	16860	19480	22000	25200	28360	31570	34830	37060	40090	35980
9	12680	14660	16910	19540	22080	25290	28430	31670	34860	36900	40090	36050
10	12680	14730	16970	19660	22130	25390	28510	31750	34880	36630	40170	36100
11	12720	14800	17070	19740	22170	25480	28600	31880	34950	36430	40270	36120
12	12760	14890	17170	19810	22250	25580	28660	32000	34970	36050	40190	36120
13	12830	14960	17240	19900	22340	25680	28780	32080	35070	35390	40130	36140
14	12890	15020	17360	19980	22440	25790	28800	32150	35050	34580	40230	36180
15	12970	15100	17470	20070	22540	25860	28860	32220	35000	33960	40110	36250
16	13000	15170	17550	20130	22640	25980	28950	32330	35020	33300	39980	36250
17	13050	15240	17650	20170	22800	26080	29010	32640	35090	32820	40000	36250
18	13110	15320	17760	20260	22910	26130	29120	32850	35040	32990	39820	36270
19	13190	15410	17780	20380	23050	26210	29300	33120	35000	33270	39530	36300
20	13260	15510	17820	20430	23200	26280	29430	33250	34980	33280	39060	36360
21	13320	15590	17880	20540	23280	26450	29740	33560	35040	33270	38570	36370
22	13400	15680	17970	20660	23400	26500	29980	33680	35050	33320	37930	36390
23	13440	15740	18080	20730	23490	26600	30120	33750	35230	33250	37530	36410
24	13480	15820	18110	20850	23590	26720	30250	33840	35190	32890	37100	36460
25	13530	15880	18180	20950	23690	26800	30360	33900	35210	32670	36860	36550
26	13610	15980	18280	21020	23800	26890	30440	33990	35120	32840	36570	36570
27	13720	16030	18410	21130	23880	26960	30560	34060	35090	33640	36340	36570
28	13760	16120	18510	21200	23970	27220	30590	34150	35050	34130	36120	36590
29	13840	16210	18620	21270	---	27460	30670	34240	34930	34440	36120	36660
30	13920	16300	18720	21330	---	27620	30770	34290	35020	34670	36050	36720
31	14010	---	18810	21440	---	27690	---	34360	---	34840	35780	---
MAX	14010	16300	18810	21440	23970	27690	30770	34360	35230	37270	40270	36720
MIN	12300	14090	16350	18880	21460	24080	27810	30800	34440	32670	35600	35210
Δ	2348.64	2351.08	2353.47	2355.74	2357.74	2360.40	2362.40	2364.55	2364.93	2364.83	2365.35	2365.87
Δ	+1760	+2290	+2510	+2630	+2530	+3720	+3080	+3590	+660	-180	+940	+940
CAL YR 1980	MAX 39490	MIN 11250	---	---	---	---	---	---	---	---	---	---
WTR YR 1981	MAX 40270	MIN 12300	---	---	---	---	---	---	---	---	---	---

Δ Elevation, in feet, at end of month.

Δ Change in contents, in acre-feet.

KANSAS RIVER BASIN

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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 (0.8 km) downstream from Medicine Creek Dam and 6.5 mi (10.5 km) northwest of Cambridge.

DRAINAGE AREA.--880 mi² (2,280 km²), approximately, of which about 640 mi² (1,660 km²) 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 (699.595 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Apr. 24, 1950, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum.

REMARKS.--Records good except those below 1.0 ft³/s (0.028 m³/s), which are fair. Flow regulated by Harry Strunk Lake (station 06842000).

AVERAGE DISCHARGE.--32 years, 62.1 ft³/s (1.759 m³/s), 44,990 acre-ft/yr (55.5 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) Mar. 23, 1960, gage height, 5.97 ft (1.820 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Nov. 13, 1952, Sept. 19, 1963, Sept. 27-29, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 386 ft³/s (10.9 m³/s) July 13, 16, gage height, 3.02 ft (0.920 m); minimum daily, 0.33 ft³/s (0.009 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.43	.86	.72	.72	.70	.90	1.1	.83	.65	1.9	88
2	.33	.52	.87	.72	.72	.64	.91	1.0	.80	.90	1.4	88
3	.40	.55	.91	.72	.62	.64	.96	1.1	.80	.76	.92	79
4	.67	.61	.84	.72	.62	.94	.90	1.2	.80	.67	.72	32
5	.41	.62	.82	.72	.61	.63	.91	1.1	.80	.64	.72	.89
6	.42	.63	.75	.72	.62	.60	.97	1.0	.80	.65	20	.93
7	.42	.63	.76	.72	.63	.68	1.0	1.1	.70	8.0	58	.83
8	.41	.73	.73	.72	.62	.63	1.0	.98	.70	53	77	.82
9	.65	.84	.72	.72	.63	.67	.99	.93	.70	65	84	.79
10	.37	.91	.74	.72	.55	.72	1.1	.82	.68	136	88	.78
11	.35	.86	.77	.72	.57	.72	1.1	.81	.76	166	88	.75
12	.38	.82	.79	.72	.61	.80	1.1	.82	.73	191	87	.81
13	.44	.72	.76	.72	.62	.82	1.2	.87	.71	313	86	.82
14	.52	.63	.77	.72	.63	.85	1.0	.81	.73	374	84	.67
15	.52	.63	.81	.72	.63	.73	1.0	.80	.77	356	83	.70
16	.51	.72	.82	.74	.62	.62	1.0	.87	.73	356	81	.71
17	.53	.72	.78	.72	.63	.57	.99	1.2	.73	273	82	.72
18	.55	.74	.81	.72	.63	.51	1.0	1.0	32	100	157	.72
19	.57	.80	.76	.72	.63	.53	1.4	.87	39	.63	219	.72
20	.59	.72	.72	.72	.63	.58	1.1	.81	26	.44	272	.72
21	.58	.75	.72	.69	.63	.66	1.2	.94	26	.34	307	.74
22	.46	.75	.72	.72	.62	.55	1.8	.88	11	.34	307	.82
23	.61	.73	.74	.72	.65	1.1	.95	.80	.79	14	291	.85
24	.74	.72	.67	.72	.72	.84	.97	.81	.78	121	249	.92
25	.79	.72	.67	.72	.76	.81	.95	.81	.77	163	179	.91
26	.73	.76	.72	.72	.84	.82	.95	.81	51	124	136	.96
27	.77	.81	.72	.72	.86	.83	.97	.80	72	27	116	1.1
28	.38	.83	.72	.72	.82	.90	1.1	.80	64	.92	96	1.2
29	.44	3.0	.72	.72	---	.85	1.1	.80	16	.92	88	1.3
30	.43	1.1	.72	.72	---	.83	1.1	.81	.70	.82	88	1.1
31	.43	---	.72	.73	---	.84	---	.82	---	.72	88	---
TOTAL	15.77	24.00	23.63	22.32	18.44	22.61	31.62	28.27	352.81	2849.40	3516.66	309.28
MEAN	.51	.80	.76	.72	.66	.73	1.05	.91	11.8	91.9	113	10.3
MAX	.79	3.0	.91	.74	.86	1.1	1.8	1.2	72	374	307	88
MIN	.33	.43	.67	.69	.55	.51	.90	.80	.68	.34	.72	.67
AC-FT	31	48	47	44	37	45	63	56	700	5650	6980	613

CAL YR 1980 TOTAL 24637.11 MEAN 67.3 MAX 344 MIN .33 AC-FT 48870
WTR YR 1981 TOTAL 7214.81 MEAN 19.8 MAX 374 MIN .33 AC-FT 14310

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 (122 m) south of U.S. Highways 6 and 34, 0.5 mi (0.8 km) downstream from Medicine Creek, 1 mi (2 km) east of Cambridge, and 1.3 mi (2.1 km) upstream from Cambridge diversion dam.

DRAINAGE AREA.--14,520 mi² (37,600 km²), approximately, of which about 7,810 mi² (20,200 km²) contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,239.07 ft (682.469 m) National Geodetic Vertical Datum of 1929. Prior to July 13, 1948, nonrecording gage at site 150 ft (46 m) upstream at same datum and July 13, 1948, to Sept. 25, 1950, at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and since 1949 by regulation from upstream reservoirs.

AVERAGE DISCHARGE.--36 years, 312 ft³/s (8.836 m³/s), 226,000 acre-ft/yr (0.279 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft³/s (4,530 m³/s) June 22, 1947, gage height, 16.7 ft (5.09 m), from floodmarks, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.07 ft³/s (0.002 m³/s) Sept. 27, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 17.6 ft (5.36 m) May 31 to June 1, 1935, from information by local resident, discharge, about 280,000 ft³/s (7,930 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) July 19, gage height, 6.85 ft (2.088 m); minimum daily, 20 ft³/s (0.57 m³/s) Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	70	97	93	80	108	115	144	145	206	157	110
2	20	72	90	92	80	108	112	130	131	225	602	111
3	20	74	75	94	85	110	118	137	115	400	208	147
4	22	74	82	95	85	154	110	139	111	169	125	156
5	24	75	110	97	90	156	103	130	105	156	95	109
6	24	76	95	101	95	151	101	113	101	131	614	91
7	25	77	90	107	100	162	103	122	98	101	697	85
8	25	74	82	101	105	159	102	139	95	100	252	77
9	24	73	88	103	95	156	103	158	88	128	236	72
10	24	73	105	97	70	159	96	177	84	132	233	76
11	24	75	115	90	50	156	90	167	87	188	227	79
12	27	79	118	40	55	151	85	147	85	191	209	80
13	31	80	121	50	70	151	79	151	82	309	215	78
14	32	83	116	70	90	151	79	146	77	371	218	74
15	35	84	109	100	120	145	79	130	77	357	208	74
16	33	84	105	110	145	145	79	126	72	361	199	80
17	39	86	102	129	180	142	77	168	65	539	201	77
18	41	89	99	116	230	134	74	277	60	307	192	75
19	43	87	99	110	168	126	157	288	100	1090	230	93
20	46	85	99	115	145	126	256	246	89	702	275	148
21	50	89	70	130	134	134	240	244	155	278	315	89
22	51	88	50	150	128	145	411	284	164	218	356	69
23	52	88	65	170	126	137	459	221	134	209	346	59
24	53	86	85	187	126	134	299	194	100	237	306	54
25	56	89	75	174	120	131	228	179	86	312	246	57
26	59	86	94	133	115	118	197	172	71	379	168	57
27	67	90	131	115	113	110	169	176	133	355	150	55
28	68	97	148	114	110	112	177	185	129	320	118	60
29	67	94	126	112	---	253	166	177	163	295	116	58
30	69	96	115	88	---	148	153	176	151	218	123	62
31	69	---	95	85	---	128	---	161	---	161	120	---
TOTAL	1242	2473	3051	3368	3110	4400	4617	5404	3153	9145	7757	2512
MEAN	40.1	82.4	98.4	109	111	142	154	174	105	295	250	83.7
MAX	69	97	148	187	230	253	459	288	164	1090	697	156
MIN	20	70	50	40	50	108	74	113	60	100	95	54
AC-FT	2460	4910	6050	6680	6170	8730	9160	10720	6250	18140	15390	4980
CAL YR 1980	TOTAL	64765	MEAN 177	MAX 959	MIN 19	AC-FT 128500						
WTR YR 1981	TOTAL	50232	MEAN 138	MAX 1090	MIN 20	AC-FT 99640						

KANSAS RIVER BASIN

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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 (3 m) upstream from bridge on U.S. Highways 6 and 34, 0.2 mi (0.3 km) west of Arapahoe, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--246 mi² (637 km²).

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 (653.467 m), 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 (6 m) downstream from bridge at present datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and return flow from irrigated areas.

AVERAGE DISCHARGE.--25 years (1951-72, 1978-81), 14.9 ft³/s (0.422 m³/s), 10,800 acre-ft/yr (13.3 hm³/yr); median of yearly mean discharges, 11 ft³/s (0.312 m³/s), 8,000 acre-ft/yr (9.86 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,280 ft³/s (206 m³/s) June 16, 1957, gage height, 24.62 ft (7.504 m); no flow Aug. 26 to Sept. 2, 1953, July 23, 29, Aug. 4, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 31 ft (9.4 m) occurred June 22, 1947, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 871 ft³/s (24.7 m³/s) Aug. 6 at 1800, gage height, 12.34 ft (3.761 m), no other peak above base of 750 ft³/s (21.2 m³/s); minimum daily, 4.3 ft³/s (0.12 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	6.7	6.3	6.8	5.8	7.3	6.6	6.5	6.6	6.3	12	8.6
2	4.7	6.4	5.6	6.5	6.0	7.3	6.4	6.4	6.4	7.1	14	8.2
3	4.6	6.4	5.8	6.0	6.2	7.3	6.1	6.7	6.4	11	17	9.9
4	4.8	6.4	6.1	6.3	6.5	9.2	6.1	7.2	6.1	63	16	10
5	4.8	6.6	6.2	6.7	6.7	9.9	6.1	6.9	6.1	22	15	8.2
6	5.0	6.6	6.3	7.0	6.7	9.2	6.1	6.3	6.2	11	421	8.6
7	5.0	6.4	6.1	7.0	6.5	8.9	6.3	6.4	5.9	7.8	134	9.2
8	5.0	6.4	5.8	6.5	6.5	8.6	5.8	7.1	6.1	6.5	16	8.2
9	5.0	6.7	6.2	6.5	6.3	8.2	6.1	7.7	6.0	5.8	11	7.0
10	5.0	6.2	6.8	7.1	5.8	8.0	5.9	7.9	5.8	6.0	10	7.6
11	5.3	6.3	6.5	6.4	6.0	7.5	5.9	7.5	6.2	6.7	9.3	7.6
12	5.3	6.6	6.4	6.8	6.4	7.0	5.8	6.9	5.6	7.5	8.9	7.6
13	5.3	6.6	6.2	7.1	7.0	7.0	5.8	6.7	5.5	9.3	10	7.3
14	5.4	7.1	6.1	7.0	7.5	6.7	5.9	6.9	5.6	6.8	11	6.9
15	5.4	7.2	6.3	6.5	7.3	6.7	6.0	6.7	5.3	5.6	10	5.8
16	5.5	6.7	7.1	6.0	8.4	6.7	6.0	7.3	5.1	6.0	10	5.4
17	5.5	6.1	6.8	6.4	9.3	6.7	6.1	21	9.8	88	10	5.3
18	5.6	5.9	7.1	6.8	9.3	6.4	6.1	29	8.6	111	10	5.8
19	5.6	6.0	6.1	7.1	8.6	6.4	8.3	59	4.5	167	11	5.9
20	5.7	6.2	6.2	7.4	8.3	6.8	9.1	25	4.6	37	11	5.2
21	5.7	6.1	6.2	8.2	8.5	6.3	8.1	12	14	18	8.9	5.4
22	5.5	6.6	6.1	7.4	7.8	7.2	41	12	9.8	12	8.9	5.5
23	5.5	6.4	6.2	7.3	8.2	6.9	12	20	8.1	10	9.6	4.6
24	6.0	6.1	6.2	7.2	7.6	7.3	8.8	11	6.2	9.0	9.9	4.8
25	5.9	5.8	6.5	7.3	7.6	7.1	7.7	8.7	5.9	10	9.6	5.4
26	6.3	5.9	6.7	6.6	7.3	6.4	6.9	7.7	7.3	15	9.9	5.6
27	7.2	6.4	7.2	6.6	7.3	6.4	6.6	7.4	6.4	158	11	5.7
28	7.1	5.7	7.4	6.5	7.3	6.4	6.8	8.0	6.1	58	9.9	5.8
29	6.9	6.6	7.4	6.2	---	7.8	6.7	9.1	7.8	32	7.9	5.8
30	6.9	6.9	7.5	6.0	---	7.3	6.5	7.6	6.9	15	7.6	6.2
31	6.6	---	7.5	6.0	---	6.8	---	6.7	---	11	7.6	---
TOTAL	172.4	192.0	200.9	209.2	202.7	227.7	237.6	355.3	200.9	939.4	868.0	203.1
MEAN	5.56	6.40	6.48	6.75	7.24	7.35	7.92	11.5	6.70	30.3	28.0	6.77
MAX	7.2	7.2	7.5	8.2	9.3	9.9	41	59	14	167	421	10
MIN	4.3	5.7	5.6	6.0	5.8	6.3	5.8	6.3	4.5	5.6	7.6	4.6
AC-FT	342	381	398	415	402	452	471	705	398	1860	1720	403

CAL YR 1980 TOTAL 3527.1 MEAN 9.64 MAX 290 MIN 3.3 AC-FT 7000
WTR YR 1981 TOTAL 4009.2 MEAN 11.0 MAX 421 MIN 4.3 AC-FT 7950

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 (3 m) downstream from bridge on State Highway 136, 2 mi (3 km) east of Edison and 5 mi (8 km) upstream from mouth.

DRAINAGE AREA.--74.9 mi² (194.0 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 2,090 ft (637 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Natural flow affected by pump irrigation development above station and by return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft³/s (26.6 m³/s) July 18, 1981, gage height, 11.95 ft (3.642 m), from floodmark; minimum daily, 0.74 ft³/s (0.021 m³/s) Sept. 9, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 940 ft³/s (26.6 m³/s) July 18, gage height, 11.95 ft (3.642 m), from floodmark; minimum daily, 1.0 ft³/s (0.028 m³/s) Oct. 11.

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. They supercede figures published in the reports for 1978-80.

Water year	Date	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Water year	Date	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
1978	Aug. 2, 1978	107 3.030	5.70 1.737	1980	July 2, 1980	305 8.638	7.95 2.423
1979	July 27, 1979	545 15.434	9.76 2.975				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.7	2.7	3.4	1.8	4.8	4.6	4.6	4.5	4.2	4.4	2.7
2	1.1	2.8	2.3	3.2	2.0	4.7	4.6	4.9	4.3	7.6	5.7	2.8
3	1.1	2.7	2.5	2.8	2.2	4.6	4.6	4.6	4.3	8.9	13	3.2
4	1.1	2.5	3.1	4.1	2.1	5.4	4.6	5.0	4.2	5.1	5.8	3.6
5	1.2	2.4	3.4	3.1	2.2	6.0	4.6	5.1	4.0	5.0	4.4	3.4
6	1.5	2.8	3.5	2.9	2.6	5.4	4.6	4.5	4.0	3.6	145	11
7	1.5	3.2	3.5	4.3	2.6	4.8	4.7	4.3	4.0	3.5	10	12
8	1.5	3.0	3.1	3.9	2.4	4.8	4.6	4.6	3.9	3.5	4.6	5.7
9	1.5	3.0	2.6	2.6	2.2	4.9	4.6	4.9	3.9	3.4	4.0	4.2
10	1.2	3.0	2.7	3.7	2.2	4.6	4.7	5.0	3.6	3.2	3.9	3.4
11	1.0	3.1	2.8	4.1	2.8	4.5	4.7	4.9	3.8	3.4	4.0	3.2
12	1.1	3.1	3.1	3.8	3.4	4.5	4.8	4.6	3.8	4.0	3.9	2.9
13	1.4	3.1	4.0	2.4	3.1	4.3	5.0	4.6	3.7	3.6	3.9	3.0
14	1.6	3.1	3.8	3.4	3.3	4.3	4.8	4.6	3.5	4.5	3.9	2.9
15	1.6	3.1	3.7	4.4	4.9	4.3	4.8	4.5	3.2	4.6	4.0	2.7
16	2.3	3.1	4.5	4.2	5.2	4.1	4.6	4.6	3.0	4.3	3.8	2.7
17	1.9	3.0	4.2	3.3	5.6	4.3	4.4	6.1	2.4	21	3.9	2.6
18	2.2	2.4	3.8	1.4	5.8	4.1	4.6	8.5	2.6	230	3.9	2.7
19	2.1	2.5	3.1	2.4	5.7	4.2	5.3	7.3	2.2	167	3.9	2.9
20	1.9	2.5	2.3	3.5	5.8	4.4	6.8	5.6	2.4	22	4.6	2.9
21	1.8	2.7	2.6	3.7	5.7	4.5	5.9	5.1	6.5	9.1	4.2	2.9
22	1.9	3.1	3.2	3.2	6.0	4.9	16	4.8	9.7	5.6	3.6	2.7
23	1.7	3.1	3.5	2.5	4.9	5.2	9.4	4.8	4.8	4.7	5.0	2.6
24	1.7	2.8	3.6	4.0	5.0	5.0	5.5	4.8	2.7	4.5	7.4	2.4
25	1.6	2.2	2.8	5.2	5.0	5.0	4.8	4.6	2.7	5.0	5.3	2.6
26	1.8	2.5	2.4	4.7	5.2	5.0	4.8	4.6	4.4	7.7	3.2	2.8
27	2.3	2.8	3.6	3.7	5.4	5.1	4.6	4.6	5.1	9.9	2.9	2.6
28	2.7	3.0	5.0	3.3	5.1	5.1	4.6	5.2	5.9	6.3	2.9	2.7
29	2.5	3.1	4.5	3.0	---	5.2	4.6	5.4	3.4	6.6	2.9	2.8
30	2.6	3.4	4.4	2.5	---	5.3	4.5	5.1	3.4	4.6	2.9	2.7
31	2.5	---	4.4	1.9	---	4.9	---	4.8	---	4.5	3.0	---
TOTAL	53.2	85.8	104.7	104.6	110.2	148.2	160.7	156.6	119.9	580.9	283.9	107.3
MEAN	1.72	2.86	3.38	3.37	3.94	4.78	5.36	5.05	4.00	18.7	9.16	3.58
MAX	2.7	3.4	5.0	5.2	6.0	6.0	16	8.5	9.7	230	145	12
MIN	1.0	2.2	2.3	1.4	1.8	4.1	4.4	4.3	2.2	3.2	2.9	2.4
AC-FT	106	170	208	207	219	294	319	311	238	1150	563	213

CAL YR 1980 TOTAL 1846.0 MEAN 5.04 MAX 65 MIN 1.0 AC-FT 3660
WTR YR 1981 TOTAL 2016.0 MEAN 5.52 MAX 230 MIN 1.0 AC-FT 4000

KANSAS RIVER BASIN

313

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 (5 m) downstream from bridge on State Highway 89, 200 ft (61 m) downstream from Burlington Northern Inc. bridge, 2 mi (3 km) west of Orleans, 2.8 mi (4.5 km) upstream from Sappa Creek, and 23 mi (37 km) upstream from Harlan County Dam.

DRAINAGE AREA.--15,640 mi² (40,500 km²), approximately, of which about 8,910 mi² (23,100 km²) 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 (601.239 m) National Geodetic Vertical Datum of 1929. Prior to June 2, 1948, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by irrigation development above station and regulation by upstream reservoirs.

AVERAGE DISCHARGE.--34 years, 303 ft³/s (8.581 m³/s), 219,500 acre-ft/yr (0.271 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft³/s (1,150 m³/s) June 22, 1948, gage height, 11.25 ft (3.429 m), from rating curve extended above 29,000 ft³/s (821 m³/s); maximum gage height, 12.60 ft (3.840 m) 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 (4.267 m), from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft³/s (60.6 m³/s) Aug. 7, gage height, 7.10 ft (2.164 m); minimum daily, 1.5 ft³/s (0.042 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	60	92	135	90	145	173	200	199	72	172	63
2	3.3	62	56	120	90	144	162	186	188	74	201	60
3	2.4	63	54	104	90	142	154	174	177	316	416	59
4	1.8	66	60	90	90	167	149	170	168	278	405	83
5	1.5	68	77	90	95	180	150	167	159	329	235	111
6	1.8	68	112	95	100	184	147	160	150	255	666	128
7	2.5	69	98	95	105	190	142	158	142	173	1950	529
8	3.4	67	88	95	105	183	135	161	134	128	1190	237
9	4.0	67	85	95	110	184	130	175	125	91	547	148
10	3.7	68	95	90	95	179	128	184	113	69	396	106
11	3.0	68	109	80	75	176	125	188	109	63	343	91
12	2.6	69	112	70	60	173	123	191	101	47	301	85
13	3.8	71	124	60	55	169	118	177	91	50	274	80
14	5.5	73	145	50	70	166	113	169	78	35	256	78
15	8.0	73	143	55	90	164	112	168	76	42	227	75
16	12	74	152	65	115	161	111	176	69	44	194	76
17	16	76	145	75	140	160	108	201	64	63	173	79
18	17	75	120	70	175	158	104	252	54	286	155	85
19	18	77	116	65	230	157	121	313	44	1230	132	85
20	22	78	100	70	287	157	140	377	37	628	106	83
21	26	79	90	80	206	160	195	339	56	713	99	82
22	28	79	72	95	176	163	291	306	92	254	76	123
23	30	79	65	130	164	167	460	323	97	154	99	104
24	30	78	65	170	156	170	458	312	93	98	146	144
25	31	80	75	220	152	166	391	272	58	84	129	149
26	34	80	90	200	150	165	304	246	43	129	104	104
27	46	80	110	175	151	163	265	229	52	177	109	81
28	49	85	140	150	147	158	235	224	36	304	89	78
29	54	90	170	140	---	157	219	221	122	302	78	71
30	59	95	180	130	---	178	210	215	72	293	71	64
31	61	---	150	100	---	217	---	203	---	229	64	---
TOTAL	585.1	2217	3290	3259	3569	5203	5673	6837	2999	7010	9403	3341
MEAN	18.9	73.9	106	105	127	168	189	221	100	226	303	111
MAX	61	95	180	220	287	217	460	377	199	1230	1950	529
MIN	1.5	60	54	50	55	142	104	158	36	35	64	59
AC-FT	1160	4400	6530	6460	7080	10320	11250	13560	5950	13900	18650	6630

CAL YR 1980 TOTAL 57120.16 MEAN 156 MAX 900 MIN .00 AC-FT 113300
 WTB YR 1981 TOTAL 53386.10 MEAN 146 MAX 1950 MIN 1.5 AC-FT 105900

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
OCT										
06...	0900	3.0	650	7.9	10.0	9.0	11	320	350	230
21...	1145	25	715	8.0	9.0	10.5	--	--	--	--
NOV										
04...	0945	35	725	8.0	6.0	11.9	17	K81	340	270
18...	1210	73	730	8.0	.0	13.5	--	--	--	--
DEC										
02...	0900	20	775	8.0	.0	13.5	29	K25	250	330
16...	1215	150	640	7.8	.5	12.3	--	--	--	--
JAN										
06...	0930	70	745	8.0	.0	13.1	7	K9	130	290
FEB										
03...	1030	90	840	7.8	.0	12.3	23	K2	56	350
MAR										
03...	1245	185	620	7.8	5.0	11.9	27	84	K14000	250
31...	0930	110	560	7.7	11.0	9.2	74	23000	20000	220
MAY										
04...	0845	170	765	8.3	16.0	8.8	62	K420	800	290
JUN										
04...	1230	160	680	8.1	25.0	11.5	38	220	K400	240
JUL										
06...	0930	275	350	7.7	24.0	7.0	140	K15000	7400	120
22...	1115	250	430	7.7	24.0	7.2	--	--	--	--
AUG										
03...	0945	450	410	7.7	26.0	6.6	130	20000	36000	150
19...	1330	134	630	8.6	24.0	10.5	--	--	--	--
SEP										
01...	0945	90	630	7.8	18.0	9.6	63	240	500	260
14...	1120	76	640	8.2	19.0	10.7	--	--	--	--

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

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

KANSAS RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARTUM, DIS- SOLVED (UG/L AS BA) (01005)	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)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	0945	10	200	<1	0	5	1	.0	3	0	3
FEB 03...	1030	11	200	<1	0	2	0	.0	6	0	4
MAY 04...	0845	13	200	<1	10	1	2	.6	3	0	30
JUL 06...	0930	8	100	1	0	4	1	.0	0	0	10

KANSAS RIVER BASIN

317

06846500 BEAVER CREEK AT CEDAR BLUFFS, KS

LOCATION.--Lat 39°59'06", long 100°33'35", in NW1/4NE1/4 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 (0.3 km) north of Cedar Bluffs, 1.0 mi (1.6 km) south of Kansas-Nebraska State line, and at mi 107.4 (172.8 km).

DRAINAGE AREA.--1,618 mi² (4,191 km²), of which 294 mi² (761 km²) is probably noncontributing.

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 (768.197 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1971, at site 0.1 mi (0.2 km) upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mi (1.3 km) downstream at datum 5.00 ft (1.524 m) lower.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--36 years, 18.5 ft³/s (0.524 m³/s), 13,400 acre-ft/yr (16.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,940 ft³/s (225 m³/s) June 11, 1960, gage height, 18.71 ft (5.703 m); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1944 reached a stage of 18.16 ft (5.535 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 244 ft³/s (6.91 m³/s) May 31, gage height, 7.80 ft (2.377 m), no peak above base of 300 ft³/s (8.50 m³/s); no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	201	.50	2.4	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	116	.40	18	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	74	.64	8.7	.16
4	.00	.00	.00	.00	.00	.02	.00	.00	52	.19	22	.02
5	.00	.00	.00	.00	.00	.00	.00	.00	40	.10	5.4	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	32	.00	1.5	.00
7	.00	.00	.00	.00	.00	.00	.00	.03	27	.00	.83	.00
8	.00	.00	.00	.00	.00	.00	.00	.01	23	.00	.45	.00
9	.00	.00	.00	.00	.00	.00	.00	.04	20	.00	.32	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	15	.00	.26	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	12	.00	.04	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	10	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.04	9.0	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	7.6	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	6.4	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.03	5.5	.00	.08	.00
17	.00	.00	.00	.00	.00	.00	.00	.08	5.0	.00	.08	.00
18	.00	.00	.00	.00	.00	.00	.00	.16	4.2	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.04	.07	3.7	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	3.1	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	5.2	2.9	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.01	98	2.5	.00	.03	.00
23	.00	.00	.10	.00	.00	.00	.00	77	2.1	.00	.16	.00
24	.00	.00	.00	.00	.00	.00	.00	29	1.8	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	15	1.5	.30	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	6.5	1.2	23	.00	.00
27	.20	.00	.00	.00	.00	.00	.00	18	.98	14	.00	.00
28	.30	.00	.00	.00	.00	.08	.01	24	.84	6.0	.00	.00
29	.22	.00	.00	.00	---	.25	.00	21	.86	27	.00	.00
30	.11	.00	.00	.00	---	.00	.00	161	.78	14	.00	.00
31	.00	---	.00	.00	---	.00	---	238	---	4.2	.00	---
TOTAL	.83	.00	.10	.00	.00	.35	.06	693.16	681.96	90.33	60.25	.18
MEAN	.027	.000	.003	.000	.000	.011	.002	22.4	22.7	2.91	1.94	.006
MAX	.30	.00	.10	.00	.00	.25	.04	238	201	27	22	.16
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.78	.00	.00	.00
AC-FT	1.6	.00	.2	.00	.00	.7	.1	1370	1350	179	120	.4

CAL YR 1980 TOTAL 62.87 MEAN .17 MAX 54 MIN .00 AC-FT 125
WTR YR 1981 TOTAL 1527.22 MEAN 4.18 MAX 238 MIN .00 AC-FT 3030

KANSAS RIVER BASIN

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 (122 m) downstream from bridge on U.S. Highway 283, 3.5 mi (5.6 km) west of Beaver City, and at mi 24.7 (39.7 km).

DRAINAGE AREA.--1,950 mi² (5,050 km²), approximately, of which about 1,650 mi² (4,270 km²) 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 (659.270 m) 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 (120 m) upstream at datum 2.0 ft (0.61 m) higher. Nov. 15, 1957, to Sept. 22, 1958, at site 3.6 mi (5.8 km) upstream at different datum.

REMARKS.--Records fair except those for winter period, which are poor.

AVERAGE DISCHARGE.--45 years, 24.3 ft³/s (0.688 m³/s), 17,610 acre-ft/yr (21.7 hm³/yr); median of yearly mean discharges, 14 ft³/s (0.396 m³/s), 10,100 acre-ft/yr (12.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,800 ft³/s (108 m³/s) July 19, 1944, gage height, 13.8 ft (4.21 m), from floodmark, site and datum then in use; no flow at times in 1937-40, 1946, 1953-57, 1959, 1969-74, 1976, 1978-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 232 ft³/s (6.57 m³/s) Aug. 1, gage height, 6.80 ft (2.073 m), no peak above base of 400 ft³/s (11.3 m³/s); no flow, Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.13	.08	.26	.06	.18	.19	.18	.26	.75	26	.18
2	.00	.13	.06	.20	.05	.18	.21	.18	.24	.76	32	.18
3	.02	.13	.07	.18	.04	.20	.25	.17	.20	1.0	11	.24
4	.04	.11	.08	.15	.04	.83	.18	.23	.26	.66	2.9	.31
5	.06	.11	.09	.12	.05	.42	.18	.23	.20	.43	1.3	.26
6	.08	.11	.09	.12	.05	.64	.22	.20	.23	.39	9.3	28
7	.06	.11	.08	.10	.05	.74	.27	.28	.36	.31	11	26
8	.06	.09	.08	.11	.04	.40	.23	.34	.28	.30	4.9	2.9
9	.08	.09	.08	.12	.04	.32	.23	.55	.18	.23	1.4	1.1
10	.04	.10	.09	.12	.04	.31	.27	.51	.21	.20	.98	.57
11	.06	.11	.10	.10	.04	.23	.25	.42	.24	.25	.79	.41
12	.06	.11	.14	.10	.05	.22	.24	.29	.17	.20	.68	.37
13	.04	.09	.18	.10	.05	.23	.26	.30	.14	.12	.67	.37
14	.04	.11	.24	.09	.06	.23	.25	.24	.12	.11	.63	.34
15	.06	.10	.30	.08	.06	.22	.25	.19	.11	.12	.53	.29
16	.10	.07	.15	.07	.07	.23	.25	.28	.08	1.5	.54	.31
17	.10	.08	.15	.06	.08	.28	.23	4.5	.07	2.0	.55	.26
18	.06	.11	.17	.07	.09	.24	.23	7.0	.06	1.4	.55	.19
19	.08	.12	.15	.09	.12	.22	.57	2.1	.07	.41	.53	.20
20	.06	.11	.10	.11	.17	.25	.65	1.1	.06	.26	.45	.17
21	.06	.13	.09	.10	.23	.28	.59	.83	.52	.21	.41	.14
22	.05	.10	.10	.09	.30	.28	3.5	.69	.69	.21	.40	.15
23	.02	.08	.12	.10	.26	.27	2.3	.62	.52	.21	.50	.13
24	.03	.08	.09	.12	.24	.24	.80	.53	.42	.21	.38	.14
25	.06	.08	.08	.14	.24	.28	.52	.48	.34	.41	.32	.13
26	.08	.08	.10	.12	.21	.23	.36	.50	.33	2.1	.30	.14
27	.18	.09	.12	.10	.23	.26	.29	.57	.26	.55	.31	.10
28	.15	.09	.15	.10	.18	.32	.28	.54	6.8	.41	.28	.10
29	.18	.10	.18	.09	---	.24	.24	.47	4.4	.36	.24	.18
30	.21	.10	.20	.08	---	.21	.21	.39	1.2	.31	.20	.06
31	.13	---	.25	.07	---	.20	---	.40	---	.26	.19	---
TOTAL	2.27	3.05	3.96	3.46	3.14	9.38	14.50	25.31	19.02	16.64	110.23	63.92
MEAN	.073	.10	.13	.11	.11	.30	.48	.82	.63	.54	3.56	2.13
MAX	.21	.13	.30	.26	.30	.83	3.5	7.0	6.8	2.1	.32	.28
MIN	.00	.07	.06	.06	.04	.18	.18	.17	.06	.11	.19	.06
AC-FT	4.5	6.0	7.9	6.9	6.2	19	29	50	38	33	219	127

CAL YR 1980 TOTAL 197.41 MEAN .54 MAX 5.4 MIN .00 AC-FT 392
WTR YR 1981 TOTAL 274.88 MEAN .75 MAX 32 MIN .00 AC-FT 545

KANSAS RIVER BASIN

319

06847500 SAPPA CREEK NEAR STANFORD, 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 (12 m) south of Burlington Northern Inc. track, 500 ft (152 m) downstream from bridge on county highway, 2 mi (3 km) east of Stamford, and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--3,740 mi² (9,690 km²), approximately, of which about 3,280 mi² (8,500 km²) 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.

GAGE.--Water-stage recorder. Datum of gage is 1,981.31 ft (603.903 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--36 years, 59.3 ft³/s (1.679 m³/s), 42,960 acre-ft/yr (53.0 hm³/yr); median of yearly mean discharges, 36 ft³/s (1.020 m³/s), 26,100 acre-ft/yr (32.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,400 ft³/s (1,230 m³/s) June 24, 1966, gage height, 22.13 ft (6.745 m), from floodmark, from contracted opening and flow-over-road measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60 ft³/s (1.70 m³/s) Aug. 6, gage height, 6.15 ft (1.875 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	15	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.2	10	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	23	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	36	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	26	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	22	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.0	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.9	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.93	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.71	.11
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.20	212.54	.11
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.14	6.86	.004
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.2	36	.11
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	8.3	422	.2

CAL YR 1980 TOTAL 271.75 MEAN .74 MAX 18 MIN .00 AC-FT 539
WTR YR 1981 TOTAL 216.85 MEAN .59 MAX 36 MIN .00 AC-FT 430

KANSAS RIVER BASIN

06848500 PRAIRIE DOG CREEK NEAR WOODRUFF, KS

LOCATION.--Lat 39°59'09", long 99°28'39", in NW1/4NW1/4 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 mi (2 km) south of Kansas-Nebraska State line, 2.5 mi (4.0 km) west of Woodruff, and at mi 26.5 (42.6 km).

DRAINAGE AREA.--1,007 mi² (2,608 km²).

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 (614.538 m) National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Oct. 7, 1955.

REMARKS.--Records fair. Flow regulated to some extent since 1964 by Norton Reservoir 48.4 mi (77.9 km) upstream and by irrigation development above station.

AVERAGE DISCHARGE.--41 years (water years 1929-32, 1945-81), 36.2 ft³/s (1.025 m³/s), 26,230 acre-ft/yr (32.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) June 23, 1947, gage height, 21.04 ft (6.413 m), site and datum then in use, from rating curve extended above 6,500 ft³/s (184 m³/s) on basis of contracted-opening measurement of 11,300 ft³/s (320 m³/s); no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 351 ft³/s (9.94 m³/s) June 26, gage height, 8.82 ft (2.688 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.03	.00	.00	2.2	.86	1.5	.00
2	.00	.00	.00	.00	.00	.02	.00	.00	1.2	1.1	.90	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.65	.94	.37	.00
4	.00	.00	.00	.00	.00	.17	.00	.00	.38	156	.19	.00
5	.00	.00	.00	.00	.00	.11	.00	.00	.22	33	.08	.00
6	.00	.00	.00	.00	.00	.07	.00	.00	.14	15	5.3	.00
7	.00	.00	.00	.00	.00	.07	.00	.00	.07	10	26	.00
8	.00	.00	.00	.00	.00	.27	.00	.00	.03	5.4	2.9	.19
9	.00	.00	.00	.00	.00	.03	.00	.00	.00	1.6	.69	20
10	.00	.00	.00	.00	.00	.01	.00	.00	.00	.61	.32	7.9
11	.00	.00	.00	.00	.00	.01	.00	.00	.03	.40	.19	2.7
12	.00	.00	.00	.00	.00	.01	.00	.00	.00	.11	.13	.87
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.06	.31
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.15	.12
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.37	.04
16	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.13	.00
17	.00	.00	.00	.00	.00	.00	.00	11	.00	.00	.02	.00
18	.00	.00	.00	.00	.00	.00	.00	3.1	.00	.05	.00	.00
19	.00	.00	.00	.00	.00	.00	.02	1.6	.00	.06	.00	.00
20	.00	.00	.00	.00	.00	.00	.01	1.2	.00	.11	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	1.8	.02	.09	.00	.00
22	.00	.00	.00	.00	.00	.00	.01	57	.00	.03	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	112	.00	.00	.05	.00
24	.00	.00	.00	.00	.00	.00	.00	50	.00	.00	.53	.00
25	.00	.00	.00	.00	.04	.00	.00	20	.00	.00	.41	.00
26	.00	.00	.00	.00	.04	.00	.00	10	119	6.3	.19	.00
27	.00	.00	.00	.00	.04	.00	.00	5.6	31	1.6	.07	.00
28	.00	.00	.00	.00	.04	.01	.00	4.2	10	28	.00	.00
29	.00	.00	.00	.00	---	.00	.00	2.5	4.1	14	.00	.00
30	.00	.00	.00	.00	---	.00	.00	1.5	1.9	8.5	.00	.00
31	.00	---	.00	.00	---	.00	---	2.9	---	3.3	.00	---
TOTAL	.00	.00	.00	.00	.16	.81	.04	284.41	170.94	380.16	40.55	32.13
MEAN	.000	.000	.000	.000	.006	.026	.001	9.17	5.70	12.3	1.31	1.07
MAX	.00	.00	.00	.00	.04	.27	.02	112	119	156	26	20
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.3	1.6	.08	564	339	754	80	64

CAL YR 1980 TOTAL 402.06 MEAN 1.10 MAX 48 MIN .00 AC-FT 797
WTR YR 1981 TOTAL 909.20 MEAN 2.49 MAX 156 MIN .00 AC-FT 1800

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 (3 km) southeast of Republican City and 8 mi (13 km) southeast of Alma.

DRAINAGE AREA.--20,750 mi² (53,700 km²), approximately, of which about 13,530 mi² (35,000 km²) 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 (REVISED).--Reservoir is formed by earthfill dam with gravity-type concrete spillway section; storage began Nov. 14, 1952. Capacity, 319,800 acre-ft (0.394 km³) between elevations 1,885.0 ft (575 m), sill of outlet gates, and 1,946.0 ft (593 m), top of storage pool. Top of flood-control pool at elevation 1,973.5 ft (602 m), capacity, 828,800 acre-ft (1.02 km³). Top of superstorage flood-control pool at elevation 1,975.5 ft (602 m), capacity, 875,600 acre-ft (1.08 km³). Figures given herein represent total contents. Water used for irrigation in the Bostwick irrigation project.

COOPERATION.--Capacity table furnished by Corps of Engineers (revised Oct. 1, 1974).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 497,700 acre-ft (0.614 km³) Apr. 6, 1960, elevation, 1,955.67 ft (596.088 m); minimum since operation of reservoir began, 110,300 acre-ft (0.136 km³) Oct. 22 to Nov. 6, 1953, elevation, 1,922.00 ft (585.826 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 252,500 acre-ft (0.311 km³) June 15, elevation, 1,940.67 ft (591.516 m); minimum, 195,600 acre-ft (0.241 km³) Oct. 26, elevation, 1,935.29 ft (589.876 m).

Capacity table (elevation, in feet,
and contents, in acre-feet)

1,935	192,800	1,945	306,400
1,940	244,700		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199900	197000	198700	202500	207500	214700	223400	233400	250600	239400	222700	230800
2	199500	197200	198500	202700	207600	215000	223500	233700	250800	239700	224100	230600
3	199100	197200	198500	202900	207900	215200	224000	234000	250900	240300	224400	230900
4	199000	197200	198600	203000	208100	215500	224000	234700	251100	240000	225200	230900
5	198900	197200	198600	203200	208400	215700	224000	234700	251300	240200	225600	231300
6	198900	197300	198700	203300	208600	216000	224100	234800	251300	239200	229500	231800
7	198900	197400	199000	203500	208900	216800	224300	235200	251500	238000	232700	232200
8	198800	197400	199000	203600	209200	217200	224400	235700	251600	236800	235100	232600
9	198700	197500	199100	203700	209400	217400	224400	236500	251600	235200	236200	232900
10	198500	197500	199100	203900	209700	217700	224500	236600	251600	233800	236800	232900
11	198200	197600	199200	204000	209900	218100	224700	236700	252000	232400	236800	232800
12	197900	197600	199300	204100	210200	218400	225000	236900	252000	230900	236700	232900
13	198000	197600	199600	204300	210500	218800	225700	237500	252000	229100	236900	232900
14	197600	197600	199800	204500	210700	219100	225800	237500	252000	227300	237100	232700
15	197500	197600	200100	204600	211000	219300	225900	237500	252000	225600	237100	232600
16	197500	197700	200300	204700	211200	219500	226000	238300	251600	223700	237000	232300
17	197500	197700	200600	204900	211500	219600	226000	240300	251100	222500	237000	232300
18	197400	197700	200700	205100	211800	219900	226900	241300	250500	221700	236800	232200
19	197200	197700	200700	205200	212000	220100	227500	241800	250000	222600	236000	232200
20	197200	197800	200600	205300	212300	220000	228000	242300	250000	222900	235000	232200
21	197100	197800	200700	205500	212500	220400	228300	243900	250500	222800	233800	232100
22	196800	197900	200800	205700	212800	220700	229300	245800	249800	222300	233100	232000
23	196800	198000	200900	205900	213100	220900	229700	246200	249100	221100	232700	232100
24	196600	198000	201000	206200	213300	221400	230700	246600	248100	220000	232200	233200
25	196300	198200	201100	206500	213600	221500	231500	247600	246900	219400	232000	233400
26	196000	198300	201200	206700	213800	221700	231800	248300	245900	220100	231800	233400
27	197100	198300	201400	207000	214200	221900	232300	249200	244700	220400	231400	233400
28	197000	198400	201600	207000	214500	222600	232700	249700	243500	220600	231000	233400
29	197000	198500	201600	207100	---	222900	233000	249900	242200	221200	230900	233400
30	197000	198600	202100	207200	---	223100	233400	250100	240700	221700	230800	233400
31	197000	---	202200	207300	---	223300	---	250200	---	222000	230800	---
MAX	199900	198600	202200	207300	214500	223300	233400	250200	252000	240300	237100	233400
MIN	196000	197000	198500	202500	207500	214700	223400	233400	240700	219400	222700	230600
Δ	1935.43	1935.60	1935.96	1936.47	1937.18	1938.04	1939.00	1940.48	1939.65	1937.91	1938.75	1939.00
Δ	-3100	+1600	+3600	+5100	+7200	+8800	+10100	+16800	-9500	-18700	+8800	+2600
CAL YR 1980	MAX	334800	MIN	196000	-39700							
WTR YR 1981	MAX	252000	MIN	196000	+33300							

Δ Elevation, in feet, at end of month.

Δ Change in contents, in acre-feet.

KANSAS RIVER BASIN

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 (2.3 km) west of Naponee, 1.4 mi (2.3 km) upstream from Turkey Creek, and 2.8 mi (4.5 km) downstream from Harlan County Dam.

DRAINAGE AREA.--20,760 mi² (53,800 km²), approximately, of which about 13,550 mi² (35,100 km²) 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 (567.958 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records poor. Flow completely regulated by Harlan County Lake (station 06849000) and partially regulated by six upstream reservoirs.

AVERAGE DISCHARGE.--28 years (1953-81), 264 ft³/s (7.476 m³/s), 191,300 acre-ft/yr (0.236 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,320 ft³/s (122 m³/s) June 25, 1957, gage height, 8.65 ft (2.637 m); minimum daily, 1.5 ft³/s (0.042 m³/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 (7,360 m³/s), from slope-area measurement near Bloomington.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft³/s (31.4 m³/s) July 3, gage height, 4.11 ft (1.253 m); minimum daily, 2.5 ft³/s (0.071 m³/s) May 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.7	6.7	5.8	4.0	6.3	4.1	6.8	8.2	610	104	14
2	11	7.7	6.7	5.8	4.0	6.3	4.3	6.6	7.3	610	103	12
3	11	7.7	6.7	5.8	4.0	6.3	5.1	6.2	7.7	677	22	14
4	11	7.7	6.7	5.2	4.0	6.3	5.8	5.2	6.4	343	17	14
5	8.8	7.2	6.3	5.2	4.2	6.3	5.1	4.0	7.2	330	18	18
6	8.7	6.7	6.3	5.2	4.6	5.4	5.3	3.6	12	440	268	19
7	8.8	6.7	6.3	5.2	5.0	5.2	6.6	2.5	13	532	54	18
8	9.4	7.2	6.7	5.2	5.0	4.8	6.3	2.8	12	510	32	13
9	8.8	7.2	6.7	5.2	4.5	4.0	6.7	6.6	12	480	25	13
10	8.8	7.2	6.7	5.2	4.0	3.6	7.2	5.2	11	431	76	13
11	8.2	6.6	6.3	4.6	3.5	3.1	7.2	4.0	12	381	168	13
12	8.2	6.3	6.3	4.6	3.5	3.6	6.3	5.9	11	408	194	13
13	8.8	5.2	6.3	4.6	4.0	3.6	8.2	6.8	10	500	83	13
14	8.6	5.2	6.3	4.6	4.5	3.6	6.3	7.9	10	570	27	14
15	8.7	5.8	6.3	4.6	5.0	3.6	4.7	7.7	11	592	27	14
16	9.4	5.8	6.3	4.6	6.0	4.0	4.6	10	21	587	27	14
17	7.2	5.8	5.9	4.6	7.0	3.6	5.0	21	118	537	22	13
18	9.2	5.8	5.8	4.6	8.0	5.2	6.3	14	197	355	51	13
19	9.1	5.8	5.8	4.6	7.5	5.2	9.4	10	193	188	125	12
20	9.4	5.8	6.3	4.6	7.0	5.2	8.2	8.2	197	182	169	12
21	8.8	5.8	6.3	4.0	6.5	5.0	7.8	48	197	224	208	13
22	8.8	6.3	6.3	4.0	6.5	5.2	7.8	113	261	289	230	14
23	8.8	6.3	5.9	4.0	6.5	3.9	7.8	14	372	319	253	14
24	10	6.3	5.8	4.0	6.5	4.0	7.6	8.8	493	335	175	38
25	9.4	6.3	5.8	4.0	6.5	4.0	7.6	8.2	622	234	94	14
26	9.4	6.3	5.8	4.0	6.3	4.0	7.6	9.1	658	154	63	12
27	13	6.3	5.8	4.0	6.3	4.0	7.4	57	587	76	63	12
28	9.0	6.3	5.8	4.0	6.3	6.3	7.2	38	575	24	56	12
29	8.5	6.7	5.2	4.0	---	5.5	7.2	17	633	16	33	12
30	8.2	6.7	5.2	4.0	---	5.8	7.2	10	616	15	18	13
31	7.2	---	5.2	4.0	---	4.0	---	7.8	---	21	16	---
TOTAL	284.2	194.4	190.5	143.8	150.7	146.9	197.9	475.9	5890.8	10970	2821	433
MEAN	9.17	6.48	6.15	4.64	5.38	4.74	6.60	15.4	196	354	91.0	14.4
MAX	13	7.7	6.7	5.8	8.0	6.3	9.4	113	658	677	268	38
MIN	7.2	5.2	5.2	4.0	3.5	3.1	4.1	2.5	6.4	15	16	12
AC-FT	564	386	378	285	299	291	393	944	11680	21760	5600	859

CAL YR 1980 TOTAL 50244.2 MEAN 137 MAX 1010 MIN 5.2 AC-FT 99660
WTR YR 1981 TOTAL 21899.1 MEAN 60.0 MAX 677 MIN 2.5 AC-FT 43440

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 (2 km) northwest of Franklin and 3 mi (5 km) upstream from mouth.

DRAINAGE AREA.--74 mi² (190 km²), approximately, of which about 56 mi² (150 km²) 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.

GAGE.--Water-stage recorder. Datum of gage is 1,858.34 ft (566.422 m) National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Dec. 19, 1952, nonrecording gage at site 1.5 mi (2.4 km) downstream at datum 30.27 ft (9.226 m) lower and Dec. 19, 1952, to Sept. 30, 1956, at present site at datum 0.84 ft (0.256 m) 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.--Records fair except those for winter period, which are poor. Two small diversions above station for irrigation.

AVERAGE DISCHARGE.--19 years (1948-56, 1968-75, 1978-81) 7.66 ft³/s (0.217 m³/s), 5,550 acre-ft/yr (6.84 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft³/s (89.2 m³/s) Sept. 20, 1950, gage height, 6.8 ft (2.07 m), from floodmark, site and datum then in use, from rating curve extended above 420 ft³/s (11.9 m³/s) on basis of slope-area measurement of peak flow; no flow at times during 1948-50.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35 ft³/s (0.99 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 14	0015	41 1.2	1.87 0.570	July 26	0300	582 16.5	a3.95 1.204
May 21	2300	*1170 33.1	a5.20 1.585	Aug. 1	2300	250 7.1	2.94 0.896
May 28	0530	530 15.0	3.80 1.158	Aug. 6	0900	680 19.3	a4.20 1.280
July 18	0400	253 7.2	2.95 0.899	Aug. 23	0530	113 3.2	2.43 0.741
July 24	0830	102 2.9	2.32 0.707	Sept. 6	2300	114 3.2	2.44 0.744

a From highwater mark (crest stage gage).

Minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	5.9	7.5	5.9	6.5	6.9	8.5	7.0	8.2	6.6	23	5.9
2	4.6	5.7	8.0	5.9	6.5	6.5	8.4	7.1	8.1	7.4	67	6.4
3	4.9	5.7	7.0	5.9	6.6	6.1	8.5	6.7	7.9	7.5	25	7.7
4	4.7	6.0	7.6	5.9	6.8	7.4	8.1	7.1	7.6	7.2	16	7.8
5	5.0	6.1	6.8	5.9	7.0	6.2	7.7	6.8	7.6	7.4	14	7.7
6	5.0	6.1	6.8	5.8	7.2	6.7	7.5	6.6	7.2	7.3	48	11
7	5.5	6.1	6.4	5.7	7.5	6.4	7.3	7.3	7.2	7.1	13	7.6
8	5.0	5.7	6.0	5.4	7.3	6.6	7.2	7.5	7.6	7.1	13	6.1
9	5.2	5.7	6.0	5.6	6.8	6.4	6.7	8.7	7.3	7.2	12	5.8
10	5.0	5.7	6.2	5.9	6.0	6.3	6.7	7.6	7.4	7.0	12	6.3
11	4.9	5.7	6.3	6.0	6.5	6.4	6.7	7.6	8.0	7.2	12	7.3
12	5.2	5.5	6.4	5.8	7.0	5.9	6.5	7.4	7.8	6.9	12	8.9
13	5.1	5.5	6.4	5.8	7.0	6.4	8.5	7.2	7.6	5.9	14	9.0
14	4.7	5.5	6.8	6.0	7.6	8.4	7.3	6.8	8.4	5.0	13	8.2
15	4.8	5.5	6.4	6.6	8.5	8.4	6.8	7.2	8.9	6.6	10	8.2
16	5.0	5.3	6.4	5.8	8.6	8.0	6.7	8.0	8.3	6.2	10	8.7
17	4.8	5.0	6.4	5.4	8.4	8.0	6.4	10	8.2	8.1	10	8.9
18	4.9	5.0	6.2	5.7	8.0	8.0	6.6	10	7.9	22	12	7.7
19	5.0	5.3	5.8	6.4	7.9	7.6	8.0	8.7	7.8	7.6	12	8.4
20	4.8	5.6	5.2	7.0	7.8	8.0	7.0	8.3	7.9	7.3	10	8.3
21	4.9	5.8	5.2	6.4	8.3	8.0	6.7	81	8.0	9.1	9.2	8.0
22	4.7	6.0	5.4	6.9	8.4	8.0	8.7	43	7.6	8.6	9.0	7.5
23	4.7	5.5	5.3	6.9	8.0	8.4	7.2	12	6.9	7.7	27	7.5
24	5.5	5.0	5.2	7.4	7.7	8.0	6.4	8.8	6.2	28	8.9	8.5
25	5.3	5.0	5.3	7.9	7.5	8.0	6.6	8.0	5.8	25	8.0	15
26	5.3	5.0	5.8	7.8	7.5	8.0	6.6	9.2	6.1	62	8.4	9.5
27	6.4	5.0	6.4	7.9	7.1	8.0	6.2	16	6.5	17	8.2	8.0
28	5.4	5.5	6.2	7.3	7.1	8.4	6.1	103	6.7	14	7.6	7.0
29	5.2	6.0	5.9	7.7	---	8.0	6.2	16	6.9	10	6.9	6.5
30	5.2	7.0	5.9	7.0	---	8.4	6.6	7.5	6.5	10	6.4	6.5
31	5.6	---	5.9	6.5	---	9.4	---	8.2	---	10	5.9	---
TOTAL	156.6	168.4	193.1	198.1	207.1	231.2	214.4	466.3	224.1	356.0	463.5	239.9
MEAN	5.05	5.61	6.23	6.39	7.40	7.46	7.15	15.0	7.47	11.5	15.0	8.00
MAX	6.4	7.0	8.0	7.9	8.6	9.4	8.7	103	8.9	62	67	15
MIN	4.3	5.0	5.2	5.4	6.0	5.9	6.1	6.6	5.8	5.0	5.9	5.8
AC-FT	311	334	383	393	411	459	425	925	445	706	919	476
CAL YR 1980	TOTAL	2283.9	MEAN 6.24	MAX 69	MIN 2.0	AC-PT 4530						
WTR YR 1981	TOTAL	3118.7	MEAN 8.54	MAX 103	MIN 4.3	AC-PT 6190						

KANSAS RIVER BASIN

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 8 ft (2 m) downstream from bridge on State Highway 136, at west edge of Riverton, 240 ft (73 m) upstream from Burlington Northern Inc. bridge, and 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--279 mi² (723 km²), of which about 190 mi² (492 km²) 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 (534.430 m) National Geodetic Vertical Datum of 1929. Apr. 1 to Oct. 1, 1948, nonrecording gage 240 ft (73 m) downstream at datum 2.32 ft (0.707 m) higher. Oct. 1, 1948, to July 11, 1950, water-stage recorder at present site at datum 1.32 ft (0.402 m) 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.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--19 years (1948-56, 1968-75, 1978-81), 30.1 ft³/s (0.852 m³/s), 21,810 acre-ft/yr (26.9 hm³/yr); median of yearly mean discharges, 27 ft³/s (0.765 m³/s), 19,600 acre-ft/yr (24.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) July 9, 1950, gage height, 13.22 ft (4.029 m), present datum, by slope-area measurement; minimum daily, 8.1 ft³/s (0.23 m³/s) Dec. 19, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s (7.93 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
May 22	0545	3070 86.9	9.24 2.816	July 26	0615	316 8.9	5.06 1.542
May 28	0915	*4820 137	10.43 3.179	Aug. 2	0300	2210 62.6	8.42 2.566
July 3	1100	298 8.4	4.98 1.518	Aug. 23	1515	447 12.7	5.56 1.695
July 17	0930	288 8.2	4.93 1.503	Sept. 24	1215	937 26.5	6.73 2.051

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Feb. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	19	15	17	14	19	20	19	33	16	47	17
2	15	18	20	17	15	20	20	19	31	17	840	18
3	15	19	15	17	20	20	20	19	27	144	100	20
4	15	18	16	17	16	26	20	19	27	44	52	20
5	16	18	15	18	15	22	20	18	27	17	58	19
6	15	17	14	19	15	21	20	18	27	17	88	20
7	15	17	15	18	15	22	21	18	27	18	89	54
8	16	17	14	18	15	21	21	18	26	18	41	18
9	15	16	14	17	15	21	21	21	25	19	25	18
10	15	16	14	17	13	21	22	18	25	19	23	18
11	16	15	14	17	16	20	22	17	26	19	23	18
12	15	15	15	17	16	21	22	17	26	18	27	18
13	15	15	15	17	17	21	37	17	24	18	69	18
14	15	14	15	17	17	20	25	16	24	18	44	18
15	14	14	15	17	17	21	20	16	27	24	34	18
16	16	14	15	16	17	21	21	28	24	20	34	18
17	15	14	15	15	17	22	20	40	23	129	29	18
18	14	14	15	15	17	22	20	41	22	102	23	18
19	15	14	15	16	17	21	24	30	22	74	21	18
20	15	14	15	16	17	21	23	20	21	117	22	18
21	15	14	15	16	17	20	23	19	31	55	21	18
22	16	14	15	16	18	20	40	1080	21	27	21	18
23	16	14	16	16	18	20	27	66	21	28	212	18
24	16	14	15	16	18	20	23	29	20	42	101	201
25	17	14	14	16	19	20	25	25	19	38	87	53
26	17	14	15	16	19	20	21	20	20	146	44	19
27	19	14	16	15	20	20	21	31	17	75	22	18
28	19	15	16	15	19	27	20	1190	17	49	19	18
29	18	14	17	15	---	26	19	136	17	32	18	18
30	19	15	17	14	---	23	20	60	17	32	18	18
31	18	---	17	14	---	21	---	38	---	32	17	---
TOTAL	492	460	474	507	469	660	678	3123	714	1424	2269	801
MEAN	15.9	15.3	15.3	16.4	16.8	21.3	22.6	101	23.8	45.9	73.2	26.7
MAX	19	19	20	19	20	27	40	1190	33	146	840	201
MIN	14	14	14	14	13	19	19	16	17	16	17	17
AC-FT	976	912	940	1010	930	1310	1340	6190	1420	2820	4500	1590
CAL YR 1980 TOTAL	8170.0			MEAN 22.3	MAX 366	MIN 9.5	AC-FT 16210					
WTR YR 1981 TOTAL	12071.0			MEAN 33.1	MAX 1190	MIN 13	AC-FT 23940					

KANSAS RIVER BASIN

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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 (4.0 km) upstream from mouth, and 4.5 mi (7.2 km) east of Red Cloud.

DRAINAGE AREA.--39.2 mi² (101.5 km²).

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.

GAGE.--Water-stage recorder. Datum of gage is 1,659.07 ft (505.685 m) National Geodetic Vertical Datum of 1929. Prior to July 17, 1952, nonrecording gage at upstream side of bridge at datum 7.26 ft (2.213 m) higher, and July 17, 1952, to Jan. 4, 1954, water-stage recorder, present site, at datum 6.26 ft (1.908 m) higher, and Sept. 6, 1961, to Sept. 30, 1977, crest-stage gage at present site and datum.

REMARKS.--Records good. Natural flow affected by pump irrigation development above station.

AVERAGE DISCHARGE.--9 years (1949-53, 1978-81), 21.1 ft³/s (0.60 m³/s), 15,290 acre-ft (18.9 hm³) per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 6,000 ft³/s (170 m³/s) July 4, 1959, gage height, 17.05 ft (5.197 m), present datum; minimum daily, 9.4 ft³/s (0.27 m³/s) June 29, July 1, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 770 ft³/s (21.8 m³/s) July 17, gage height, 12.85 ft (3.917 m), from high-water mark; minimum daily, 9.4 ft³/s (0.27 m³/s) June 29, July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	14	14	15	17	15	18	19	9.4	21	12
2	12	13	14	14	15	16	15	18	17	11	147	12
3	12	13	13	14	14	17	15	20	16	35	51	12
4	12	13	14	14	14	19	14	23	15	23	23	12
5	13	13	14	14	14	17	14	19	14	16	23	12
6	13	14	14	14	14	17	14	18	14	14	25	13
7	13	14	14	14	14	16	14	18	13	14	23	25
8	13	14	14	14	14	16	14	18	13	13	16	17
9	13	14	14	14	14	16	14	21	12	14	14	14
10	13	14	14	14	15	16	15	20	12	13	13	13
11	13	14	14	14	22	16	15	19	12	13	12	12
12	13	14	14	14	14	16	15	19	12	13	12	12
13	13	14	14	14	14	16	15	18	12	13	12	11
14	13	14	14	14	14	16	15	18	12	13	12	11
15	14	14	14	14	14	16	16	18	12	13	12	11
16	15	14	15	13	14	17	16	21	12	13	12	10
17	14	14	15	13	14	17	16	44	11	266	11	10
18	14	13	15	13	14	16	17	77	11	109	11	10
19	14	14	14	14	14	16	19	73	11	104	11	10
20	15	14	14	14	15	17	18	37	11	48	11	10
21	15	14	14	14	15	17	18	24	11	30	11	9.8
22	15	14	14	14	15	17	22	21	11	26	11	9.8
23	15	14	14	14	16	17	19	22	11	23	25	9.8
24	15	14	13	15	16	17	18	19	10	29	16	11
25	15	14	13	15	16	18	18	18	9.9	48	18	52
26	15	14	13	15	16	18	18	22	9.9	94	14	24
27	15	14	13	15	17	18	18	88	9.9	63	13	18
28	15	14	14	15	17	30	17	235	9.6	34	13	16
29	14	14	14	15	---	40	18	153	9.4	27	13	16
30	14	14	14	15	---	22	18	42	9.6	24	12	15
31	14	---	14	15	---	16	---	23	---	23	12	---
TOTAL	426	415	432	439	420	560	490	1204	362.3	1188.4	630	430.4
MEAN	13.7	13.8	13.9	14.2	15.0	18.1	16.3	38.8	12.1	38.3	20.3	14.3
MAX	15	14	15	15	22	40	22	235	19	266	147	52
MIN	12	13	13	13	14	16	14	18	9.4	9.4	11	9.8
AC-FT	845	823	857	871	833	1110	972	2390	719	2360	1250	854
CAL YR 1980	TOTAL	6373.0	MEAN 17.4	MAX 250	MIN 10	AC-FT 12640						
WTR YR 1981	TOTAL	6997.1	MEAN 19.2	MAX 266	MIN 9.4	AC-FT 13880						

KANSAS RIVER BASIN

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 (0.3 km) upstream from Nebraska-Kansas State line and 3.5 mi (5.6 km) 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 (491.478 m) National Geodetic Vertical Datum of 1929.

REMARKS.--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.--27 years, 77.5 ft³/s (2.195 m³/s), 56,150 acre-ft/yr (69.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 781 ft³/s (22.1 m³/s) Sept. 2, 1973, gage height, 5.05 ft (1.539 m); no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 432 ft³/s (12.2 m³/s) July 4; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	84	68	55	404	123	65
2	.00	.00	.00	.00	.00	.00	71	69	63	410	128	65
3	.00	.00	.00	.00	.00	.00	75	71	66	418	218	60
4	.00	.00	.00	.00	.00	.00	73	73	66	432	238	48
5	.00	.00	.00	.00	.00	.00	73	76	81	408	214	40
6	.00	.00	.00	.00	.00	.00	71	75	116	327	177	39
7	.00	.00	.00	.00	.00	.00	69	70	110	281	146	38
8	.00	.00	.00	.00	.00	.00	68	69	107	342	135	30
9	.00	.00	.00	.00	.00	.00	67	86	96	388	135	16
10	.00	.00	.00	.00	.00	.00	68	95	95	369	133	3.0
11	.00	.00	.00	.00	.00	.00	70	94	94	312	131	17
12	.00	.00	.00	.00	.00	.00	69	90	95	285	130	23
13	.00	.00	.00	.00	.00	.00	68	77	94	265	130	22
14	.00	.00	.00	.00	.00	.00	66	75	89	271	108	17
15	.00	.00	.00	.00	.00	.00	77	72	89	287	88	3.6
16	.00	.00	.00	.00	.00	.00	83	73	85	324	86	.00
17	.00	.00	.00	.00	.00	.00	73	114	84	360	85	.00
18	.00	.00	.00	.00	.00	.00	74	157	81	402	83	.00
19	.00	.00	.00	.00	.00	.00	74	150	106	406	75	.00
20	.00	.00	.00	.00	.00	.00	80	78	181	364	91	.00
21	.00	.00	.00	.00	.00	.00	103	10	206	336	149	.00
22	.00	.00	.00	.00	.00	.00	101	68	214	312	171	.00
23	.00	.00	.00	.00	.00	.00	107	78	229	287	182	.00
24	.00	.00	.00	.00	.00	.00	108	74	242	272	192	.00
25	.00	.00	.00	.00	.00	16	91	72	249	283	187	.00
26	.00	.00	.00	.00	.00	59	73	73	281	297	171	.00
27	.00	.00	.00	.00	.00	73	77	112	319	281	140	.00
28	.00	.00	.00	.00	.00	86	72	96	374	234	120	.00
29	.00	.00	.00	.00	---	77	70	64	376	217	98	.00
30	.00	.00	.00	.00	---	81	68	59	368	179	88	.00
31	.00	---	.00	.00	---	104	---	57	---	145	78	---
TOTAL	.00	.00	.00	.00	.00	496.00	2323	2495	4711	9898	4230	486.60
MEAN	.000	.000	.000	.000	.000	16.0	77.4	80.5	157	319	136	16.2
MAX	.00	.00	.00	.00	.00	104	108	157	376	432	238	65
MIN	.00	.00	.00	.00	.00	.00	66	10	55	145	75	.00
AC-FT	.00	.00	.00	.00	.00	984	4610	4950	9340	19630	8390	965
CAL YR 1980	TOTAL	35731.50	MEAN	97.6	MAX	664	MIN	.00	AC-FT	70870		
WTR YR 1981	TOTAL	24639.60	MEAN	67.5	MAX	432	MIN	.00	AC-FT	48870		

KANSAS RIVER BASIN

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06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE

LOCATION.--Lat 40°04'05", long 98°22'25", in SW1/4NE1/4 sec.7, T.1 N., R.9 W., Webster County, Hydrologic Unit 10250016, on left bank 300 ft (91 m) upstream from Willow Creek, 0.2 mi (0.3 km) downstream from Courtland diversion dam, and 2 mi (3 km) southwest of Guide Rock.

DRAINAGE AREA.--22,040 mi² (57,100 km²), approximately, of which about 14,550 mi² (37,700 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,624.13 ft (495.035 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1959, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good except those for winter period, 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.--31 years, 339 ft³/s (9.600 m³/s), 245,600 acre-ft/yr (0.303 km³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,200 ft³/s (827 m³/s) June 16, 1957, gage height, 20.73 ft (6.319 m), present datum; minimum daily, 0.1 ft³/s (0.003 m³/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 (7,080 m³/s), from slope-area measurements near Bloomington and Hardy.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,800 ft³/s (108 m³/s) May 29, gage height, 14.50 ft (4.420 m); minimum daily, 1.7 ft³/s (0.048 m³/s) Apr. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	78	58	109	70	95	13	12	222	35	11	61
2	44	78	50	96	70	93	13	6.1	159	11	662	51
3	43	79	46	98	70	101	8.6	3.4	130	206	995	44
4	42	74	54	104	72	129	8.0	14	115	873	163	61
5	42	74	60	102	72	132	1.7	11	77	76	50	69
6	54	75	75	102	76	123	4.5	1.9	33	42	59	68
7	58	76	62	99	82	113	6.9	7.2	24	42	765	321
8	63	76	56	96	80	111	6.1	14	19	66	547	452
9	66	72	58	96	76	134	7.0	30	23	41	169	199
10	65	70	62	80	70	141	6.5	32	14	64	91	147
11	60	72	70	75	56	143	8.0	14	11	54	57	121
12	61	72	82	70	58	142	6.4	8.3	10	13	37	106
13	74	74	92	76	65	139	13	6.9	9.6	7.1	87	98
14	75	72	93	90	90	135	20	11	5.8	15	246	89
15	75	70	90	90	120	135	46	11	18	26	146	85
16	79	68	93	85	137	136	20	22	17	20	71	82
17	78	68	89	68	158	138	15	88	2.8	276	54	80
18	78	70	86	70	134	141	21	240	2.4	348	37	79
19	74	72	72	75	113	138	50	266	35	446	26	79
20	71	72	40	82	106	55	35	146	31	154	29	79
21	74	72	44	90	104	20	9.5	120	31	121	44	79
22	74	70	48	100	103	10	24	439	53	57	42	79
23	70	70	60	105	101	7.5	24	1360	12	23	101	80
24	70	68	58	115	100	7.5	5.0	403	9.8	17	538	97
25	68	66	50	117	102	5.0	21	186	4.8	133	362	539
26	70	64	65	105	102	5.0	18	107	35	428	193	264
27	87	62	90	99	104	5.0	6.2	160	60	515	100	157
28	91	60	103	95	100	5.0	4.3	1250	56	181	70	128
29	88	60	104	91	---	5.0	5.4	2790	17	51	85	118
30	81	58	107	60	---	5.0	11	728	51	16	109	108
31	78	---	117	64	---	4.6	---	348	---	11	76	---
TOTAL	2103	2112	2234	2804	2591	2553.6	438.1	8835.8	1288.2	4368.1	6022	4020
MEAN	67.8	70.4	72.1	90.5	92.5	82.4	14.6	285	42.9	141	194	134
MAX	91	79	117	117	158	143	50	2790	222	873	995	539
MIN	42	58	40	60	56	4.6	1.7	1.9	2.4	7.1	11	44
AC-FT	4170	4190	4430	5560	5140	5070	869	17530	2560	8660	11940	7970
CAL YR 1980	TOTAL	44459.9	MEAN	121	MAX	1540	MIN	1.2	AC-FT	88190		
WTR YR 1981	TOTAL	39369.8	MEAN	108	MAX	2790	MIN	1.7	AC-FT	78090		

KANSAS RIVER BASIN

06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1962 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
OCT 06...	1600	59	--	7.9	21.0	10.3	16	380	K69	230	65
NOV 04...	1700	74	640	8.0	12.5	10.7	4	K10	200	260	76
DEC 02...	1550	50	610	8.0	.0	13.5	18	K25	210	280	87
JAN 06...	1600	102	640	7.9	2.5	13.1	12	K6	50	260	80
FEB 03...	1715	70	745	8.0	.0	13.1	9	K2	K9	310	95
MAR 03...	1430	128	530	7.9	5.0	11.9	15	66	1500	230	69
31...	1630	5.0	610	8.0	15.0	10.0	16	1800	9000	270	82
MAY 04...	1615	14	560	8.0	19.0	9.6	63	400	780	250	76
JUN 03...	1440	133	720	8.0	24.0	8.8	18	600	430	330	100
JUL 06...	1745	57	550	7.9	30.0	7.6	39	2500	1200	200	52
AUG 03...	1745	560	290	7.7	29.0	7.0	98	4000	2400	120	36
SEP 01...	1630	58	690	8.2	23.0	10.5	53	150	K110	300	86

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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 06...	17	110	21	1170	.47	.030	1.1	1.10	1.6	.030	10
NOV 04...	17	92	19	421	.51	.060	.58	.64	1.2	.250	6.9
DEC 02...	16	79	20	466	1.4	.020	.71	.73	2.1	.200	4.9
JAN 06...	15	83	18	534	1.5	.090	.88	.97	2.5	.160	7.1
FEB 03...	17	100	21	506	1.7	.090	.85	.94	2.6	.180	13
MAR 03...	14	74	13	393	.81	.090	.81	.90	1.7	.200	7.5
31...	16	87	18	469	.71	.090	1.2	1.30	2.0	.230	9.2
MAY 04...	15	80	15	430	.48	.110	1.4	1.50	2.0	.240	13
JUN 03...	19	110	21	590	1.2	.070	1.0	1.10	2.3	.510	5.4
JUL 06...	17	92	22	581	.59	.160	1.4	1.60	2.2	.340	10
AUG 03...	8.0	17	8.9	1370	.92	.740	2.5	3.20	4.1	1.10	25
SEP 01...	21	120	30	496	1.1	<.090	--	1.10	2.2	.240	4.0

KANSAS RIVER BASIN

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06853000 REPUBLICAN RIVER NEAR GUIDE ROCK, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITTY LAB (MG/L AS CACO3) (90410)	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)
NOV 04...	1700	40	33	.9	11	220	.4	28	411
JAN 06...	1600	32	31	.8	9.5	230	.3	30	412
FEB 03...	1715	57	33	.8	10	250	.3	34	469
MAY 04...	1615	42	26	.7	9.6	210	.3	29	380
JUN 03...	1440	--	--	--	--	--	--	--	--
JUL 06...	1745	20	38	1.2	19	180	.5	9.8	359
SEP 01...	1630	--	--	--	--	--	.4	--	--

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 04...	.56	82.1	.48	.210	4	100	100	<1	0
JAN 06...	.56	113	1.5	.130	--	--	60	--	--
FEB 03...	.65	88.6	1.9	.160	4	200	60	<1	0
MAY 04...	.52	14.4	.48	.160	6	100	60	<1	0
JUN 03...	--	--	1.1	--	--	--	--	--	--
JUL 06...	.49	55.3	.59	.150	6	200	260	<1	10
SEP 01...	.64	73.3	--	--	--	--	--	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 04...	8	40	5	30	.2	2	0	7
JAN 06...	--	20	--	20	--	--	--	--
FEB 03...	1	20	0	30	.0	3	0	10
MAY 04...	1	60	1	60	.0	2	0	40
JUN 03...	--	--	--	--	--	--	--	--
JUL 06...	3	20	1	6	.1	0	0	10
SEP 01...	--	--	--	--	--	--	--	--

KANSAS RIVER BASIN

06853500 REPUBLICAN RIVER NEAR HARDY, NE

LOCATION.--Lat 39°59'33", long 97°55'53", in NE1/4NE1/4SE1/4 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 (1.9 km) southwest of Hardy and at mi 141.2 (227.2 km).

DRAINAGE AREA.--22,401 mi² (58,019 km²), of which about 7,500 mi² (19,425 km²) 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), 1907-9, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft (457.645 m) National Geodetic Vertical Datum of 1929. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi (32 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station and by storage in reservoirs in Colorado, Kansas and Nebraska. Considerable regulation since 1952 by Harlan County Reservoir (see site 06849000).

AVERAGE DISCHARGE.--50 years (water years 1914, 1933-81), 574 ft³/s (16.26 m³/s), 415,900 acre-ft/yr (0.513 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 225,000 ft³/s (6,370 m³/s) June 2, 1935, gage height, 19.4 ft (5.91 m), 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 (5.182 m) June 24, 1947, discharge, 100,000 ft³/s (2,830 m³/s), based on records for upstream stations.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,750 ft³/s (135 m³/s) July 18, gage height, 9.64 ft (2.938 m); minimum, 38 ft³/s (1.08 m³/s) Apr. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	106	102	161	64	117	67	41	446	107	141	121
2	68	102	86	137	68	118	58	42	346	106	578	104
3	65	100	94	125	74	118	58	41	281	119	1210	94
4	65	100	109	115	78	131	52	48	239	276	881	91
5	65	98	112	108	84	148	52	50	210	652	369	99
6	68	100	126	105	90	154	50	51	181	253	237	109
7	68	102	131	110	84	150	48	42	142	163	194	115
8	70	100	123	115	80	139	47	44	125	144	766	283
9	67	95	108	110	76	138	46	73	113	182	511	415
10	65	98	106	100	70	136	44	103	105	169	293	256
11	65	96	109	97	66	131	48	67	101	151	196	215
12	65	97	115	96	71	129	47	57	96	148	145	198
13	68	95	125	98	80	125	45	48	91	117	147	172
14	74	95	127	99	90	121	44	46	86	79	186	158
15	74	95	124	96	100	120	44	43	90	73	284	140
16	398	95	125	95	120	118	52	49	85	69	231	122
17	145	95	122	96	179	118	50	107	81	147	163	117
18	95	95	117	99	198	114	47	1000	73	1690	135	116
19	88	95	116	104	179	111	55	1330	67	1940	113	116
20	86	97	89	110	149	113	59	506	65	653	99	115
21	86	99	60	120	138	107	62	290	77	337	89	112
22	86	100	50	125	132	110	54	226	66	261	85	108
23	84	100	52	130	126	113	48	530	76	195	96	106
24	84	97	48	140	123	106	49	818	69	177	154	105
25	82	96	60	151	121	78	47	392	62	205	509	124
26	84	97	100	152	119	67	42	285	75	763	386	379
27	96	98	150	137	119	63	45	246	100	1090	278	274
28	106	99	185	132	118	61	41	338	121	671	208	186
29	112	100	206	129	---	78	40	1930	139	391	165	152
30	112	103	215	100	---	148	39	1980	108	240	152	133
31	108	---	183	80	---	98	---	690	---	170	150	---
TOTAL	2874	2945	3575	3572	2996	3578	1480	11513	3916	11738	9151	4835
MEAN	92.7	98.2	115	115	107	115	49.3	371	131	379	295	161
MAX	398	106	215	161	198	154	67	1980	446	1940	1210	415
MIN	65	95	48	80	64	61	39	41	62	69	85	91
AC-FT	5700	5840	7090	7090	5940	7100	2940	22840	7770	23280	18150	9590

CAL YR 1980 TOTAL 64409 MEAN 176 MAX 1700 MIN 39 AC-FT 127800
WTR YR 1981 TOTAL 62173 MEAN 170 MAX 1980 MIN 39 AC-FT 123300

KANSAS RIVER BASIN

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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 (15 m) downstream from bridge on county road at south edge of Surprise.

DRAINAGE AREA.--345 mi² (894 km²).

WATER-DISCHARGE RECORDS

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. Altitude of gage is 1,520 ft (463 m), from topographic map.

REMARKS.--Records good above 5 ft³/s (0.14 m³/s) and poor below.

AVERAGE DISCHARGE.--17 years, 25.2 ft³/s (0.714 m³/s), 18,260 acre-ft/yr (22.5 hm³/yr); median of yearly mean discharges, 22 ft³/s (0.623 m³/s), 15,900 acre-ft/yr (19.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s (303 m³/s) July 19, 1965, gage height, 11.52 ft (3.511 m); no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 131 ft³/s (3.71 m³/s) Aug. 5, gage height, 2.63 ft (0.802 m), no peak above base of 250 ft³/s (7.08 m³/s); no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.03	1.2	.00	.02	.00	.23	.32
2	.00	.00	.00	.00	.00	.03	.73	.00	.00	.00	36	.10
3	.00	.00	.00	.00	.00	.02	.44	.00	.00	.00	17	1.4
4	.00	.00	.00	.00	.00	.31	.15	.58	.00	.00	4.9	2.3
5	.00	.00	.00	.00	.00	.39	.06	.24	.00	.00	50	1.9
6	.00	.00	.00	.00	.00	.14	.03	.05	.00	.00	9.7	1.0
7	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00	2.8	.73
8	.00	.00	.00	.00	.00	.11	.00	.03	.00	.00	1.8	.32
9	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.44	.15
10	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.22	.15
11	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.10	.06
12	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.06	.06
13	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.06	.00
14	.00	.00	.00	.00	.15	.04	.03	.00	.00	.00	.10	.00
15	.00	.00	.00	.00	.32	.02	.24	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.32	.01	.06	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.32	.00	.00	.23	.00	.00	.00	.00
18	.00	.00	.00	.00	.22	.00	.00	3.9	.00	.00	.00	.00
19	.00	.00	.00	.00	.22	.00	.03	1.4	.00	.00	.00	.00
20	.00	.00	.00	.00	.15	.00	.06	2.2	.00	.00	.00	.00
21	.00	.00	.00	.00	.15	.00	.15	1.5	.00	.01	.00	.00
22	.00	.00	.00	.00	.22	.00	.32	1.8	.00	.00	.00	.00
23	.00	.00	.00	.00	.10	.00	.06	1.8	.00	.00	.89	.00
24	.00	.00	.00	.00	.06	.02	.03	1.4	.00	.00	.22	.00
25	.00	.00	.00	.00	.03	.06	.00	.70	.00	.00	1.8	.00
26	.00	.00	.00	.00	.00	.00	.00	.37	.00	.00	15	.00
27	.00	.00	.00	.00	.06	.00	.00	.31	.00	.00	22	.00
28	.00	.00	.00	.00	.03	.32	.00	.43	.00	.00	10	.00
29	.00	.00	.00	.00	---	.89	.00	.29	.00	.00	6.4	.00
30	.00	.00	.00	.00	---	3.1	.00	.06	.00	.00	4.5	.00
31	.00	---	.00	.00	---	4.2	---	.04	---	.00	1.1	---
TOTAL	.00	.00	.00	.00	2.35	10.07	3.59	17.33	.02	.01	185.32	8.49
MEAN	.000	.000	.000	.000	.084	.32	.12	.56	.001	.000	5.98	.28
MAX	.00	.00	.00	.00	.32	4.2	1.2	3.9	.02	.01	50	2.3
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	4.7	20	7.1	34	.04	.02	368	17

CAL YR 1980 TOTAL 4059.75 MEAN 11.1 MAX 1090 MIN .00 AC-FT 8050
WTR YR 1981 TOTAL 227.18 MEAN .62 MAX 50 MIN .00 AC-FT 451

KANSAS RIVER BASIN

06879900 BIG BLUE RIVER AT SURPRISE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-70, 1974-81.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	TEMPER- ATURE (DEG C) (00010)
MAR				
03...	1250	.04	395	5.0
31...	1245	5.1	448	14.0
MAY				
05...	1630	.25	370	15.0
JUN				
01...	1445	.06	352	25.0
AUG				
25...	1230	2.2	173	22.0

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 20 ft (6 m) downstream from county road bridge, 2 mi (3 km) west of Seward, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--446 mi² (1,155 km²).

PERIOD OF RECORD.--October 1953 to September 1973, March 1974 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISID RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,429.27 ft (435.641 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--27 years, (1953-73, 1975-81) 42.9 ft³/s (1.215 m³/s), 31,080 acre-ft/yr (38.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) June 17, 1957, gage height, 20.53 ft (6.258 m); minimum daily, 1.3 ft³/s (0.037 m³/s) July 31, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.91 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Oct. 16	0830	*846	24.0	13.03	3.972	July 19	0100	370	10.5	9.01	2.746
May 4	1430	445	12.6	9.60	2.926	July 20	1400	374	10.6	9.06	2.761

Minimum daily discharge, 3.6 ft³/s (0.10 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	6.9	7.1	7.8	7.4	7.8	8.0	7.4	16	7.4	12	9.4
2	5.6	6.7	6.4	7.6	7.2	7.8	7.9	7.4	14	7.2	72	10
3	5.6	6.6	6.6	7.8	7.2	7.8	8.3	7.5	13	7.3	128	11
4	5.6	6.5	6.8	7.4	7.2	8.8	13	231	12	6.8	197	11
5	5.8	6.6	7.0	7.2	7.4	9.1	9.6	129	11	5.8	75	9.7
6	5.8	6.6	7.2	7.4	7.4	8.4	7.9	35	11	4.4	39	8.6
7	5.8	6.5	7.2	7.6	7.4	8.1	7.7	23	10	4.4	36	7.9
8	5.7	6.8	6.2	7.6	7.0	8.0	7.8	16	10	4.2	22	7.2
9	5.6	6.9	6.6	7.4	7.2	8.0	7.6	13	9.9	4.7	15	6.6
10	5.4	7.4	7.2	7.2	6.8	8.0	7.5	9.7	9.3	4.6	12	6.4
11	5.6	6.7	7.4	7.0	6.6	8.0	7.7	8.8	9.2	4.1	11	6.3
12	5.7	7.0	7.5	7.4	6.8	8.0	8.2	8.6	9.3	3.8	10	6.0
13	5.9	7.0	7.4	7.8	7.2	8.0	8.1	8.3	10	4.4	10	6.0
14	6.2	6.8	7.3	8.0	7.6	7.8	8.0	8.2	10	4.0	10	6.0
15	6.7	6.8	7.4	7.2	8.0	7.8	8.1	8.0	11	4.3	9.8	5.7
16	513	6.7	7.3	7.0	8.2	7.6	7.8	8.0	9.5	3.6	9.5	5.8
17	55	6.8	7.5	6.8	8.6	7.6	7.8	7.4	9.0	4.1	8.9	5.5
18	9.9	6.9	7.3	7.0	9.0	7.6	7.8	40	9.0	139	8.9	5.6
19	7.8	6.9	7.2	7.4	9.4	7.4	7.9	82	9.0	203	8.8	5.6
20	7.1	6.9	6.6	7.6	9.6	7.6	8.0	44	9.1	333	8.6	5.5
21	7.0	6.9	7.0	7.4	8.4	7.8	8.1	36	8.2	133	8.4	5.5
22	6.9	7.3	7.2	7.6	8.1	8.3	8.7	36	7.9	31	8.4	5.4
23	7.0	7.1	6.4	7.8	8.0	8.1	9.0	67	6.3	22	9.5	5.5
24	7.0	7.0	5.8	7.8	7.8	8.1	8.2	49	5.8	84	9.9	7.0
25	7.0	6.8	6.0	8.0	8.0	8.1	7.8	36	7.0	59	8.9	8.7
26	6.4	7.0	7.6	7.8	7.8	7.8	7.7	26	6.6	31	9.4	7.4
27	7.2	6.8	8.0	7.6	8.1	7.7	7.7	22	8.1	22	11	5.9
28	7.8	7.0	7.8	7.4	8.0	7.8	7.5	26	9.2	18	10	8.0
29	7.4	7.0	7.8	7.4	---	8.7	7.5	27	8.0	16	9.8	8.8
30	7.0	7.1	8.0	7.2	---	9.0	7.4	22	8.1	14	9.6	9.9
31	7.3	---	7.8	7.4	---	8.5	---	18	---	13	9.4	---
TOTAL	757.4	206.0	220.6	231.6	217.4	249.1	244.3	1067.3	286.5	1203.1	807.8	217.9
MEAN	24.4	6.87	7.12	7.47	7.76	8.04	8.14	34.4	9.55	38.8	26.1	7.26
MAX	513	7.4	8.0	8.0	9.6	9.1	13	231	16	333	197	11
MIN	5.4	6.5	5.8	6.8	6.6	7.4	7.4	7.4	5.8	3.6	8.4	5.4
AC-FT	1500	409	438	459	431	494	485	2120	568	2390	1600	432
CAL YR 1980	TOTAL	13178.8	MEAN	36.0	MAX	1440	MIN	5.4	AC-FT	26140		
WTF YR 1981	TOTAL	5709.0	MEAN	15.6	MAX	513	MIN	3.6	AC-FT	11320		

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHUS) (00095)	PH (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)
OCT											
21...	1230	7.1	565	7.7	12.0	8.0	32	K13000	K16500	220	66
NOV											
18...	1120	6.7	540	7.9	1.5	13.0	10	--	420	260	79
DEC											
16...	1030	5.7	570	8.2	.0	13.5	0	67	190	230	70
JAN											
08...	1500	7.5	515	8.1	.0	18.0	10	K7	K13	260	78
FEB											
03...	1220	7.2	565	7.8	.0	17.9	11	K32	K43	270	83
MAR											
03...	1045	8.0	482	8.1	5.0	12.6	19	K3100	600	240	72
31...	1135	8.9	540	7.9	14.0	10.2	23	--	92	250	76
MAY											
05...	1500	111	128	7.5	15.0	7.2	290	36000	240000	44	14
JUN											
01...	1330	16	397	8.0	20.0	6.6	62	1500	2000	150	46
JUL											
06...	1145	4.1	555	8.2	24.0	6.6	38	800	900	240	72
AUG											
25...	1045	8.7	585	7.7	21.0	6.5	74	2900	3400	150	43
SEP											
04...	0830	14	540	8.0	17.0	6.8	57	1800	4400	230	69

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
21...	14	43	7.1	394	3.3	.180	1.2	1.40	4.7	.660	12
NOV											
18...	15	30	6.8	378	1.5	.040	.61	.65	2.2	.350	7.0
DEC											
16...	13	41	6.5	343	1.2	.000	.44	.44	1.6	.240	27
JAN											
08...	15	26	6.8	376	1.6	.030	.62	.65	2.3	.290	11
FEB											
03...	16	46	7.3	413	1.8	.120	.57	.69	2.5	.340	8.3
MAR											
03...	14	43	7.8	356	.65	.060	.59	.65	1.3	.340	4.4
31...	15	41	7.1	406	.68	.230	1.4	1.60	2.3	.570	8.5
MAY											
05...	2.3	36	6.6	2240	1.7	.100	12	12.0	14	2.40	81
JUN											
01...	9.4	30	6.2	770	2.6	.230	2.8	3.00	5.6	1.40	23
JUL											
06...	15	56	6.6	504	1.4	.150	1.8	1.90	3.3	.650	9.4
AUG											
25...	9.9	65	10	422	.00	.060	1.6	1.70	1.7	.370	12
SEP											
04...	14	32	7.0	647	1.5	.090	2.3	2.40	3.9	.660	12

KANSAS RIVER BASIN

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06880000 LINCOLN CREEK NEAR SEWARD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 18...	1120	.00	28	.8	7.3	260	.3	29	--
FEB 03...	1220	.00	38	1.0	6.7	290	.3	32	412
MAY 05...	1500	23	4.1	.3	9.6	21	.3	7.8	102
JUN 01...	1330	--	--	--	--	--	--	--	--
AUG 25...	1045	8.0	28	1.1	9.5	140	.3	39	289

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 18...	--	--	1.5	.290	6	200	570	3	0
FEB 03...	.56	8.0	1.8	.260	--	--	40	--	--
MAY 05...	.14	30.6	1.7	.490	3	60	360	<1	0
JUN 01...	--	--	2.5	--	--	--	--	--	--
AUG 25...	.39	6.8	.00	.110	--	--	60	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SFLE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	2	20	4	130	.2	7	0	6
FEB 03...	--	30	--	300	--	--	--	--
MAY 05...	6	420	0	20	.0	1	0	10
JUN 01...	--	--	--	--	--	--	--	--
AUG 25...	--	16	--	1	--	--	--	--

KANSAS RIVER BASIN

06880500 BIG BLUE RIVER AT SEWARD, NE

LOCATION.--Lat 40°54'05", long 97°05'55", in NW1/4NW1/4 sec.28, T.11 N., R.3 E., Seward County, Hydrologic Unit 10270201, at downstream end of left abutment of bridge on State Highway 15 at south edge of Seward, 0.5 mi (0.8 km) upstream from Plum Creek and 1.4 mi (2.3 km) downstream from Lincoln Creek.

DRAINAGE AREA.--1,101 mi² (2,852 km²).

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 1,415.16 ft (431.341 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1969, at site 1.2 mi (1.9 km) upstream at datum 6.33 ft (1.929 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by ground-water withdrawals and diversions for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--28 years, 109 ft³/s (3.087 m³/s), 78,970 acre-ft/yr (97.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s (433 m³/s) June 18, 1957; maximum gage height, 22.83 ft (6.959 m) June 16, 1967, site and datum then in use; no flow July 30, 31, 1955, result of irrigation pumping.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 16	2300	*1030 29.2	a19.31 5.886
May 4	2300	965 27.3	11.59 3.533

a Affected by backwater.

Minimum daily discharge, 1.7 ft³/s (0.048 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	13	15	14	20	54	17	30	6.8	13	27
2	14	16	11	15	14	19	37	15	27	5.7	70	21
3	15	15	12	15	14	20	34	17	25	7.1	108	17
4	16	14	13	15	14	24	42	379	23	7.8	227	19
5	17	14	13	15	15	26	150	773	22	6.8	170	15
6	17	14	13	15	15	24	84	222	21	6.1	330	11
7	18	14	13	15	14	23	40	80	22	4.1	380	10
8	19	14	13	14	13	25	30	52	21	3.8	150	8.3
9	19	13	14	14	12	24	27	38	20	3.3	71	7.7
10	23	14	14	14	12	22	25	30	19	4.2	47	7.2
11	27	13	15	14	12	20	23	27	18	3.3	35	6.7
12	30	13	15	14	13	19	23	25	17	1.7	28	6.2
13	29	13	15	14	14	19	22	24	16	2.2	23	6.1
14	31	13	15	14	14	18	22	23	16	3.7	21	5.2
15	33	13	15	14	15	18	21	22	19	3.5	18	4.7
16	558	12	15	14	17	17	21	23	18	2.8	16	4.3
17	563	12	15	14	18	17	19	25	18	3.0	15	4.3
18	118	12	15	14	17	17	19	69	16	52	13	5.5
19	61	12	14	14	19	17	20	391	15	220	13	7.2
20	28	13	13	14	20	16	19	292	13	231	11	8.2
21	20	13	14	14	21	18	19	134	12	157	8.0	9.5
22	18	13	14	14	20	21	24	77	8.9	44	7.9	10
23	17	13	13	14	20	20	22	90	6.3	27	13	11
24	15	13	13	15	19	20	25	78	5.4	63	14	14
25	14	13	13	15	21	18	22	64	7.8	67	17	14
26	12	13	14	15	20	17	20	52	8.2	41	45	17
27	15	14	14	14	21	18	19	45	9.5	28	175	14
28	16	14	14	13	20	21	18	43	11	22	88	16
29	16	14	15	13	---	24	18	44	9.9	18	66	16
30	16	14	15	14	---	28	18	40	9.9	15	56	13
31	15	---	15	15	---	65	---	34	---	14	39	---
TOTAL	1822	404	430	443	458	675	937	3245	484.9	1074.9	2287.9	336.1
MEAN	58.8	13.5	13.9	14.3	16.4	21.8	31.2	105	16.2	34.7	73.8	11.2
MAX	563	16	15	15	21	65	150	773	30	231	380	27
MIN	12	12	11	13	12	16	18	15	5.4	1.7	7.9	4.3
AC-FT	3610	801	853	879	908	1340	1860	6440	962	2130	4540	667
CAL YR 1980	TOTAL	27680.8	MEAN	75.6	MAX	1560	MIN	4.4	AC-FT	54900		
WTR YR 1981	TOTAL	12597.8	MEAN	34.5	MAX	773	MIN	1.7	AC-FT	24990		

KANSAS RIVER BASIN

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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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
OCT											
21...	0930	21	515	7.4	10.0	7.2	83	K24300	K27600	150	42
NOV											
18...	0900	12	600	7.8	1.5	11.5	19	--	120	280	83
DEC											
16...	0845	15	670	8.3	1.0	15.7	26	430	150	260	72
JAN											
08...	1530	15	652	8.2	.0	17.2	24	K10	K16	320	92
FEB											
03...	1050	14	610	7.8	.0	16.0	13	K7	K19	290	85
MAR											
03...	0925	20	510	8.1	4.5	12.2	32	1900	K40	240	71
31...	1045	74	692	7.9	14.0	13.1	56	K80	1000	300	82
MAY											
05...	1315	756	170	7.6	14.0	6.0	470	59000	390000	40	11
JUN											
01...	1130	29	539	8.1	19.5	6.5	49	1200	1400	210	60
JUL											
06...	1215	6.5	565	8.2	24.0	6.6	38	440	700	240	73
AUG											
25...	0920	17	525	7.6	19.0	6.2	58	2900	3600	210	60
SEP											
04...	0900	26	520	7.8	19.0	6.4	68	930	2300	210	61

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
21...	10	46	7.6	418	1.7	.420	1.7	2.10	3.8	.750	23
NOV											
18...	18	63	8.0	427	.71	.030	1.1	1.10	1.8	.390	4.4
DEC											
16...	19	80	9.4	428	.88	.040	1.4	1.40	2.3	.330	25
JAN											
08...	22	12	9.4	485	1.0	.040	1.8	1.80	2.8	.030	13
FEB											
03...	20	82	8.8	458	1.3	.060	.94	1.00	2.3	.310	17
MAR											
03...	14	68	8.1	373	.25	.030	1.4	1.40	1.7	.310	12
31...	22	100	10	564	.40	.120	2.2	2.30	2.7	.460	15
MAY											
05...	3.0	4.6	2.2	3090	2.1	.920	15	16.0	18	1.80	38
JUN											
01...	15	71	7.9	555	1.9	.110	2.4	2.50	4.4	.950	28
JUL											
06...	15	59	7.2	489	1.4	.090	1.9	2.00	3.4	.660	9.6
AUG											
25...	14	52	6.0	503	.98	.380	.92	1.30	2.3	.470	9.5
SEP											
04...	14	65	9.5	551	1.2	.110	2.3	2.40	3.6	.550	<.1

KANSAS RIVER BASIN

06880500 BIG BLUE RIVER AT SEWARD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 18...	0900	11	31	.8	9.8	270	.3	25	--
FEB 03...	1050	5.0	41	1.0	7.3	290	.3	20	445
MAR 03...	0925	--	--	--	--	--	--	--	--
MAY 05...	1315	.00	6.3	.4	9.3	45	.3	6.9	79
JUN 01...	1130	--	--	--	--	--	--	--	--
AUG 25...	0920	7.0	26	.8	11	200	.2	21	315

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 18...	--	--	.71	.270	6	200	80	1	0
FEB 03...	.61	16.8	1.3	.180	--	--	50	--	--
MAR 03...	.51	19.6	--	--	--	--	--	--	--
MAY 05...	.11	161	1.7	.160	3	80	270	<1	10
JUN 01...	--	--	1.8	--	--	--	--	--	--
AUG 25...	.44	14.7	.98	.180	--	--	50	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 18...	2	30	5	320	.0	5	0	6
FEB 03...	--	30	--	380	--	--	--	--
MAR 03...	--	--	--	--	--	--	--	--
MAY 05...	8	200	0	30	.0	0	0	10
JUN 01...	--	--	--	--	--	--	--	--
AUG 25...	--	<10	--	180	--	--	--	--

KANSAS RIVER BASIN

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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 (18 m) downstream from bridge on county road, 6.2 mi (10.0 km) northwest of Dorchester, and 19 mi (31 km) upstream from mouth.

DRAINAGE AREA.--1,206 mi² (3,124 km²).

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 (427.781 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1970, at site 60 ft (18 m) upstream at same datum.

REMARKS.--Records good except those for winter period, 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.--23 years, 163 ft³/s (4.616 m³/s), 118,100 acre-ft/yr (0.146 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s (323 m³/s) Mar. 20, 1969, gage height, 20.34 ft (6.200 m); minimum daily, 12 ft³/s (0.34 m³/s) Dec. 31, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1950, reached a stage of 24.8 ft (7.56 m), present datum, from floodmarks, discharge, 49,400 ft³/s (1,400 m³/s), from contracted-opening and flow-over-road measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,090 ft³/s (30.9 m³/s) Oct. 16, gage height, 9.84 ft (2.999 m), no peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 21 ft³/s (0.59 m³/s) July 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	33	36	39	37	37	65	42	69	29	37	68
2	29	33	30	39	36	37	79	41	63	28	205	60
3	28	33	40	40	34	36	63	41	59	31	329	54
4	28	35	38	37	39	40	63	50	57	31	109	51
5	28	35	37	43	43	41	63	93	55	30	67	46
6	29	34	37	42	43	50	54	122	53	27	56	40
7	29	33	37	41	45	51	49	119	51	26	63	116
8	28	32	37	37	38	44	47	93	49	26	115	276
9	29	32	32	36	42	40	46	72	48	35	213	624
10	28	34	33	35	40	41	44	60	46	33	227	254
11	28	33	35	34	30	41	44	55	46	28	196	115
12	29	32	37	43	40	42	43	53	46	26	116	74
13	30	32	37	41	50	42	43	82	45	22	82	58
14	29	32	37	38	56	41	45	77	43	21	73	50
15	30	32	38	33	60	39	43	61	45	21	61	44
16	640	32	37	30	66	37	43	55	44	21	54	40
17	215	33	38	28	50	37	44	62	40	45	45	39
18	63	34	39	37	35	35	44	83	37	52	38	37
19	45	34	35	42	38	37	44	386	35	213	37	35
20	39	34	32	32	40	38	44	729	33	140	39	35
21	36	34	40	32	39	40	44	821	32	101	34	33
22	33	34	45	34	40	42	56	645	30	94	32	33
23	34	35	41	42	41	41	56	307	34	114	37	33
24	34	35	30	39	41	41	52	285	34	79	45	38
25	35	34	32	39	40	41	51	340	26	63	52	45
26	34	34	45	39	39	38	48	340	27	60	48	129
27	36	35	50	40	38	38	47	216	43	53	45	93
28	38	34	54	39	37	40	45	144	40	53	63	60
29	36	34	54	39	---	46	46	109	31	52	96	48
30	38	37	60	36	---	56	45	90	32	44	94	40
31	37	---	39	36	---	62	---	78	---	40	77	---
TOTAL	1824	1008	1212	1162	1177	1291	1500	5751	1293	1638	2785	2668
MEAN	58.8	33.6	39.1	37.5	42.0	41.6	50.0	186	43.1	52.8	89.8	88.9
MAX	640	37	60	43	66	62	79	821	69	213	329	624
MIN	28	32	30	28	30	35	43	41	26	21	32	33
AC-FT	3620	2000	2400	2300	2330	2560	2980	11410	2560	3250	5520	5290
CAL YR 1980	TOTAL	38040	MEAN	104	MAX	1320	MIN	28	AC-FT	75450		
WTE YR 1981	TOTAL	23309	MEAN	63.9	MAX	821	MIN	21	AC-FT	46230		

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
29...	1145	36	555	8.2	4.0	11.8	17	4200	4100	230	69
NOV											
24...	0915	35	568	8.0	2.0	13.9	15	390	270	220	67
DEC											
17...	1020	38	615	8.0	5.0	11.4	6	260	K60	240	74
JAN											
20...	1000	32	610	8.1	.0	12.5	30	K31	K68	240	75
FEB											
17...	1000	48	565	7.7	3.0	15.8	18	290	160	210	64
MAR											
10...	1045	40	650	8.2	5.0	12.0	10	K150	3700	250	75
APR											
07...	1000	50	505	7.8	11.0	10.3	49	1900	K2600	190	56
MAY											
07...	1030	124	320	7.1	15.0	7.1	210	K630000	74000	100	30
JUN											
24...	0930	35	675	8.2	26.5	8.0	53	K2000	4100	220	66
JUL											
21...	1445	98	376	7.7	23.0	--	74	--	K77010	130	39
AUG											
19...	1030	38	435	8.0	19.0	7.9	48	1900	2200	170	52
SEP											
04...	1015	52	390	7.9	17.5	8.0	66	4300	4000	140	41

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
29...	13	54	23	388	1.1	.200	1.0	1.20	2.3	.710	5.5
NOV											
24...	12	49	21	370	1.1	.020	.79	.81	1.9	.630	6.6
DEC											
17...	13	52	26	396	2.0	.290	1.3	1.60	3.6	.720	7.4
JAN											
20...	13	58	15	396	2.2	.380	.62	1.00	3.2	.790	7.5
FEB											
17...	11	51	20	376	2.1	.640	1.4	2.00	4.1	.800	18
MAR											
10...	14	64	38	433	2.1	1.10	1.2	2.30	4.4	1.60	11
APR											
07...	11	49	20	699	2.0	.490	2.3	2.80	4.8	1.60	16
MAY											
07...	6.5	23	21	2360	1.5	1.90	7.4	9.30	11	2.40	66
JUN											
24...	13	65	26	652	.35	.110	2.3	2.40	2.8	.870	22
JUL											
21...	8.8	11	22	760	3.4	.470	2.5	3.00	6.4	1.90	3.8
AUG											
19...	10	37	13	520	1.2	.070	1.6	1.70	2.9	.750	20
SEP											
04...	8.2	34	17	622	1.9	.050	2.5	2.50	4.4	1.20	14

KANSAS RIVER BASIN

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06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	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 CAC03) (90410)	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)
NOV 24...	0915	.00	37	1.1	7.4	230	.3	23	360
FEB 17...	1000	5.0	36	1.1	6.8	200	.3	24	343
MAY 07...	1030	.00	22	1.0	14	120	.4	15	212
AUG 19...	1030	1.0	23	.8	9.4	170	.3	30	282

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 24...	.49	34.0	1.1	.620	5	200	60	<1	0
FEB 17...	.28	44.5	2.0	.660	--	--	50	--	--
MAY 07...	.29	71.0	1.5	.630	7	100	250	<1	20
AUG 19...	.38	28.9	1.2	.560	--	--	50	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELF- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 24...	7	30	2	190	.0	3	0	4
FEB 17...	--	20	--	260	--	--	--	--
MAY 07...	11	180	1	10	.1	1	0	10
AUG 19...	--	52	--	54	--	--	--	--

KANSAS RIVER BASIN

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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 .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
OCT							
29...	1145	36	4.0	45	4.4	--	--
NOV							
24...	0915	35	2.0	36	3.4	--	--
DEC							
17...	1020	38	5.0	30	3.1	--	--
JAN							
20...	1000	32	.0	32	2.8	--	--
FEB							
17...	1000	48	3.0	19	2.5	--	--
MAR							
10...	1045	40	5.0	34	3.7	--	--
APR							
07...	1000	50	11.0	358	48	--	--
MAY							
07...	1030	124	15.0	2280	763	86	90
JUN							
24...	0930	35	26.5	282	27	--	--
JUL							
21...	1445	98	23.0	529	140	--	--
AUG							
19...	1030	38	19.0	272	28	--	--
SEP							
15...	1330	44	19.5	206	24	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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)
OCT						
29...	--	66	71	94	100	--
NOV						
24...	--	99	--	--	--	--
DEC						
17...	--	11	13	58	100	--
JAN						
20...	--	49	62	70	83	100
FEB						
17...	--	45	--	--	--	--
MAR						
10...	--	98	--	--	--	--
APR						
07...	--	99	100	--	--	--
MAY						
07...	97	100	--	--	--	--
JUN						
24...	--	98	--	--	--	--
JUL						
21...	--	99	99	100	--	--
AUG						
19...	--	98	--	--	--	--
SEP						
15...	--	100	--	--	--	--

KANSAS RIVER BASIN

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06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .062 MM (80158)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. FALL SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. FALL SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. FALL SIEVE DIAM. % FINER THAN 8.00 MM (80171)
OCT											
29...	1145	36	8	0	4	20	70	94	97	99	100
NOV											
24...	0915	35	6	0	1	20	64	91	96	99	100
DEC											
27...	1020	38	7	0	2	16	57	78	91	99	100
JAN											
20...	1000	32	9	--	0	20	69	87	97	100	--
FEB											
17...	1000	48	4	--	0	15	63	91	99	100	--
MAR											
10...	1045	40	3	0	3	24	62	82	93	98	--
APR											
07...	1000	50	5	0	3	28	72	91	97	100	--
MAY											
07...	1030	124	3	--	0	15	55	87	95	98	--
JUN											
24...	0930	35	5	--	0	15	63	90	98	100	--
JUL											
21...	1445	98	10	0	4	19	53	80	91	96	98
AUG											
19...	1030	38	7	0	1	11	65	95	99	100	--
SEP											
15...	1330	44	9	--	0	19	68	91	98	100	--

KANSAS RIVER BASIN

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 highway bridge, 1.8 mi (2.9 km) south of Missouri Pacific Railroad station in Crete, 3.3 mi (5.3 km) downstream from Walnut Creek, and 3.6 mi (5.8 km) upstream from Squaw Creek.

DRAINAGE AREA.--2,716 mi² (7,034 km²).

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 (399.81 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 20, 1954, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, 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.--28 years (1953-81), 339 ft³/s (9.600 m³/s), 245,600 acre-ft/yr (0.303 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft³/s (782 m³/s) July 10, 1950, gage height, 28.74 ft (8.760 m); maximum gage height, 29.80 ft (9.083 m) June 16, 1967; minimum daily discharge, 6.0 ft³/s (0.17 m³/s) Aug. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,660 ft³/s (104 m³/s) Sept. 25 at 0400, gage height, 17.83 ft (5.435 m), no other peak above base of 3,000 ft³/s (85.0 m³/s); minimum daily, 7.0 ft³/s (0.20 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	77	74	84	76	87	132	77	144	22	86	178
2	53	75	74	83	80	84	145	72	132	19	202	153
3	53	71	72	83	82	86	147	73	123	18	436	133
4	52	66	75	74	86	96	199	94	115	22	440	121
5	51	62	87	71	84	96	138	450	112	23	411	110
6	50	63	85	70	73	100	185	830	107	24	405	107
7	51	64	80	84	72	108	190	399	102	22	608	107
8	50	63	59	82	70	112	133	249	96	23	590	178
9	51	63	76	79	64	102	106	180	94	57	411	355
10	51	63	82	82	68	98	95	137	91	44	350	592
11	50	64	89	69	74	93	91	112	89	28	320	301
12	50	64	86	85	80	89	88	101	89	18	265	176
13	51	64	81	72	90	89	92	94	78	13	194	127
14	52	66	79	74	69	88	92	115	71	8.0	145	103
15	58	62	81	75	77	85	88	114	70	18	125	91
16	66	62	80	85	89	82	85	102	69	10	110	83
17	2210	66	79	83	102	81	84	110	68	7.6	99	76
18	1890	68	79	67	123	78	83	152	60	7.0	84	72
19	354	68	78	72	122	77	86	270	58	223	76	69
20	208	69	70	75	113	76	84	945	49	536	65	67
21	137	69	74	83	113	85	84	1080	40	403	56	65
22	116	71	72	84	106	88	94	975	43	320	45	63
23	102	70	70	85	101	86	110	669	33	189	53	61
24	91	71	78	84	97	87	108	415	23	172	62	156
25	73	70	82	87	96	87	99	420	24	129	99	1810
26	72	71	88	90	93	87	106	436	17	164	83	184
27	82	73	71	98	91	83	94	407	28	151	87	160
28	82	70	74	76	88	87	87	291	25	118	219	130
29	80	74	77	68	---	96	82	221	36	102	221	88
30	80	72	80	75	---	98	80	184	34	95	213	72
31	78	---	83	76	---	109	---	163	---	82	208	---
TOTAL	6498	2031	2415	2455	2479	2800	3287	9937	2120	3067.6	6768	5988
MEAN	210	67.7	77.9	79.2	88.5	90.3	110	321	70.7	99.0	218	200
MAX	2210	77	89	98	123	112	199	1080	144	536	608	1810
MIN	50	62	59	67	64	76	80	72	17	7.0	45	61
AC-FT	12890	4030	4790	4870	4920	5550	6520	19710	4210	6080	13420	11880
CAL YR 1980	TOTAL	86035.0	MEAN	235	MAX	3190	MIN	6.0	AC-FT	170700		
WTR YR 1981	TOTAL	49845.6	MEAN	137	MAX	2210	MIN	7.0	AC-FT	98870		

KANSAS RIVER BASIN

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06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-63, 1968 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1961 to September 1962, April 1968 to current year.

SEDIMENT RECORDS: October 1961 to September 1962.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 33.5°C July 10, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 32.5°C July 13; minimum, 1.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- ANCE (UMHOS) (00095)	PH (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											
29...	1505	80	560	8.2	5.0	11.4	28	K8600	3400	230	67
NOV											
24...	1310	72	618	8.1	3.5	12.8	15	5800	K890	240	72
DEC											
17...	1325	78	640	8.4	5.5	13.3	21	3700	420	270	81
JAN											
20...	1320	76	665	8.2	2.5	14.3	55	2300	300	260	78
FEB											
17...	1230	96	628	8.0	3.0	7.0	19	K11000	1200	220	66
MAR											
10...	1500	99	609	8.5	7.5	15.0	24	K3100	560	230	67
APR											
07...	1225	191	650	8.2	13.0	10.4	65	3400	2300	250	71
MAY											
07...	1430	348	270	7.6	14.5	6.8	--	22000	12000	86	25
JUL											
21...	1200	418	242	7.5	25.0	5.8	93	K15000	13000	78	23
24...	1320	23	630	8.3	26.0	8.0	19	5500	K2500	250	77
AUG											
19...	1515	76	471	8.1	23.5	7.7	--	3000	660	180	52
SEP											
04...	1245	122	415	7.8	19.5	7.2	68	2900	3200	150	44

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
29...	14	60	23	439	1.4	.240	.96	1.20	2.6	.660	7.7
NOV											
24...	14	69	21	418	1.1	.130	.87	1.00	2.1	.690	6.2
DEC											
17...	16	65	24	436	1.4	.140	1.6	1.70	3.1	.680	11
JAN											
20...	16	72	15	467	1.8	.350	2.1	2.40	4.2	.650	15
FEB											
17...	13	63	18	405	2.1	.510	2.2	2.70	4.8	.710	7.4
MAR											
10...	15	72	28	396	1.1	.140	2.0	2.10	3.2	.810	19
APR											
07...	18	88	13	458	1.6	.270	3.0	3.30	4.9	.960	19
MAY											
07...	5.7	13	17	2680	2.6	1.40	8.4	9.80	12	2.00	78
JUL											
21...	5.0	2.0	7.9	1020	4.3	.640	1.9	2.50	6.8	1.80	15
24...	15	71	38	526	.09	.080	1.7	1.80	1.9	.650	14
AUG											
19...	11	49	17	508	1.4	.170	1.9	2.10	3.5	.910	18
SEP											
04...	9.5	45	15	629	1.6	.120	2.3	2.40	4.0	.930	14

KANSAS RIVER BASIN

06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	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 CAC03) (90410)	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)
NOV 24...	1310	.00	39	1.1	8.7	240	.3	22	396
FEB 17...	1230	.00	43	1.3	6.5	220	.2	20	372
MAY 07...	1430	.00	20	.9	9.6	94	.4	12	172
AUG 19...	1515	15	27	.9	11	160	.3	26	296

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 24...	.54	77.0	1.1	.690	7	200	70	<1	0
FEB 17...	.31	59.4	2.1	.560	--	--	50	--	--
MAY 07...	.36	252	2.6	.370	5	100	240	19	20
AUG 19...	.40	60.7	1.4	.550	--	--	50	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 24...	8	20	1	270	.0	1	0
FEB 17...	--	20	--	210	--	--	--
MAY 07...	18	240	6	10	.1	1	40
AUG 19...	--	37	--	36	--	--	--

06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	18.5	16.0	7.5	6.0	5.0	2.5	3.5	2.5	2.5	1.5	6.0	3.5
2	15.5	14.0	8.5	6.5	2.0	1.0	3.5	2.0	2.0	1.5	7.0	5.0
3	14.5	11.5	9.5	8.0	3.0	1.5	2.5	2.0	2.5	1.5	7.0	5.0
4	16.0	12.5	9.5	7.5	3.0	2.0	3.0	2.5	2.0	1.0	5.0	3.5
5	16.5	13.0	8.5	7.0	3.5	2.5	3.0	2.5	3.0	1.5	5.0	2.0
6	17.5	14.0	9.5	7.0	3.0	2.0	3.0	2.5	3.0	1.5	6.0	4.0
7	17.5	14.0	10.0	8.5	2.0	2.0	2.5	2.0	3.0	1.5	6.0	4.0
8	18.0	15.0	10.0	8.0	3.0	1.5	3.0	2.0	1.5	1.5	6.0	3.5
9	18.0	15.0	9.5	7.5	3.5	1.5	2.5	2.0	2.5	1.5	7.0	4.5
10	16.5	14.5	8.5	6.5	3.5	2.5	2.0	2.0	1.5	1.5	8.0	4.5
11	15.0	12.0	8.5	7.5	3.5	2.0	2.5	2.0	1.5	1.0	8.5	5.5
12	14.0	11.0	10.5	7.5	4.0	2.5	3.0	1.5	1.5	1.0	10.0	6.5
13	15.5	12.0	10.5	7.0	4.0	3.5	3.0	2.0	3.0	1.0	10.0	7.5
14	16.5	14.0	7.0	5.0	3.5	2.5	3.0	2.0	3.5	1.5	10.0	6.5
15	14.5	13.5	5.5	4.0	5.0	3.0	3.0	2.0	3.5	1.5	11.0	7.5
16	17.0	14.5	5.0	3.0	5.5	5.0	2.0	1.5	4.0	1.5	10.5	7.0
17	15.0	15.0	4.0	2.5	6.0	4.5	2.5	1.5	4.0	1.5	11.0	9.0
18	15.0	13.5	3.5	2.5	6.0	4.5	3.0	2.0	3.0	1.0	9.0	5.5
19	13.5	10.5	4.0	2.5	4.5	2.0	3.0	2.0	4.0	1.0	8.0	5.0
20	12.5	11.0	4.5	3.0	3.0	2.5	2.5	2.0	5.5	2.0	8.0	6.0
21	13.0	11.5	4.5	2.5	3.0	2.5	3.0	1.5	5.5	4.5	7.5	6.5
22	13.5	12.0	5.5	3.5	3.0	2.0	3.0	2.0	5.5	4.0	10.0	6.0
23	13.5	11.0	6.0	5.5	2.5	2.0	3.5	2.0	6.0	3.0	11.5	7.5
24	11.0	8.5	5.5	2.5	2.0	2.0	3.5	2.0	7.0	4.0	13.5	9.5
25	9.5	7.5	3.5	2.0	2.0	2.0	3.5	2.0	8.0	6.0	15.0	11.5
26	8.5	6.5	3.5	1.5	3.0	2.0	3.0	1.5	8.0	6.5	15.0	12.0
27	7.0	4.0	4.0	2.5	3.5	2.5	3.0	1.5	8.0	6.5	14.5	12.5
28	4.5	3.0	4.0	2.0	3.5	2.5	3.5	1.5	8.0	6.0	15.0	14.0
29	5.0	3.0	3.5	2.0	3.5	2.5	2.5	1.5	---	---	14.5	12.0
30	6.0	4.0	4.5	3.5	3.5	2.5	3.5	1.5	---	---	15.0	9.5
31	7.5	5.0	---	---	3.5	2.5	2.0	1.5	---	---	15.5	13.5
MONTH	18.5	3.0	10.5	1.5	6.0	1.0	3.5	1.5	8.0	1.0	15.5	2.0
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	15.5	11.5	19.5	16.0	22.5	19.0	28.5	22.5	30.5	25.0	---	---
2	17.5	13.0	20.0	15.5	23.5	21.0	26.5	23.0	30.0	25.0	---	---
3	17.5	15.5	19.5	17.0	23.5	19.0	26.0	22.0	30.0	27.5	---	---
4	16.0	12.0	18.0	17.0	24.0	20.5	28.0	22.5	31.0	27.0	---	---
5	12.5	10.5	18.0	15.5	26.0	21.0	29.0	22.5	31.0	28.0	---	---
6	13.5	10.0	16.5	15.0	26.0	21.0	30.0	23.0	31.0	27.5	---	---
7	15.5	12.0	16.0	14.5	27.0	22.0	29.5	24.0	29.5	27.0	---	---
8	16.5	13.5	17.0	14.0	26.5	23.0	30.0	23.0	28.0	26.0	---	---
9	16.0	12.5	17.0	16.0	26.0	22.0	27.5	23.5	28.0	26.5	---	---
10	20.5	14.5	16.5	12.0	26.0	21.0	30.0	24.0	28.0	25.5	---	---
11	20.5	17.5	16.5	12.5	25.5	21.0	31.0	24.5	28.0	25.0	---	---
12	21.5	17.0	16.5	14.5	26.0	22.0	32.0	24.5	28.5	25.5	---	---
13	21.5	16.5	16.5	13.5	28.0	23.0	32.5	24.5	28.5	26.0	---	---
14	16.5	12.0	16.0	11.5	26.5	23.5	31.0	24.5	31.0	26.0	23.5	20.5
15	16.0	12.0	17.5	14.0	23.5	20.5	30.5	23.0	32.0	28.5	22.0	18.5
16	16.0	13.5	17.5	15.5	23.5	17.5	30.0	22.5	31.5	27.5	19.0	15.5
17	18.5	14.0	15.5	14.0	24.0	18.5	27.5	22.5	29.5	25.5	16.0	13.0
18	18.5	16.0	14.0	11.5	24.5	19.5	26.0	21.5	27.0	24.0	16.5	13.0
19	17.5	16.5	15.0	10.5	23.5	19.0	27.0	22.5	26.5	23.5	18.5	14.0
20	17.0	14.0	15.0	12.0	26.0	20.5	27.5	23.5	---	---	20.0	16.0
21	14.5	12.5	14.0	13.5	24.5	21.5	26.0	24.5	---	---	20.0	17.0
22	16.0	14.0	16.5	14.0	26.0	20.5	26.0	23.5	---	---	19.5	16.5
23	17.0	13.0	19.5	16.5	27.5	21.5	27.0	24.5	---	---	19.5	16.0
24	18.5	14.0	20.0	17.0	29.0	22.0	27.0	24.5	---	---	19.5	19.0
25	20.5	15.5	21.0	18.0	29.5	21.5	27.0	24.0	---	---	20.0	18.5
26	22.0	17.5	21.5	19.0	26.0	22.0	27.0	23.5	---	---	20.0	19.0
27	23.0	19.0	21.5	19.5	28.0	20.0	23.5	21.5	---	---	19.0	16.0
28	23.0	19.0	21.0	19.5	29.5	22.5	21.5	20.0	---	---	19.0	15.5
29	20.5	17.0	22.5	20.0	27.5	24.0	21.5	20.0	---	---	23.0	21.0
30	20.0	16.5	23.0	19.5	28.5	22.5	24.5	21.0	---	---	24.5	21.5
31	---	---	23.0	20.0	---	---	28.0	23.5	---	---	---	---
MONTH	23.0	10.0	23.0	10.5	29.5	17.5	32.5	20.0	32.0	23.5	24.5	13.0

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 (4.5 km) west of Wilber.

DRAINAGE AREA.--460 mi² (1,191 km²).

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 (402.946 m) National Geodetic Vertical Datum of 1929. Prior to July 10, 1970, at site 0.2 mi (0.3 km) downstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Many diversions above station for irrigation.

AVERAGE DISCHARGE.--22 years, 76.9 ft³/s (2.178 m³/s), 55,710 acre-ft/yr (68.7 hm³/yr); median of yearly mean discharges, 60 ft³/s (1.699 m³/s), 43,500 acre-ft/yr (53.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s (207 m³/s) Mar. 28, 1960, gage height, 14.92 ft (4.548 m) site then in use; maximum gage height, 17.92 ft (5.462 m) Oct. 12, 1973, from high-water mark; no flow Sept. 20, 21, 24, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 660 ft³/s (18.7 m³/s) May 21, gage height, 9.80 ft (2.987 m), from floodmark, no peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily, 0.26 ft³/s (0.007 m³/s) Sept. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	2.9	2.4	4.6	3.4	4.5	8.2	4.8	9.4	2.6	2.1	3.1
2	.49	2.4	2.2	4.2	3.2	4.5	7.6	5.1	9.1	3.7	2.2	1.6
3	1.3	2.3	1.9	3.7	3.0	4.5	7.6	5.3	8.9	3.9	120	1.0
4	1.4	1.8	1.9	3.2	3.5	5.3	7.3	5.6	8.7	3.5	20	.90
5	1.5	1.8	2.1	2.5	4.0	5.8	26	12	8.3	3.4	15	.43
6	1.6	1.7	2.4	2.6	4.5	5.8	16	65	8.3	3.7	10	.43
7	1.7	1.5	2.6	2.8	4.7	5.8	8.6	94	7.9	2.7	25	2.2
8	1.9	1.7	2.3	2.7	4.5	5.2	7.0	40	7.2	2.9	9.0	.90
9	1.9	1.2	2.5	2.7	4.8	5.0	5.8	24	7.0	2.4	5.6	.50
10	1.9	1.4	2.9	2.6	4.5	4.7	5.6	17	6.3	14	3.8	.48
11	1.9	1.5	3.0	2.9	4.0	4.7	6.0	11	6.3	5.0	3.3	1.0
12	1.9	1.6	3.6	3.0	5.0	4.9	5.9	9.2	6.6	2.2	3.0	.40
13	2.0	2.0	3.6	2.8	5.2	4.8	5.5	8.0	6.5	.70	2.9	.38
14	2.1	2.3	3.4	2.8	5.5	4.7	5.6	7.8	28	.36	3.5	.38
15	3.1	1.7	3.8	3.3	5.1	4.9	5.8	6.9	62	13	3.5	.34
16	3.5	1.6	3.9	3.0	5.7	4.9	6.2	6.9	23	3.4	3.0	.34
17	20	1.8	3.9	3.3	8.8	4.9	6.2	7.1	13	2.7	2.8	.34
18	312	2.2	4.1	3.1	10	5.1	5.5	19	11	2.7	2.6	.34
19	100	2.1	3.6	3.1	9.9	5.1	5.6	235	8.5	2.0	1.9	.34
20	41	2.1	3.1	3.3	8.2	5.4	5.8	450	6.6	4.3	1.4	.34
21	19	2.1	3.3	3.6	8.6	5.5	5.9	620	5.3	3.2	1.0	.27
22	13	2.1	3.2	3.8	7.2	5.9	6.3	500	4.3	4.8	.40	.26
23	9.4	1.9	3.0	4.0	5.6	6.7	6.5	220	2.9	4.8	1.7	.26
24	6.7	1.9	2.2	4.3	5.1	8.1	8.1	86	.99	8.1	1.4	.40
25	5.3	1.8	2.3	4.9	5.6	7.1	8.5	41	.74	10	12	151
26	4.4	1.8	3.5	5.2	5.1	6.4	6.4	26	1.2	15	12	166
27	4.1	2.1	2.9	4.5	5.1	6.3	6.6	19	8.3	4.0	13	57
28	3.8	2.2	2.6	4.0	4.7	6.5	7.1	15	13	2.5	6.3	34
29	3.3	2.6	2.6	3.9	---	7.9	5.8	14	8.3	2.4	5.1	32
30	3.4	2.6	3.1	3.3	---	7.7	5.1	11	4.1	2.2	3.1	26
31	3.7	---	4.6	3.5	---	7.9	---	11	---	2.1	2.5	---
TOTAL	577.99	58.7	92.5	107.2	154.5	176.5	224.1	2596.7	301.73	138.26	299.10	482.93
MEAN	18.6	1.96	2.98	3.46	5.52	5.69	7.47	83.8	10.1	4.46	9.65	16.1
MAX	312	2.9	4.6	5.2	10	8.1	26	620	62	15	120	166
MIN	.49	1.2	1.9	2.5	3.0	4.5	5.1	4.8	.74	.36	.40	.26
AC-FT	1150	116	183	213	306	350	445	5150	598	274	593	958
CAL YR 1980 TOTAL	19518.91			MEAN 53.3	MAX 1020	MIN .26	AC-FT 38720					
WTR YR 1981 TOTAL	5210.21			MEAN 14.3	MAX 620	MIN .26	AC-FT 10330					

KANSAS RIVER BASIN

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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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
29...	1400	3.3	440	7.7	5.0	10.1	60	3300	2700	85	24
NOV											
24...	1145	1.8	796	7.5	3.0	11.9	32	230	1000	180	50
DEC											
17...	1200	6.2	710	7.8	5.0	13.7	9	K30	140	210	64
JAN											
20...	1135	3.5	845	8.0	.0	14.5	34	K10	20	270	81
FEB											
17...	1130	8.3	585	8.2	3.0	7.5	15	K1000	K64	200	62
MAR											
10...	1415	4.7	667	8.3	8.0	15.4	4	K46	K4	220	67
APR											
07...	1115	8.5	475	7.8	13.0	8.9	61	3100	3000	150	45
MAY											
07...	1230	91	150	7.3	15.0	6.1	--	46000	62000	48	14
JUL											
21...	1330	3.2	507	7.6	22.5	5.7	52	2600	8900	100	30
24...	1115	.95	520	7.6	28.0	6.3	34	1300	2600	120	34
AUG											
19...	1330	2.1	552	7.6	21.5	7.4	50	700	1300	94	27
SEP											
04...	1115	.80	745	7.3	17.5	6.6	93	1300	3500	110	33

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
29...	6.1	39	65	405	.53	.120	1.6	1.70	2.2	.470	26
NOV											
24...	13	62	120	512	.82	.040	1.1	1.10	1.9	.480	11
DEC											
17...	13	60	70	433	.39	.080	1.2	1.30	1.7	.380	18
JAN											
20...	16	73	74	519	.54	.070	.59	.66	1.2	.050	14
FEB											
17...	12	56	38	365	.22	.070	.16	.23	.45	.270	7.9
MAR											
10...	13	58	59	400	.28	.060	.75	.81	1.1	.320	7.9
APR											
07...	10	43	33	546	.97	.380	2.1	2.50	3.5	.690	17
MAY											
07...	3.2	8.3	10	4910	1.8	2.30	12	14.0	16	2.80	100
JUL											
21...	7.2	18	72	506	1.5	.280	1.9	2.20	3.7	.520	12
24...	7.4	58	80	712	1.8	.200	2.2	2.40	4.2	.860	15
AUG											
19...	6.4	19	94	558	1.4	.070	1.9	2.00	3.4	.730	11
SEP											
04...	7.7	28	140	688	2.3	.080	2.2	2.30	4.6	.710	15

KANSAS RIVER BASIN

06881200 TURKEY CREEK NEAR WILBER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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 CACO3) (90410)	FLUO- RTIDE, 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)
NOV 24...	1145	.00	94	3.1	13	180	.3	25	490
FEB 17...	1130	14	49	1.5	5.3	190	.3	19	357
MAY 07...	1230	.00	11	.7	10	59	.4	9.8	111
AUG 19...	1330	.00	73	3.5	10	94	.3	21	314

DATE	SOLIDS, DIS- SOLVED (TUNS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TUNS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS R) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 24...	.67	2.4	.82	.460	7	200	90	<1	20
FEB 17...	.29	4.8	.22	.230	--	--	40	--	--
MAY 07...	.15	27.3	1.8	.500	6	70	240	1	20
AUG 19...	.43	1.8	1.4	.420	--	--	70	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PR) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELF- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 24...	8	190	1	160	.2	1	0	6
FEB 17...	--	30	--	130	--	--	--	--
MAY 07...	15	560	6	10	.1	1	0	30
AUG 19...	--	100	--	86	--	--	--	--

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 (1.1 km) south of the intersection of U.S. Highways 136 and 77, 1.2 mi (1.9 km) downstream from Indian Creek, and 3.1 mi (5.0 km) upstream from Bear Creek.

DRAINAGE AREA.--3,900 mi² (10,101 km²), of which about 3,830 mi² (9,920 km²) contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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 (371.826 m) National Geodetic Vertical Datum of 1929. October 1910 to September 1915, non-recording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor.

AVERAGE DISCHARGE.--12 years (water years 1911-15, 1975-81), 575 ft³/s (16.28 m³/s), 416,600 acre-ft/yr (0.514 km³/yr); median of yearly mean discharges, 482 ft³/s (13.65 m³/s), 349,200 acre-ft/yr (0.431 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s (935 m³/s) July 23, 1911, gage height, 26.00 ft (7.925 m); minimum daily, 20 ft³/s (0.57 m³/s) Aug. 15, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1902, 49,100 ft³/s (1,390 m³/s) Oct. 12, 1973, gage height, 33.02 ft (10.064 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,920 ft³/s (82.7 m³/s) Oct. 19, gage height, 8.58 ft (2.615 m), no peak above base of 4,000 ft³/s (113 m³/s); minimum daily, 22 ft³/s (0.62 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	129	121	118	118	130	137	109	232	56	138	241
2	89	135	58	110	114	125	155	104	206	41	569	220
3	80	134	80	108	106	125	173	98	289	43	594	189
4	84	105	98	106	112	159	182	106	173	49	473	170
5	87	114	118	104	116	155	185	112	163	49	661	155
6	84	114	135	106	120	152	213	232	155	43	806	146
7	85	113	140	108	118	145	189	922	145	39	1000	207
8	111	111	135	110	116	145	225	664	141	34	1080	470
9	104	108	120	110	114	152	179	383	134	408	913	386
10	58	105	106	102	110	152	152	280	130	350	689	298
11	78	104	124	110	102	145	134	226	130	86	543	565
12	79	106	127	125	110	141	125	195	134	68	440	441
13	80	112	135	115	120	134	130	172	134	39	397	262
14	84	108	134	110	130	130	125	161	130	22	311	191
15	126	106	135	105	140	130	116	156	145	30	239	157
16	135	105	134	100	170	125	116	177	183	27	195	136
17	86	101	133	96	180	116	118	184	157	33	169	120
18	1610	102	125	100	189	112	114	189	134	74	145	112
19	2320	106	66	110	179	108	122	213	117	189	130	112
20	781	107	82	104	182	108	114	352	111	163	109	112
21	414	108	90	116	179	112	112	1470	113	485	96	93
22	276	108	94	136	166	112	129	1900	94	381	80	93
23	233	121	98	140	159	112	127	1550	79	372	82	93
24	185	106	100	130	145	116	133	1020	77	271	192	93
25	165	102	94	135	145	120	144	630	61	228	691	155
26	143	102	104	130	137	125	145	528	48	237	1140	1790
27	160	106	110	115	137	130	139	525	141	259	404	614
28	149	107	116	100	134	134	137	502	97	274	279	300
29	141	110	110	100	---	141	128	396	68	192	228	245
30	132	109	112	94	---	141	116	308	66	159	278	163
31	130	---	120	110	---	141	---	259	---	146	246	---
TOTAL	8378	3304	3454	3463	3848	4073	4314	14123	3987	4847	13317	8329
MEAN	270	110	111	112	137	131	144	456	133	156	430	278
MAX	2320	135	140	140	189	159	225	1900	289	485	1140	1790
MIN	58	101	58	94	102	108	112	98	48	22	80	93
AC-FT	16620	6550	6850	6870	7630	8080	8560	28010	7910	9610	26410	16520

CAL YR 1980 TOTAL 162631 MEAN 444 MAX 5100 MIN 33 AC-FT 322600
WTR YR 1981 TOTAL 75437 MEAN 207 MAX 2320 MIN 22 AC-FT 149600

KANSAS RIVER BASIN

06881500 BIG BLUE RIVER AT BEATRICE, NE--Continued

WATER QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- ANCE (UMHOS) (00095)	PH (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)
OCT											
30...	0900	129	611	7.7	5.0	12.1	24	5900	800	200	59
NOV											
25...	1445	103	725	8.3	2.5	15.2	19	144	K36	240	72
DEC											
18...	1545	129	740	8.5	4.0	16.0	22	K46	K63	240	73
JAN											
21...	1120	116	790	8.1	.5	15.6	51	180	K35	260	76
FEB											
12...	1015	114	936	8.6	.0	13.0	19	K12	K55	290	85
MAR											
10...	1030	144	650	8.7	5.5	16.4	56	K38	180	230	69
APR											
08...	1010	234	615	8.5	14.5	12.4	61	330	290	220	64
MAY											
07...	1135	930	387	8.0	16.0	6.4	370	22000	47000	140	41
JUN											
25...	1350	64	712	8.8	30.0	14.0	50	K270	1800	240	71
JUL											
22...	1345	354	265	8.1	25.0	6.5	81	9400	6000	83	25
AUG											
19...	1410	129	485	7.9	23.0	8.1	90	K320	540	140	42
SEP											
03...	1600	176	440	8.4	22.0	7.6	100	1400	480	130	38

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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...	13	53	46	426	2.0	.170	2.0	2.20	4.2	.900	18
NOV											
25...	15	100	55	458	1.3	.020	.98	1.00	2.3	.540	6.0
DEC											
18...	15	72	59	484	2.0	.000	1.8	1.80	3.8	.760	24
JAN											
21...	16	77	65	509	2.7	.130	.97	1.10	3.8	.890	10
FEB											
12...	18	90	71	569	3.4	.230	1.7	1.90	5.3	.920	14
MAR											
10...	14	69	49	493	.69	.000	2.8	2.80	3.5	.800	32
APR											
08...	15	72	39	519	1.0	.040	3.4	3.40	4.4	.790	20
MAY											
07...	9.3	51	11	4370	2.8	.890	18	19.0	22	2.90	110
JUN											
25...	14	81	74	597	.96	.030	2.4	2.40	3.4	.790	22
JUL											
22...	5.1	22	11	1050	4.9	.600	3.1	3.70	8.6	1.00	22
AUG											
19...	8.7	53	43	502	2.0	.120	1.8	1.90	3.9	.710	13
SEP											
03...	8.3	44	32	582	2.2	.070	2.0	2.10	4.3	.930	14

06881500 BIG BLUE RIVER AT BEATRICE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 25...	1445	22	65	1.8	8.3	220	.3	22	476	.65	132	1.3
FEB 12...	1015	26	87	2.2	8.2	260	.3	26	557	.46	105	3.4
MAY 07...	1135	11	25	.9	10	130	.4	12	238	.32	598	2.7
AUG 19...	1410	11	42	1.6	11	130	.3	23	309	.42	108	1.8

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
NOV 25...	--	--	--	--	--	.490	--	--	--	100
FEB 12...	--	--	--	--	--	.750	--	--	--	--
MAY 07...	.700	1.5	17	2.2	4.9	.260	4	30	25	100
AUG 19...	--	--	--	--	--	.630	--	--	--	--

DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR) (01031)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO) (01036)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
NOV 25...	--	100	--	--	<1	--	--	10	--	--	--
FEB 12...	--	70	--	--	--	--	--	--	--	--	--
MAY 07...	1700	350	1	1	0	90	70	20	31	31	0
AUG 19...	--	80	--	--	--	--	--	--	--	--	--

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU) (01041)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN) (01054)
NOV 25...	--	--	2	--	--	10	--	--	4	--	--
FEB 12...	--	--	--	--	--	20	--	--	--	--	--
MAY 07...	120	120	4	93000	93000	170	87	86	1	3400	3400
AUG 19...	--	--	--	--	--	<10	--	--	--	--	--

KANSAS RIVER BASIN

06881500 BIG BLUE RIVER AT BEATRICE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, PENDE TOTAL (UG/L AS SE) (01147)	SELE- NIUM, PENDE TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SF) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 25...	180	--	--	1.1	--	--	3	0	--	--	7
FEB 12...	260	--	--	--	--	--	--	--	--	--	--
MAY 07...	0	.5	.3	.2	3	1	2	0	120	100	20
AUG 19...	21	--	--	--	--	--	--	--	--	--	--

DATE	TIME	PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)
MAY 07...	1135	.00	.00	.00	.00	.00	.00	.00	.00	.05

DATE	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)
MAY 07...	.00	.00	.00	.00	.00	.00	.00	.00	.00

DATE	METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION TOTAL (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL (UG/L) (39755)	SILVEX, TOTAL (UG/L) (39760)
MAY 07...	.00	.00	.01	0	.00	.30	.04	.00	.00

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 (70337)	SED. SUSP. FALL DIAM. % FINER THAN (70338)	SED. SUSP. FALL DIAM. % FINER THAN (70340)	SED. SUSP. FALL DIAM. % FINER THAN (70342)
MAY 07...	1135	930	16.0	5560	14000	75	85	98	100

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	BED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)
MAY 07...	1135	930	5	0	2	14	61	84	93	98	100

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 (1.0 km) southwest of Barneston, 1.3 mi (2.1 km) upstream from Plum Creek, and 4.3 mi (6.9 km) upstream from Nebraska-Kansas State line.

DRAINAGE AREA.--4,447 mi² (11,518 km²) (revised), of which about 4,370 mi² (11,318 km²) contributes directly to surface runoff.

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 (354.24 m) National Geodetic Vertical Datum of 1929. Prior to June 9, 1941, water-stage recorder at site 0.3 mi (0.5 km) downstream at datum 1.56 ft (0.475 m) 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 (1.1 km) upstream at datum 2.0 ft (0.61 m) higher.

REMARKS.--Records fair except those for winter period, which are poor. Low flow regulated by powerplant 0.7 mi (1.1 km) upstream prior to July 1978. 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.--49 years, 771 ft³/s (21.83 m³/s), 558,600 acre-ft/yr (0.689 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,700 ft³/s (1,630 m³/s) June 9, 1941, gage height, 34.3 ft (10.45 m); minimum daily, 1 ft³/s (0.028 m³/s) Nov. 30, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,100 ft³/s (343 m³/s) Sept. 25 at 1015, gage height, 18.09 ft (5.514 m), no other peak above base of 10,000 ft³/s (283 m³/s); minimum daily, 57 ft³/s (1.61 m³/s) June 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	131	138	104	77	126	176	144	603	80	181	251
2	99	122	130	175	90	171	130	136	253	81	3040	238
3	97	121	110	112	124	120	148	124	250	79	933	252
4	95	172	105	169	165	185	185	126	232	76	684	203
5	96	119	108	81	129	178	135	132	194	73	1300	159
6	98	114	105	150	161	154	227	137	176	68	2480	155
7	98	114	165	123	113	196	214	450	164	67	1990	167
8	97	112	220	167	160	105	208	761	174	67	1310	348
9	94	107	168	103	116	172	207	477	155	73	977	464
10	97	105	148	150	110	190	185	370	129	88	761	359
11	94	108	162	76	110	173	164	300	123	116	593	362
12	90	113	190	95	120	128	120	198	171	114	489	534
13	89	126	105	155	130	182	159	203	124	110	406	393
14	91	123	120	107	112	124	130	183	131	96	396	230
15	92	114	173	149	143	145	133	182	169	89	314	198
16	118	110	118	99	200	118	288	175	158	83	242	175
17	125	114	165	76	211	168	84	176	172	223	208	169
18	458	124	113	103	226	120	116	245	109	402	165	165
19	2270	121	154	151	219	162	139	244	57	562	179	156
20	961	115	105	165	206	96	146	250	59	327	143	149
21	456	120	96	104	203	146	163	300	61	279	139	141
22	313	118	98	154	192	118	159	400	63	470	135	142
23	254	112	101	104	138	173	175	1490	65	377	129	149
24	202	132	94	176	189	113	169	1070	67	355	126	155
25	172	138	99	173	141	173	165	720	67	251	158	7330
26	155	132	103	170	185	101	165	900	67	1690	1010	2250
27	178	113	174	161	132	185	170	526	74	1950	559	1690
28	173	110	111	115	152	135	173	513	96	1010	331	722
29	149	125	154	171	---	151	167	461	241	188	266	439
30	135	125	114	98	---	146	152	390	81	257	221	320
31	130	---	162	69	---	154	---	277	---	206	262	---
TOTAL	7682	3610	4108	4005	4254	4608	4952	12060	4485	9907	20127	18465
MEAN	248	120	133	129	152	149	165	389	150	320	649	616
MAX	2270	172	220	176	226	196	288	1490	603	1950	3040	7330
MIN	89	105	94	69	77	96	84	124	57	67	126	141
AC-FT	15240	7160	8150	7940	8440	9140	9820	23920	8900	19650	39920	36630
CAL YR 1980	TOTAL	196471	MEAN 537	MAX 8000	MIN 60	AC-FT 389700						
WTR YR 1981	TOTAL	98263	MEAN 269	MAX 7330	MIN 57	AC-FT 194900						

KANSAS RIVER BASIN

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-69, October 1980 to September 1981.

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 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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											
30...	1350	130	434	7.3	7.0	12.2	37	K15000	840	140	42
NOV											
25...	1200	119	980	8.2	5.0	14.8	28	161	K120	250	75
DEC											
22...	1130	99	805	8.4	1.0	16.1	51	K35	K10	270	80
JAN											
21...	1330	92	760	8.5	2.0	18.5	57	K10	50	260	76
FEB											
12...	1245	112	858	8.6	.0	16.1	38	K35	K13	290	86
MAR											
11...	1120	182	595	8.9	6.5	16.3	45	K3	K4	220	64
APR											
08...	1320	232	580	9.0	15.0	11.6	65	K270	53	180	46
MAY											
07...	1615	760	675	8.5	18.0	9.6	50	K500	K97	240	71
JUN											
25...	1100	69	600	8.4	27.0	8.6	42	K67	770	220	63
JUL											
22...	1600	430	395	8.1	27.0	7.2	34	3000	1200	120	34
AUG											
19...	1100	160	320	7.7	24.5	7.6	40	1700	520	110	31
SEP											
03...	1300	259	530	8.5	23.0	8.1	58	K140	84	180	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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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...	9.4	41	26	345	1.7	.630	2.4	3.00	4.7	.750	16
NOV											
25...	16	97	54	487	1.7	.140	1.2	1.30	3.0	.630	5.2
DEC											
22...	18	84	60	515	1.7	.120	2.5	2.60	4.3	.810	--
JAN											
21...	18	87	57	532	1.7	.140	2.5	2.60	4.3	.850	16
FEB											
12...	18	92	61	553	2.5	.050	1.5	1.50	4.0	.790	12
MAR											
11...	15	69	44	424	.43	.000	2.1	2.10	2.5	.560	15
APR											
08...	15	76	46	400	.01	.050	3.2	3.20	3.2	.530	20
MAY											
07...	16	72	47	526	2.5	1.10	1.5	2.60	5.1	.700	15
JUN											
25...	14	70	48	478	.82	.070	2.0	2.10	2.9	.700	13
JUL											
22...	8.1	31	32	540	1.3	.570	1.5	2.10	3.4	.630	12
AUG											
19...	7.0	40	21	455	2.0	.190	1.5	1.70	3.7	.610	9.7
SEP											
03...	12	56	35	450	1.9	.070	2.1	2.20	4.1	.850	11

KANSAS RIVER BASIN

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06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 25...	1200	23	64	1.8	9.2	230	.6	23	485
FEB 12...	1245	29	76	1.9	7.3	260	.4	20	529
APR 08...	1320	--	--	--	--	--	.6	--	--
MAY 07...	1615	13	63	1.8	8.8	230	1.0	6.9	425
AUG 19...	1100	.00	21	.9	10	90	.3	18	303

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CH) (01030)
NOV 25...	.66	156	1.7	.570	5	200	100	<1	0
FEB 12...	.72	160	2.6	.620	4	200	60	<1	0
APR 08...	--	--	--	--	--	--	--	--	--
MAY 07...	.58	872	.22	.390	9	100	230	<1	10
AUG 19...	.41	131	2.0	.470	6	--	70	--	0

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PR) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 25...	2	<10	0	170	.5	2	0	5
FEB 12...	3	20	1	150	.0	3	0	4
APR 08...	--	--	--	--	--	--	--	--
MAY 07...	3	10	0	20	.1	3	0	<3
AUG 19...	6	24	2	19	.1	2	0	--

KANSAS RIVER BASIN

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE

LOCATION.--Lat 40°19'58", long 98°04'20", in SW1/4NE1/4 sec.11, T.4 N., R.7 W., Nuckolls County, Hydrologic Unit 10270206, on right bank 1,500 ft (457 m) upstream from bridge on State Highway 14, 1 mi (2 km) upstream from Walnut Creek, 3.2 mi (5.1 km) southeast of Deweese, and 6 mi (10 km) northwest of Angus.

DRAINAGE AREA.--979 mi² (2,536 km²).

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 (497.638 m) National Geodetic Vertical Datum of 1929. Prior to May 16, 1957, non-recording gage and Oct. 1, 1974, to Mar. 24, 1981, at site 1,500 ft (460 m) downstream at present datum; May 16, 1957, to Sept. 30, 1972, at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--26 years (water years 1954-72, 1975-81), 141 ft³/s (3.993 m³/s), 102,200 acre-ft/yr (0.126 km³/yr); median of yearly mean discharges, 116 ft³/s (3.285 m³/s), 84,000 acre-ft/yr (0.104 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,100 ft³/s (711 m³/s) Aug. 31, 1969, gage height, 18.57 ft (5.660 m); minimum daily, 6.3 ft³/s (0.18 m³/s) Sept. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 26, 1951, reached a stage of 14.9 ft (4.54 m), from information by local residents, discharge, 16,000 ft³/s (453 m³/s), based on records for former station at Angus.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,240 ft³/s (35.1 m³/s) May 22, gage height, 7.28 ft (2.219 m), no peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 17 ft³/s (0.48 m³/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	43	46	50	42	52	59	61	171	24	17	65
2	32	43	40	48	32	53	57	55	122	30	508	54
3	33	44	28	48	34	54	65	80	103	117	669	54
4	34	44	35	38	36	64	69	237	83	404	373	66
5	35	44	45	35	38	57	60	113	65	282	429	63
6	35	44	46	40	45	54	58	69	58	197	351	71
7	34	45	46	42	50	51	64	58	53	114	489	91
8	34	45	38	44	46	51	66	54	51	66	292	130
9	34	43	30	49	46	51	56	51	49	50	169	145
10	34	43	40	45	40	51	55	47	46	46	132	140
11	34	44	46	48	30	51	58	43	46	39	89	228
12	35	45	48	44	30	51	55	44	47	29	69	96
13	37	45	47	50	34	51	58	43	45	25	54	59
14	36	44	48	49	42	50	62	43	44	20	121	50
15	37	45	49	49	48	50	53	40	50	27	247	45
16	43	44	49	42	56	49	57	53	43	22	91	45
17	38	44	49	34	59	50	57	108	41	30	53	44
18	38	45	48	40	59	48	55	462	39	134	41	42
19	39	46	44	48	57	48	68	646	38	824	34	42
20	39	51	38	50	55	48	64	266	39	422	30	44
21	39	53	30	53	55	51	61	148	46	189	25	43
22	40	55	32	50	53	51	100	792	43	118	23	42
23	40	54	38	50	53	48	90	718	38	63	88	42
24	39	49	32	51	54	47	69	412	35	37	964	72
25	40	48	26	51	54	44	61	198	33	38	594	356
26	40	51	34	50	53	44	58	137	33	41	317	194
27	47	51	40	50	55	53	57	124	31	63	178	61
28	46	53	48	51	52	82	59	99	26	45	131	50
29	43	48	54	49	---	151	60	858	25	42	106	46
30	44	48	50	40	---	82	61	528	20	32	82	44
31	43	---	50	40	---	64	---	270	---	20	73	---
TOTAL	1175	1401	1294	1428	1308	1751	1872	6857	1563	3590	6839	2524
MEAN	37.9	46.7	41.7	46.1	46.7	56.5	62.4	221	52.1	116	221	84.1
MAX	47	55	54	53	59	151	100	858	171	824	964	356
MIN	32	43	26	34	30	44	53	40	20	20	17	42
AC-FT	2330	2780	2570	2830	2590	3470	3710	13600	3100	7120	13570	5010
CAL YR 1980	TOTAL	33178.5	MEAN	90.7	MAX	1680	MIN	7.9	AC-FT	65810		
WTR YR 1981	TOTAL	31602.0	MEAN	86.6	MAX	964	MIN	17	AC-FT	62680		

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 current year.

WATER TEMPERATURES: February 1979 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 508 micromhos Feb. 14, 1980; minimum daily, 82 micromhos 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.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 571 micromhos June 18; minimum daily, 85 micromhos May 29.

WATER TEMPERATURES: Maximum, 25.0°C on several days during summer period; 2.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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 KF AGAR 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											
07...	1115	34	460	7.7	13.0	10.0	8	260	600	190	61
NOV											
05...	0930	43	450	7.8	7.5	10.9	12	200	750	200	63
DEC											
03...	1015	43	450	7.6	.0	13.1	--	K100	330	240	53
JAN											
08...	1000	42	465	7.7	.0	13.1	1	31	41	210	67
FEB											
04...	0945	36	470	7.5	.0	12.9	7	K6	41	220	69
MAR											
04...	1000	65	420	7.7	6.0	10.9	18	300	430	190	60
APR											
01...	0945	62	450	7.8	8.0	10.7	13	480	1000	210	66
MAY											
05...	1205	115	340	7.4	15.5	8.6	93	K13000	66000	150	47
JUN											
03...	1000	100	350	7.5	19.0	8.2	20	1500	1600	150	47
JUL											
07...	0915	126	160	7.2	23.5	7.2	110	K6500	7000	61	17
AUG											
04...	1100	386	115	7.4	25.0	6.8	110	K14000	5000	37	11
SEP											
02...	0950	57	380	7.6	16.0	9.6	50	K420	900	170	52

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

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	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											
07...	10	34	13	1040	.30	.000	.50	.50	.80	.120	3.3
NOV											
05...	9.9	36	11	289	.62	.030	.42	.45	1.1	.370	5.7
DEC											
03...	27	59	3.2	--	.16	.060	.33	.39	.55	.030	2.3
JAN											
08...	10	44	13	320	1.1	.040	.65	.69	1.8	.240	5.2
FEB											
04...	11	43	12	334	1.1	.040	.38	.42	1.5	.270	16
MAR											
04...	9.9	36	9.6	327	.91	.050	.54	.59	1.5	.320	--
APR											
01...	10	38	10	365	1.1	.100	1.1	1.20	2.3	.350	--
MAY											
05...	8.6	47	10	902	.87	.230	2.7	2.90	3.8	.760	12
JUN											
03...	8.5	32	8.2	523	.92	.170	1.2	1.40	2.3	.770	6.8
JUL											
07...	4.4	12	5.7	1440	2.3	.450	2.7	3.10	5.4	.960	31
AUG											
04...	2.4	4.0	2.8	1480	.99	.910	2.4	3.30	4.3	1.30	28
SEP											
02...	9.4	32	9.1	278	.91	.120	.88	1.00	1.9	.400	2.6

KANSAS RIVER BASIN

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	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)	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)
NOV 05...	0930	8.0	19	.6	7.5	190	.3	32	296
JAN 08...	1000	19	19	.6	8.0	190	.3	31	312
MAY 05...	1205	13	17	.6	9.4	140	.4	21	249
JUN 03...	1000	--	--	--	--	--	--	--	--
JUL 07...	0915	10	6.3	.4	12	51	.3	16	117
SEP 02...	0950	--	--	--	--	--	.0	--	--

DATE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
NOV 05...	.40	34.4	.57	.330	5	200	60	<1	0
JAN 08...	.42	35.4	1.1	.210	--	--	30	--	--
MAY 05...	.34	77.3	.87	.350	5	100	210	<1	0
JUN 03...	--	--	.92	--	--	--	--	--	--
JUL 07...	.16	39.8	2.3	.390	--	--	--	--	--
SEP 02...	.41	46.0	--	--	--	--	--	--	--

DATE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 05...	4	20	5	40	.0	2	0	6
JAN 08...	--	20	--	50	--	--	--	--
MAY 05...	2	100	2	30	.0	2	0	20
JUN 03...	--	--	--	--	--	--	--	--
JUL 07...	--	310	--	30	--	--	--	--
SEP 02...	--	--	--	--	--	--	--	--

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	438	235	449	462	483	445	154	458	470	274	445	376
2	446	232	455	461	463	414	126	467	145	273	455	420
3	448	242	454	476	463	410	128	470	142	279	448	427
4	441	310	460	469	468	404	125	470	135	382	455	428
5	438	421	452	471	462	458	183	465	252	374	363	428
6	438	420	453	470	465	459	167	470	248	377	363	433
7	445	437	460	499	474	456	169	470	360	448	465	430
8	443	435	462	500	470	459	174	465	362	446	465	426
9	446	438	455	499	475	230	450	472	413	445	365	423
10	443	444	481	433	462	247	453	461	413	436	364	429
11	445	448	479	434	460	253	445	463	436	435	368	428
12	445	451	480	440	461	230	443	460	439	439	349	426
13	448	448	472	448	463	237	448	460	447	442	343	425
14	458	442	468	448	508	236	450	482	447	458	340	429
15	453	446	474	449	507	237	444	490	445	455	333	428
16	440	446	462	446	504	239	447	490	450	451	218	428
17	448	448	451	459	502	413	454	490	451	457	218	427
18	446	446	445	462	450	415	449	490	453	452	322	429
19	438	459	442	461	451	416	449	495	451	451	325	430
20	423	450	460	467	450	415	455	490	455	449	328	420
21	418	450	468	460	452	444	447	488	439	448	328	423
22	453	450	462	461	149	446	445	485	443	451	394	420
23	444	451	459	462	149	445	450	483	440	454	395	419
24	445	455	468	471	149	445	450	489	460	452	425	420
25	448	449	468	465	180	417	447	483	460	451	425	434
26	449	450	465	491	300	411	445	460	458	453	420	433
27	448	448	459	494	301	413	444	460	460	455	438	436
28	447	451	460	490	300	415	444	459	458	458	439	437
29	448	458	461	491	300	202	443	459	450	468	437	437
30	164	458	461	489	---	193	444	470	447	458	439	435
31	152	---	461	490	---	194	---	470	---	452	377	---

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	463	458	469	471	564	449	447	470	180	463	122	404
2	465	464	472	462	549	435	421	456	250	400	123	408
3	467	459	476	472	558	430	435	464	350	400	123	407
4	468	462	471	462	550	431	433	368	385	144	121	386
5	469	463	473	460	453	432	429	369	438	136	113	418
6	471	468	471	467	449	446	430	400	445	133	113	384
7	472	464	468	458	450	445	433	452	499	178	113	388
8	471	468	471	461	451	444	430	448	500	316	188	341
9	474	468	469	471	543	448	420	448	500	312	186	341
10	471	468	472	457	538	444	417	458	496	317	116	408
11	479	463	473	459	540	442	417	449	493	418	187	408
12	478	466	475	458	536	444	417	441	488	420	246	387
13	461	467	476	439	461	444	432	445	481	421	184	410
14	458	468	471	428	447	450	435	435	490	420	236	407
15	461	463	472	443	451	443	434	456	489	415	279	448
16	461	468	503	443	460	443	434	447	503	416	238	444
17	479	469	499	464	466	448	435	413	504	410	365	444
18	479	468	491	458	455	440	430	200	571	410	365	450
19	479	468	501	459	458	441	438	200	518	141	364	444
20	478	463	479	459	462	438	438	193	512	130	409	447
21	448	468	472	458	458	443	440	183	514	179	409	449
22	449	471	472	461	460	443	444	107	497	179	408	450
23	449	471	472	459	456	443	439	105	466	250	341	392
24	446	471	488	491	450	443	439	110	504	258	90	392
25	448	468	489	507	460	440	427	109	503	322	90	211
26	458	468	469	491	450	438	433	93	411	328	95	447
27	457	468	468	496	452	441	433	92	506	328	119	450
28	449	472	471	468	447	440	435	92	505	330	120	447
29	461	471	468	468	---	442	438	85	518	247	336	393
30	455	468	470	462	---	433	435	144	504	239	336	391
31	479	---	468	462	---	435	---	137	---	245	337	---

KANSAS RIVER BASIN

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	10.0	6.0	4.0	3.0	6.0	8.0	15.0	19.0	23.0	21.0	23.0
2	16.0	11.0	5.0	5.0	3.0	7.0	9.0	16.0	19.0	23.0	22.0	23.0
3	16.0	12.0	4.0	4.0	4.0	6.0	9.0	16.0	20.0	22.0	23.0	23.0
4	15.0	12.0	5.0	3.0	4.0	5.0	7.0	16.0	20.0	23.0	23.0	22.0
5	16.0	13.0	5.0	4.0	4.0	5.0	7.0	16.0	20.0	22.0	24.0	22.0
6	17.0	14.0	4.0	3.0	5.0	6.0	8.0	15.0	20.0	22.0	25.0	20.0
7	18.0	13.0	4.0	3.0	5.0	6.0	8.0	15.0	20.0	22.0	24.0	19.0
8	19.0	14.0	5.0	4.0	5.0	6.0	9.0	15.0	21.0	23.0	23.0	20.0
9	18.0	15.0	5.0	4.0	3.0	6.0	10.0	16.0	21.0	23.0	23.0	20.0
10	15.0	13.0	5.0	4.0	3.0	6.0	11.0	14.0	22.0	24.0	22.0	20.0
11	15.0	13.0	6.0	5.0	2.0	7.0	12.0	14.0	23.0	24.0	23.0	20.0
12	16.0	12.0	6.0	5.0	3.0	7.0	12.0	14.0	23.0	24.0	23.0	21.0
13	17.0	12.0	6.0	4.0	6.0	7.0	13.0	13.0	23.0	25.0	23.0	19.0
14	18.0	10.0	6.0	5.0	5.0	7.0	14.0	13.0	22.0	25.0	23.0	19.0
15	18.0	9.0	7.0	4.0	5.0	7.0	14.0	14.0	19.0	25.0	24.0	18.0
16	17.0	8.0	5.0	4.0	6.0	6.0	15.0	15.0	20.0	25.0	23.0	18.0
17	16.0	7.0	5.0	3.0	6.0	7.0	14.0	16.0	21.0	25.0	23.0	19.0
18	16.0	7.0	4.0	3.0	7.0	6.0	14.0	16.0	20.0	24.0	22.0	19.0
19	14.0	8.0	2.0	4.0	7.0	6.0	14.0	15.0	19.0	23.0	22.0	19.0
20	12.0	7.0	2.0	4.0	6.0	6.0	13.0	16.0	20.0	24.0	22.0	18.0
21	13.0	6.0	2.0	5.0	6.0	5.0	13.0	16.0	21.0	24.0	23.0	18.0
22	14.0	7.0	3.0	5.0	7.0	6.0	13.0	17.0	22.0	24.0	24.0	18.0
23	13.0	8.0	3.0	6.0	7.0	6.0	14.0	17.0	21.0	24.0	23.0	19.0
24	12.0	7.0	2.0	6.0	7.0	7.0	14.0	17.0	22.0	24.0	23.0	18.0
25	12.0	7.0	2.0	5.0	6.0	7.0	14.0	17.0	23.0	23.0	23.0	19.0
26	10.0	6.0	3.0	6.0	7.0	7.0	15.0	17.0	23.0	22.0	23.0	19.0
27	8.0	5.0	3.0	5.0	6.0	8.0	15.0	18.0	23.0	21.0	23.0	20.0
28	9.0	6.0	4.0	4.0	6.0	9.0	16.0	19.0	23.0	20.0	23.0	21.0
29	8.0	6.0	4.0	5.0	---	9.0	16.0	19.0	22.0	20.0	23.0	21.0
30	10.0	7.0	4.0	4.0	---	9.0	16.0	19.0	22.0	20.0	24.0	20.0
31	10.0	---	3.0	5.0	---	9.0	---	20.0	---	20.0	24.0	---

KANSAS RIVER BASIN

363

06883570 LITTLE BLUE RIVER NEAR ALEXANDRIA, NE

LOCATION.--Lat 40°12'27", long 97°23'23", in SE1/4SE1/4 sec.23, T.3 N., R.1 W., Thayer County, Hydrologic Unit 10270206, on left bank 750 ft (229 m) upstream from bridge on State Highway 53, 2.7 mi (4.3 km) south of Alexandria, 9.8 mi (15.8 km) downstream from Dry Creek, and 5.7 mi (9.2 km) upstream from Big Sandy Creek.

DRAINAGE AREA.--1,557 mi² (4,033 km²).

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 (414.312 m) National Geodetic Vertical Datum of 1929. July 1959 to Sept. 30, 1972, at site 2.3 mi (3.7 km) upstream at datum 12.0 ft (3.66 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--20 years (water years 1960-72, 1975-81), 225 ft³/s (6.372 m³/s), 163,000 acre-ft/yr (0.201 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft³/s (725 m³/s) Mar. 28, 1960, gage height, 17.30 ft (5.273 m), site and datum then in use; minimum daily, 2.9 ft³/s (0.082 m³/s) Aug. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,340 ft³/s (94.6 m³/s) July 18 at 1530, gage height, 12.99 ft (3.959 m); no other peak above base of 2,000 ft³/s (56.6 m³/s); minimum daily, 9.1 ft³/s (0.26 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	49	62	76	38	76	84	69	354	29	41	104
2	28	49	25	72	33	71	78	67	251	26	241	91
3	28	47	30	64	35	73	71	68	192	28	1070	87
4	28	47	40	56	37	97	73	69	157	33	965	81
5	28	48	66	56	40	95	71	113	133	163	568	77
6	28	47	72	54	46	87	69	202	116	313	716	80
7	29	48	78	56	52	78	63	128	100	194	612	167
8	29	49	70	56	48	71	63	96	91	139	550	123
9	29	49	54	50	47	67	65	84	82	89	400	92
10	30	49	50	42	42	71	67	73	79	68	252	95
11	30	49	56	40	22	70	73	71	80	41	184	101
12	30	51	70	52	36	70	76	71	80	25	139	100
13	31	53	82	56	45	72	78	69	75	16	116	117
14	30	54	75	56	70	67	76	67	66	11	102	94
15	32	52	71	52	100	65	80	65	78	9.3	86	77
16	45	50	72	45	200	65	76	71	75	9.1	113	71
17	397	50	69	50	175	63	71	94	68	239	128	65
18	179	49	64	50	151	63	71	152	59	1600	102	63
19	67	52	38	50	135	65	73	1240	57	2630	84	63
20	56	50	20	50	97	63	73	1160	55	1610	72	61
21	46	50	28	58	89	65	76	472	68	717	62	60
22	42	54	40	62	84	69	89	257	74	353	56	60
23	40	52	39	62	78	71	82	831	69	210	79	58
24	39	52	36	62	76	69	89	883	59	141	90	64
25	39	50	32	60	78	65	94	529	49	102	754	88
26	40	54	50	58	78	65	78	297	49	130	690	103
27	53	56	56	56	78	67	71	221	69	357	391	147
28	60	54	58	54	76	73	69	187	44	326	266	113
29	55	58	60	44	---	87	69	133	39	149	192	77
30	53	61	64	31	---	95	69	850	36	85	149	64
31	50	---	72	42	---	138	---	649	---	60	120	---
TOTAL	1697	1533	1699	1672	2086	2313	2237	9338	2804	9902.4	9390	2643
MEAN	54.7	51.1	54.8	53.9	74.5	74.6	74.6	301	93.5	319	303	88.1
MAX	397	61	82	76	200	138	94	1240	354	2630	1070	167
MIN	26	47	20	31	22	63	63	65	36	9.1	41	58
AC-FT	3370	3040	3370	3320	4140	4590	4440	18520	5560	19640	18630	5240
CAL YR 1980 TOTAL	50397.7		MEAN 138	MAX 2620	MIN 2.9	AC-FT 99960						
WTR YR 1981 TOTAL	47314.4		MEAN 130	MAX 2630	MIN 9.1	AC-FT 93850						

KANSAS RIVER BASIN

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 (5 m) upstream from bridge on State Highway 53, 0.8 mi (1.3 km) south of Alexandria.

DRAINAGE AREA.--607 mi² (1,572 km²).

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

GAGE.--Water stage recorder. Altitude of gage is 1,395 ft (425.2 m) from topographic map.

REMARKS.--Records good. Natural flow of stream affected by ground-water withdrawals and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,490 ft³/s (70.5 m³/s) Aug. 6, 1981, gage height, 9.19 ft (2.801 m); minimum daily, 16 ft³/s (0.45 m³/s) Apr. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft³/s (70.5 m³/s) Aug. 6, gage height, 9.19 ft (2.801 m); minimum daily, 16 ft³/s (0.45 m³/s) Apr. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	19	19	20	19	18	19	19	23	22	22	20
2	20	19	19	20	19	18	18	19	23	25	54	21
3	20	19	19	20	19	18	18	19	22	27	39	21
4	20	19	19	20	19	19	17	20	21	26	45	22
5	20	19	19	20	19	18	17	19	21	25	84	22
6	20	19	18	20	19	18	16	19	20	25	1420	22
7	19	19	19	19	20	18	18	19	20	23	1250	43
8	19	19	19	19	20	18	19	19	19	24	502	38
9	20	19	19	18	20	19	18	19	19	41	208	35
10	20	19	19	18	21	19	19	20	19	26	103	30
11	20	19	18	18	18	18	19	20	19	23	74	24
12	20	19	19	18	19	18	19	19	19	22	59	21
13	20	19	19	18	18	18	19	19	19	22	56	21
14	21	19	19	19	18	18	19	19	19	25	46	20
15	20	19	19	19	18	18	18	19	20	30	37	20
16	21	19	19	19	18	18	18	19	19	31	31	19
17	64	19	19	19	18	18	18	20	21	30	27	19
18	81	19	19	19	18	18	18	45	23	46	25	19
19	50	19	19	19	18	18	18	541	20	67	25	19
20	25	19	19	19	18	19	18	635	19	62	23	19
21	22	19	19	19	18	18	18	350	19	44	22	19
22	21	19	20	19	18	18	19	210	19	34	21	19
23	21	18	19	20	18	19	18	171	19	26	30	19
24	20	18	19	20	18	18	18	87	19	23	25	20
25	19	18	19	20	19	18	19	51	19	23	26	106
26	19	18	20	19	18	18	19	42	19	24	23	62
27	20	18	20	19	18	18	19	78	23	27	22	44
28	19	18	21	19	18	18	19	58	28	30	20	31
29	19	19	20	19	---	18	19	35	26	30	21	26
30	19	19	20	19	---	19	19	28	22	26	21	23
31	19	---	20	19	---	20	---	24	---	23	21	---
TOTAL	757	564	595	593	521	566	550	2682	618	932	4382	844
MEAN	24.4	18.8	19.2	19.1	18.6	18.3	18.3	86.5	20.6	30.1	141	28.1
MAX	81	19	21	20	21	20	19	635	28	67	1420	106
MIN	19	18	18	18	18	18	16	19	19	22	20	19
AC-FT	1500	1120	1180	1180	1030	1120	1090	5320	1230	1850	8690	1670
CAL YR 1980	TOTAL	19251	MEAN 52.6	MAX 1270	MIN 17	AC-FT 38180						
WTR YR 1981	TOTAL	13604	MEAN 37.3	MAX 1420	MIN 16	AC-FT 26980						

KANSAS RIVER BASIN

365

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 (revised), 0.8 mi (1.3 km) south of Fairbury, and 5.2 mi (8.4 km) upstream from Rose Creek.

DRAINAGE AREA.--2,350 mi² (6,087 km²).

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 (390.812 m) 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 (5.6 km) downstream at various datums.

REMARKS.--Records good except those for winter period, which are poor. Some regulation at low stage by powerplants above station. Natural flow of stream affected by irrigation development above station.

AVERAGE DISCHARGE.--60 years, 365 ft³/s (10.34 m³/s), 264,400 acre-ft/yr (0.326 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,800 ft³/s (1,070 m³/s) Oct. 12, 1973, gage height, 18.96 ft (5.779 m); minimum daily, 14 ft³/s (0.40 m³/s) Nov. 22, 1929, discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 18	2300	*4070 115	7.30 2.225
Aug. 6	2300	3070 86.9	6.30 1.920

Minimum daily discharge, 32 ft³/s (0.91 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	75	85	104	52	97	146	87	463	64	90	127
2	48	74	42	96	52	97	117	84	329	61	256	116
3	48	75	50	86	54	99	106	83	251	72	684	114
4	50	74	62	76	56	128	102	89	198	71	1230	112
5	49	74	88	78	60	128	96	88	169	67	973	109
6	51	77	92	72	76	119	92	159	149	245	1590	107
7	51	77	104	76	80	111	89	171	134	231	2310	194
8	51	78	90	76	76	106	88	146	126	181	1370	224
9	50	78	74	70	76	102	86	119	120	167	907	181
10	49	77	70	62	56	98	87	105	118	120	520	157
11	48	78	75	60	40	98	91	95	126	88	326	146
12	49	79	89	74	58	98	92	93	107	56	245	135
13	52	79	96	78	76	98	94	86	108	43	196	135
14	56	78	94	80	86	96	95	84	103	32	177	134
15	62	80	90	74	98	96	94	81	109	33	140	119
16	94	80	89	66	123	93	95	87	106	35	126	114
17	198	81	92	70	178	96	91	122	100	61	144	109
18	377	80	86	70	166	95	95	149	99	914	144	105
19	186	80	54	70	157	95	102	823	96	2960	132	103
20	120	84	38	72	133	96	103	1880	92	2110	128	102
21	97	84	47	76	123	97	102	1040	91	1010	117	100
22	83	84	60	88	115	98	119	631	92	542	107	97
23	75	84	58	92	109	96	115	689	88	310	136	95
24	68	82	56	96	103	97	108	1080	86	206	169	113
25	65	80	52	101	103	97	115	640	79	168	328	1060
26	65	83	70	102	103	92	108	430	74	233	887	268
27	80	86	76	90	104	92	98	396	106	263	502	193
28	85	87	77	84	100	96	92	373	83	444	321	181
29	83	87	79	58	---	116	89	286	78	240	216	146
30	82	85	85	41	---	110	87	510	72	155	170	124
31	78	---	96	54	---	148	---	764	---	113	145	---
TOTAL	2601	2400	2316	2392	2613	3185	2994	11470	3952	11295	14786	5020
MEAN	83.9	80.0	74.7	77.2	93.3	103	99.8	370	132	364	477	167
MAX	377	87	104	104	178	148	146	1880	463	2960	2310	1060
MIN	48	74	38	41	40	92	86	81	72	32	90	95
AC-FT	5160	4760	4590	4740	5180	6320	5940	22750	7840	22400	29330	9960

CAL YR 1980 TOTAL 75666 MEAN 207 MAX 3470 MIN 31 AC-FT 150100
WTR YR 1981 TOTAL 65024 MEAN 178 MAX 2960 MIN 32 AC-FT 129000

KANSAS RIVER BASIN

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS

LOCATION.--Lat 39°05'48", 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 (1 m) downstream from bridge on county road, 0.6 mi (1.0 km) west of Hollenberg, and 1.75 mi (2.82 km) downstream from Nebraska-Kansas State line.

DRAINAGE AREA.--2,752 mi² (7,128 km²).

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 (370.667 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Discharge measurements made prior to 1974 water year are published in table of miscellaneous sites in WDR NE-73.

AVERAGE DISCHARGE.--7 years, 433 ft³/s (12.26 m³/s), 313,700 acre-ft/yr (0.387 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) Mar. 15, 1978, gage height, 16.58 ft (5.054 m) from high-water mark; minimum daily, 40 ft³/s (1.13 m³/s) Dec. 17, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1973, reached a stage of 23.07 ft (7.032 m), present datum, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 19	0500	*5000 142	a10.00 3.048	Sept. 25	1000	4110 116	9.10 2.774
Aug. 7	0600	3250 92.0	a8.37 2.551				

a From floodmark.

Minimum daily discharge, 46 ft³/s (1.30 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	101	97	140	98	116	183	105	554	79	189	179
2	54	98	60	130	96	114	158	103	364	71	704	152
3	53	94	70	116	100	114	137	99	273	88	541	134
4	53	96	84	106	102	138	127	107	233	92	1240	126
5	55	90	100	108	104	153	119	107	196	81	1350	122
6	53	90	109	102	112	142	117	113	172	111	1420	118
7	55	90	127	106	116	133	116	190	157	263	2790	142
8	55	92	153	106	106	126	112	172	149	201	1500	297
9	55	90	129	100	104	120	106	146	140	182	1020	207
10	53	90	114	92	94	118	110	125	133	168	619	173
11	52	90	112	90	64	120	117	114	131	118	405	160
12	53	90	112	108	70	113	117	110	135	85	310	149
13	55	89	120	110	90	112	117	105	113	67	283	143
14	55	90	124	110	110	109	117	101	111	56	251	147
15	61	90	124	104	140	108	116	97	124	49	204	138
16	93	88	124	96	170	107	120	103	122	46	174	130
17	109	89	124	100	230	106	118	153	111	223	174	113
18	254	92	122	100	212	104	120	185	109	1310	185	109
19	276	92	104	100	177	105	131	244	107	4090	172	109
20	149	93	60	106	172	105	129	2080	102	2730	160	105
21	113	93	76	114	147	107	126	1300	102	1370	146	103
22	99	93	90	122	135	109	142	723	101	753	136	99
23	101	93	88	130	129	108	149	498	99	442	134	97
24	92	93	86	140	122	109	131	1130	96	296	197	122
25	82	93	82	145	119	110	131	804	86	261	175	2450
26	79	93	100	152	119	113	133	512	80	1190	693	1060
27	101	93	106	135	122	112	122	394	144	1250	621	383
28	107	96	108	131	119	117	113	338	116	971	429	249
29	103	96	110	120	---	134	107	296	93	581	316	200
30	105	97	116	90	---	139	105	236	90	323	249	162
31	101	---	130	98	---	139	---	864	---	232	203	---
TOTAL	2781	2774	3261	3507	3479	3660	3746	11654	4543	17779	16990	7878
MEAN	89.7	92.5	105	113	124	118	125	376	151	574	548	263
MAX	276	101	153	152	230	153	183	2080	554	4090	2790	2450
MIN	52	88	60	90	64	104	105	97	80	46	134	97
AC-FT	5520	5500	6470	6960	6900	7260	7430	23120	9010	35260	33700	15630
CAL YR 1980	TOTAL	108574	MEAN 297	MAX 4810	MIN 43	AC-FT 215400						
WTR YR 1981	TOTAL	82052	MEAN 225	MAX 4090	MIN 46	AC-FT 162800						

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 1980 TO SEPTEMBER 1981

DATE	STRAFM- FLOW, INSTAN- TANFOUS (CFS) (00061)	SPE- CTIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95402)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 30...	106	538	7.6	6.5	13.0	16	3500	600	190	--	60	9.3
NOV 25...	94	575	8.3	.0	13.5	21	K1220	196	190	.00	60	9.8
DEC 18...	125	550	8.2	3.0	13.1	7	300	160	190	2.0	61	9.6
JAN 21...	116	550	7.8	.5	14.0	40	K47	K38	190	8.0	60	9.2
FEB 12...	70	668	7.6	.0	11.9	12	K30	K40	240	22	77	12
MAR 11...	120	555	8.3	5.0	12.1	7	123	K28	200	17	63	9.7
APR 08...	114	545	8.4	19.5	9.4	25	K220	K40	200	16	62	9.9
MAY 08...	170	395	7.9	17.5	9.6	60	14000	7700	150	17	47	7.3
JUN 25...	93	500	8.6	23.5	7.8	43	K500	K4500	190	.00	60	10
JUL 20...	2740	133	7.3	26.0	6.1	160	12000	11000	52	--	17	2.4
AUG 07...	2780	140	7.4	25.5	5.2	190	29000	21000	39	7.0	12	2.3
SEP 03...	133	435	8.4	23.0	9.4	44	500	280	140	.00	42	7.5

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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAR AS CAC03) (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 ST02) (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)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT 30...	--	--	--	--	35	41	--	--	--	.44	92.7	394
NOV 25...	45	1.4	4.6	190	40	46	.3	25	350	.48	88.8	429
DEC 18...	41	1.3	5.6	190	41	40	.3	24	343	.47	116	384
JAN 21...	46	1.5	5.3	180	41	40	.3	24	340	.46	106	360
FEB 12...	50	1.4	6.3	220	53	48	.3	31	418	.57	79.0	432
MAR 11...	44	1.4	5.6	180	42	41	.3	22	339	.46	110	348
APR 08...	46	1.4	6.7	180	42	43	.3	23	345	.47	106	452
MAY 08...	26	.9	7.7	130	36	23	.4	19	250	.34	115	787
JUN 25...	47	1.5	8.3	200	46	48	.3	18	358	.49	89.9	463
JUL 20...	4.6	.3	8.1	33	7.3	3.9	.3	9.9	80	.11	592	2770
AUG 07...	4.8	.4	10	32	4.0	15	.3	13	81	.11	608	3280
SEP 03...	35	1.4	10	140	20	43	.3	23	266	.36	95.5	474

KANSAS RIVER BASIN

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	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)	POPON, 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 30...	1.2	--	.100	1.3	1.40	2.6	.550	--	--	--	--	5.0
NOV 25...	1.2	1.2	.020	.69	.71	1.9	.340	.320	50	<10	40	7.4
DEC 18...	1.3	1.3	.000	.77	.77	2.1	.370	.290	30	<10	20	8.3
JAN 21...	1.4	1.4	.170	.46	.63	2.0	.360	.260	40	10	40	3.4
FEB 12...	1.8	1.8	.090	.55	.64	2.4	.320	.280	40	10	70	2.5
MAR 11...	.99	.98	.070	.63	.70	1.7	.380	.290	40	<10	20	9.1
APR 08...	.81	.81	.060	1.5	1.60	2.4	.460	.310	50	10	10	11
MAY 08...	2.0	1.2	1.30	2.0	3.30	5.3	.750	.290	360	30	10	18
JUN 25...	.03	.01	.020	1.8	1.80	1.8	.580	.210	50	30	2	12
JUL 20...	1.4	1.4	.540	7.0	7.50	8.9	1.20	.390	250	130	10	28
AUG 07...	1.2	1.2	1.70	6.6	8.30	9.5	1.70	.370	200	340	6	67
SEP 03...	.47	.23	.100	1.3	1.40	1.9	.590	.410	50	<10	4	10

DATE	TIME	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) (00624)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS) (01001)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)
------	------	--	--	--	--	--	---	---	---	--

NOV 25...	0930	--	--	--	--	--	--	4	100	--
FEB 12...	1500	--	--	--	--	--	--	3	200	--
MAY 08...	1445	--	--	--	--	--	--	4	100	--
JUL 20...	1145	.430	1.5	5.6	1.9	20	14	6	100	0

DATE	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD) (01026)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR) (01031)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO) (01036)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU) (01041)
------	--	---	---	---	--	--	--	---	--	--

NOV 25...	--	<1	--	--	0	--	--	--	--	--
FEB 12...	--	<1	--	--	0	--	--	--	--	--
MAY 08...	--	<1	--	--	0	--	--	--	--	--
JUL 20...	0	1	50	40	10	18	18	0	56	43

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE) (01044)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB) (01050)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN) (01054)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
------	---	--	--	--	--	---	--	--	--

NOV 25...	1	--	--	--	--	1	--	--	--
FEB 12...	2	--	--	--	--	2	--	--	--
MAY 08...	3	--	--	--	--	0	--	--	--
JUL 20...	13	56000	56000	53	51	2	870	860	.3

KANSAS RIVER BASIN

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06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTMBER 1981

		MERCURY SUS- PENDE RECIV- ERABLE (UG/L AS HG) (71895)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE) (01146)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, TOTAL RECIV- ERABLE (UG/L AS ZN) (01092)	ZINC, SUS- PENDE RECIV- ERABLE (UG/L AS ZN) (01091)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)		
NOV 25...		--	1.0	--	--	2	0	--	--	5		
FEB 12...		--	.0	--	--	2	0	--	--	<3		
MAY 08...		--	.5	--	--	1	0	--	--	4		
JUL 20...		.2	.1	0	0	0	0	250	120	130		
		PER- THANE TOTAL (UG/L) (39034)	PCB, TOTAL (UG/L) (39516)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI- AZINON, TOTAL (UG/L) (39570)		
JUL 20...	1145	.00	.00	.00	.00	.00	.00	.00	.00	.00		
		DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOTAL (UG/L) (39480)		
JUL 20...		.00	.00	.00	.00	.00	.00	.00	.00	.00		
		METHYL PARA- THION, TOTAL (UG/L) (39600)	METHYL TRI- THION, TOTAL (UG/L) (39790)	PARA- THION, TOTAL (UG/L) (39540)	TOX- APHENE, TOTAL (UG/L) (39400)	TOTAL TRI- THION TOTAL (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	MIREX, TOTAL (UG/L) (39755)	SILVEX, TOTAL (UG/L) (39760)		
JUL 20...		.00	.00	.03	0	.00	.02	.01	.00	.00		
		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DTS- 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 .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)	
JUL 20...	1145	2740	26.0	3340	24700	66	72	83	98	99	100	
AUG 07...	1200	2780	25.5	3610	27100	61	66	79	97	99	100	
		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	NUMBER OF SAM- PLING POINTS (00063)	RED MAT. FALL DIAM. % FINER THAN .125 MM (80159)	BED MAT. FALL DIAM. % FINER THAN .250 MM (80160)	BED MAT. FALL DIAM. % FINER THAN .500 MM (80161)	BED MAT. FALL DIAM. % FINER THAN 1.00 MM (80162)	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM (80169)	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM (80170)	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM (80171)	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM (80172)	RED MAT. SIEVE DIAM. % FINER THAN 32.0 MM (80173)
JUL 20...	1145	2740	4	0	18	36	62	76	89	96	99	100
AUG 07...	1200	2780	3	0	7	30	57	73	90	97	--	--

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

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 1981

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
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	1961-81	08-06-81	5.45	245
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	1961-81	07-03-81	10.93	285
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 1978-81b	08-06-81	7.60	890
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	1960-81	09-25-81	9.16	800

* 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

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Measurements of streamflow at points other than gaging stations are given in the following table. Those that are measurements of peak flow are designated by a dagger (†). 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 1981

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Niobrara River basin						
Snake River (06459175)	Niobrara River	Lat 42°36'51", long 101°16'38", in NE1/4NW1/4 sec.2, T.30 N., R.34 W., Cherry County, at Doughboy bridge on Nebraska Highway 97, 24 miles southwest of Menzel.	405	1963, 1980	05-06-81	148
					06-02-81	150
					06-30-81	140
					07-28-81	171
					08-26-81	142
					09-22-81	143
Snake River (06459185)	Niobrara River	Lat 42°36'38", long 101°11'00", in NW1/4NW1/4 sec.3, T.30 N., R.33 W., Cherry County, at Webster bridge, 22 miles south of Menzel.	413	1960, 1963	05-06-81	161
					06-02-81	172
					06-30-81	155
					07-28-81	180
Plum Creek ¹ (06462450)	Niobrara River	Lat 42°34'08", long 100°06'22", in NW1/4SW1/4 sec.14, T.30 N., R.24 W., Brown County, at bridge on U.S. Highway 20, 2 miles west of Johnstown.	--	1969-73, 1978-80	10-22-80	20
					06-01-81	19
					07-27-81	28
					09-29-81	18
Plum Creek ¹ (06462470)	Niobrara River	Lat 42°40'01", long 100°03'26", in SE1/4SE1/4 sec.7, T.31 N., R.23 W., Brown County, at county road bridge 0.2 mile upstream from Sand Draw and 6.5 miles north of Johnstown.	--	1969-73, 1978-80	10-22-80	59
					06-01-81	58
					07-27-81	75
					09-29-81	56
Long Pine Creek ¹ (06463050)	Niobrara River	Lat 42°32'59", long 99°42'23", in NE1/4NW1/4 sec.30, T.30 N., R.20 W., Brown County, at timber bridge 0.1 mile downstream from bridge on U.S. Highway 20 and 0.9 mile northwest of Long Pine.	--	1978-80	10-23-80	55
					06-02-81	50
					07-28-81	55
					09-30-81	46
Bone Creek ¹ (06463090)	Long Pine Creek	Lat 42°32'51", long 99°52'33", in NE1/4NE1/4 sec.27, T.30 N., R.22 W., Brown County, at bridge on U.S. Highway 20, 0.6 mile west of junction of highways 7 and 20 in Ainsworth.	--	1969-73, 1978-80	10-23-80	1.9
					06-02-81	1.7
					07-28-81	2.4
					09-30-81	2.4
Sand Draw ¹ (06463290)	Bone Creek	Lat 42°34'08", long 99°58'08", in NE1/4NE1/4 sec.14, T.30 N., R.23 W., Brown County, at bridge on county road 4.5 miles east and 0.7 mile north of Johnstown.	--	1978-80	10-23-80	.87
					06-02-81	.81
					07-28-81	1.43
					09-29-81	.86
Sand Draw ¹ (06463310)	Bone Creek	Lat 42°38'10", long 99°51'10", in NE1/4NE1/4 sec.26, T.31 N., R.22 W., Brown County, at bridge on county road 8.6 miles south of Meadville and about 4.5 miles upstream from Bone Creek.	--	1978-80	10-23-80	5.5
					06-02-81	3.8
					07-28-81	7.7
					09-30-81	5.4
Bone Creek ¹ (06463350)	Long Pine Creek	Lat 42°40'16", long 99°46'06", in NE1/4SW1/4 sec.10, T.31 N., R.21 W., Brown County, at bridge on U.S. Highway 183, 2.8 miles west and 8.4 miles north of Long Pine.	--	1969-73, 1978-80	10-23-80	36
					06-02-81	43
					07-28-81	88
					09-30-81	41
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.	--	1969-80	04-21-81	17
					09-23-81	12
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.	--	1969-80	04-21-81	7.2
					09-23-81	5.9

See footnotes at end of table

Discharge measurements made at miscellaneous sites during water year 1981--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Niobrara River basin--Continued						
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 Neek.	--	1969-80	04-20-81 09-23-81	12 10
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 Neek.	--	1969-80	04-20-81 09-23-81	5.5 3.4
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 1978-80	10-06-80 11-03-80 02-23-81 03-23-81 04-27-81 05-18-81 06-22-81 07-23-81 08-03-81 09-08-81	76 97 117 86 78 115 75 62 78 73
Platte River basin						
Deer Creek ¹ (06781530)	Middle Loup	Lat 41°05'37", long 98°42'37", in SE1/4SE1/4 sec.17, T.13 N., R.12 W., Howard County, at upstream side of bridge on county road 1.2 miles north of Boles.	--	1977-80	11-06-80 06-04-81 07-30-81	a.01 a.05 1.1
Oak Creek ¹ (06784400)	Middle Loup	Lat 41°11'30", long 98°41'25", in SW1/4SW1/4 sec.10, T.14 N., R.12 W., Howard County, at upstream side of bridge on county road 3.6 miles southwest of Farwell.	--	1977-80	11-06-80 06-04-81 07-30-81	11 16 21
Oak Creek ¹ (06784500)	Middle Loup	Lat 41°07'10", long 98°36'45", in NW1/4NW1/4 sec.8, T.13 N., R.11 W., Howard County, at downstream side of bridge on county road 2 miles west of Dannebrog.	--	1949-57 1977-80	11-06-80 06-04-81 07-30-81	20 21 32
Dry Creek ¹ (06784505)	Oak Creek	Lat 41°06'18", long 98°36'16", in NE1/4NW1/4 sec.17, T.13 N., R.11 W., Howard County, at downstream side of bridge on county road 3.3 miles southwest of Dannebrog.	--	1977-80	11-06-80 06-04-81 07-30-81	2.2 2.2 3.5
Turkey Creek ¹ (06784750)	Middle Loup River	Lat 41°10'48", long 98°36'50", in SE1/4SE1/4 sec.18, T.14 N., R.11 W., Howard County, at upstream side of bridge on county road 3.1 miles north of Nysted.	--	1977-80	11-06-80 06-04-81 07-28-81	2.1 1.7 4.0
Turkey Creek ¹ (06784810)	Middle Loup River	Lat 41°09'28", long 98°31'06", in SE1/4NE1/4 sec.25, T.14 N., R.11 W., Howard County, at upstream side of bridge on county road 3.2 miles northeast of Dannebrog.	--	1977-80	11-06-80 06-04-81 07-30-81	6.0 5.6 22
Turkey Creek Tributary ¹ (06784820)	Turkey Creek	Lat 41°10'55", long 98°29'39", in NW1/4SW1/4 sec.17, T.14 N., R.10 W., Howard County, at downstream side of bridge on county road 3 miles southwest of St Paul.	--	1977-80	11-06-80 06-04-81 07-30-81	.94 .56 1.7
Unnamed Creek ¹ (06785020)	Middle Loup River	Lat 41°12'48", long 98°28'35", in SW1/4NW1/4 sec.4, T.14 N., R.10 W., Howard County, at downstream side of bridge on county road near west edge of St Paul.	--	1977-80	11-06-80 06-04-81 07-30-81	.52 .17 5.4

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1981--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Platte River basin--Continued						
Dana 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.	--	1962b 1977-80	04-23-81 08-05-81 09-22-81	.33 587 12
Hyra 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.	--	1977-80	04-23-81 09-21-81	.91 2.7
Auger Creek ¹ (06790245)	North Loup River	Lat 41°17'38", long 98°34'26", in SE1/4SE1/4 sec.4, T.15 N., R.11 W., Howard County, at upstream side of bridge on State Highway 11, 0.5 mile north of Elba.	--	1977-80	11-06-80 06-04-81 07-30-81	.70 .85 .13
Unnamed Creek ¹ (06790255)	North Loup River	Lat 41°16'22", long 98°33'24", in SE1/4NE1/4 sec.15, T.15 N., R.11 W., Howard County, downstream side of bridge on State Highway 11, 0.5 mile southeast of Elba.	--	1977-80	11-06-80 06-04-81 07-30-81	a.05 a.03 a.05
Salt Creek ¹ (06803080)	Platte River	Lat 40°46'13", long 96°43'05", in SW1/4SW1/4 sec.2, T.9 N., R.6 E., Lancaster County, at bridge on county road 0.9 mile west of U.S. Highway 77 and at northwest corner of State Penitentiary, Lincoln.	221	1971-80	02-04-81 03-05-81 04-08-81 05-12-81 06-10-81 07-07-81 08-18-81 09-03-81 09-29-81	7.5 14 8.8 6.8 4.3 4.1 4.9 5.9 3.7
Salt Creek ¹ (06803525)	Platte River	Lat 40°54'18", long 96°35'09", in NW1/4SW1/4 sec.24, T.11 N., R.7 E., Lancaster County, at bridge 0.5 mile north of Interstate Highway 80 and 3 miles southwest of Waverly.	815	1971-80	10-14-80 11-12-80 04-08-81 05-11-81 06-10-81 08-17-81 09-03-81	49 83 158 80 71 77 69
Mill Creek ¹ (06805499)	Platte River	Lat 41°00'13", long 96°09'35", in NE1/4SE1/4SE1/4 sec.15, T.12 N., R.11 E., Cass County, at railroad bridge at north edge of Louisville.	--	1973-80	03-23-81	.94
Cedar Creek ¹ (06805525)	Platte River	Lat 41°00'05", long 96°07'15", in SE1/4SE1/4SE1/4 sec.13, T.12 N., R.11 E., Cass County, at bridge on State Highway 66, 2.0 miles east of Louisville.	--	1973-80	03-23-81	2.1
Fourmile Creek ¹ (06805565)	Platte River	Lat 41°01'02", long 95°57'46", in SE1/4SW1/4 sec.9, T.12 N., R.13 E., at county road bridge 1 mile north of State Highway 66, 3.25 miles west of Maiden Lane in Plattsmouth, and 3.67 miles upstream from mouth.	--	1975-80	03-23-81	5.4
Weeping Water Creek basin						
Weeping Water Creek ¹ (06806460)	Missouri River	Lat 40°51'18", long 96°07'10", in NW1/4NW1/4 sec.7, T.10 N., R.12 E., Cass County, at bridge of Missouri Pacific Railroad just south of north-south road, 1 mile southeast of Weeping Water.	--	1947, 1950-80	03-23-81	8.5
South Branch Weeping Water Creek ¹ (06806495)	Weeping Water Creek	Lat 40°48'45", long 95°56'43", in SW1/4SE1/4SW1/4 sec.22, T.10 N., R.13 E., Cass County, at bridge on U.S. Highway 34, 1.1 miles west of Union.	--	1973-80	03-23-81	13

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1981--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
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, 1954-60b, 1961-80	03-31-81 05-04-81 06-04-81 07-06-81 08-03-81 09-01-81	9.7 12 14 13 28 12
Big Blue River (06879855)	Kansas River	Lat 41°01'54", long 97°49'33", in NW1/4NW1/4 sec.7, T.12 N., R.4 W., York County, at bridge on county line road 2.5 miles west of Arborville.	--	1970c, 1974-80	09-15-81	0
Lincoln Creek (06879980)	Big Blue River	Lat 40°54'23", long 97°49'26", NW1/4SW1/4 sec.19, T.11 N., R.4 W., York County, at bridge on county line 4 miles northeast of Hampton.	--	1969-70, 1974-80	09-15-81	0
Lincoln Creek (06879995)	Big Blue River	Lat 40°57'51", long 97°20'44", NE1/4NW1/4 sec.36, T.12 N., R.1 W., Seward County, at county road bridge 4.5 miles north of Utica.	--	1968-70, 1974-80	09-16-81	0
West Fork Big Blue River (06880559)	Big Blue River	Lat 40°41'41", long 98°03'06", SW1/4NW1/4 sec.6, T.8 N., R.6 W., Clay County, at county road bridge 3.1 miles northwest of Eldorado.	--	1976-80	09-15-81	2.8
West Fork Big Blue River (06880610)	Big Blue River	Lat 40°43'28", long 97°50'35", in SW1/4SW1/4 sec.19, T.9 N., R.4 W., Hamilton County, at county road bridge 5.4 miles east of Stockham.	--	1969-70, 1974-80	09-15-81	3.3
School Creek (06880745)	West Fork Big Blue River	Lat 40°38'25", long 97°46'58", in NE1/4NE1/4 sec.25, T.8 N., R.5 W., Clay County, at county road bridge on county line 3 miles northeast of Sutton.	--	1974-80	09-15-81	.10
West Fork Big Blue River (06880760)	Big Blue River	Lat 40°47'08", long 97°22'05", in NE1/4NE1/4 sec.1, T.9 N., R.1 W., York County, at bridge on county line 4 miles west of Beaver Crossing.	--	1969-70, 1974-80	09-16-81	22
Beaver Creek (06880770)	West Fork Big Blue River	Lat 40°51'33", long 97°49'26", in SW1/4SW1/4 sec.6, T.10 N., R.4 W., York County, at bridge on county-line road 4 miles southeast of Hampton.	--	1969-70, 1972-80	09-15-81	0
Beaver Creek (06880785)	West Fork Big Blue River	Lat 40°47'49", long 97°20'44", NE1/4SE1/4 sec.25, T.10 N., R.1 W., Seward County, at county road bridge 3.5 miles northwest of Beaver Crossing.	--	1968-70, 1974-80	09-16-81	1.1
Indian Creek (06880788)	West Fork Big Blue River	Lat 40°43'15", long 97°21'53", SE1/4NE1/4 sec.25, T.9 N., R.1 W., Seward County, at bridge on county line 1 mile west of Cordova.	--	1969-70, 1974-80	09-16-81	0
Turkey Creek (06881110)	Big Blue River	Lat 40°33'12", long 97°22'05", SW1/4SW1/4 sec.19, T.7 N., R.1 E., Saline County, at bridge on county line 3.7 miles northeast of Milligan.	--	1968-69, 1976-80	09-16-81	0
Big Sandy Creek (06883583)	Little Blue River	Lat 40°21'02", long 97°52'37", in SW1/4SW1/4 sec.34, T.5 N., R.5 W., Clay County, at county road bridge 4 miles southwest of Ong.	--	1970d, 1974-80	09-16-81	0

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES
Discharge measurements made at miscellaneous sites during water year 1981--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Kansas River basin--Continued						
Little Sandy Creek (06883590)	Big Sandy Creek	Lat 40°22'56", long 97°49'26", in SE1/4SE1/4 sec.28, T.5 N., R.5 W., Clay County, at county road bridge 1.2 miles southeast of Ong.	--	1970, 1974-80	09-16-81	0
Dry Sandy Creek (06883925)	Big Sandy Creek	Lat 40°21'02", long 97°32'45", SW1/4SE1/4 sec.33, T.5 N., R.2 W., Fillmore County, at bridge on county line 1.4 miles northeast of Bruning.	--	1976-80	09-16-81	0

* Also a crest-stage gage.

† Operated as a continuous-record gaging station.

‡ Also published with additional data elsewhere in this report.

a Estimate.

b Gage heights, or gage heights and discharge measurements only.

c Published as a low-flow partial record station.

d Published as a crest stage partial record station.

Low-flow investigations were made in the area of the High Plains Regional Aquifer System (RASA) in Nebraska during the 1981 water year to obtain data on ground-water/surface-water relationships. These data will be used to help calibrate numerical models of the hydrologic system of the area.

PLATTE RIVER BASIN

Pumpkin Creek basin

Discharge measurements and observations of zero flow were made on Pumpkin Creek and its tributaries in Banner and Morrill Counties, Nebr., in November 1980. Conditions were good, as only very light rainfall had occurred in the area 6 days prior to the measurements. Locations are listed in downstream order.

<u>Location</u>	<u>Observation of zero flow or measured discharge, in cubic feet per second</u>
	November 3-4, 1980
Bull Canyon 12 mi northeast of Harrisburg in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T.19 N., R.58 W.-----	0
Long Canyon 11 mi northeast of Harrisburg in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T.19 N., R.57 W.-----	0
Bull Canyon 10 mi northeast of Harrisburg in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.19 N., R.57 W.-----	0
Pumpkin Creek 7 mi north of Harrisburg in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T.20 N., R.56 W.-----	0
East Willow Creek 6 mi west of Harrisburg in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.18 N., R.57 W.-----	0
West Willow Creek 8 mi west of Harrisburg in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T.18 N., R.57 W.-----	0
Willow Creek 5 mi northwest of Harrisburg in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T.19 N., R.56 W.-----	0
Willow Creek 6 mi north of Harrisburg in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.20 N., R.56 W.-----	0
Pumpkin Creek 5 mi north of Harrisburg in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T.19 N., R.56 W.-----	Ponded
Pumpkin Creek 7 mi northeast of Harrisburg in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T.19 N., R.55 W.-----	0
Tributary to Pumpkin Creek 8 mi northeast of Harrisburg in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.19 N., R.55 W.--	0
Pumpkin Creek 10 mi northeast of Harrisburg in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.19 N., R.55 W.-----	.42
Indian Springs Canyon 11 mi northeast of Harrisburg in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.19 N., R.54 W.----	0
Pumpkin Creek 12 mi northeast of Harrisburg in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T.19 N., R.54 W.-----	0
Pumpkin Creek 14 mi northeast of Harrisburg in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T.19 N., R.54 W.-----	0
Big Horn Gulch 14 mi northeast of Harrisburg in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.19 N., R.53 W.-----	0
Pumpkin Creek 8 mi northwest of Redington in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T.19 N., R.53 W.-----	.08
Hackberry Creek 8 mi west of Redington in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.19 N., R.53 W.-----	0
Chalk Creek 5 mi west of Redington in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T.19 N., R.53 W.-----	0
Pumpkin Creek 5 mi west of Redington in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T.19 N., R.53 W.-----	.61
Pumpkin Creek 2 mi west of Redington in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.19 N., R.52 W.-----	1.5
Pumpkin Creek 1 mi north of Redington in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T.19 N., R.52 W.-----	1.4
Lawrence Fork 10 mi southwest of Redington in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T.17 N., R.52 W.-----	0
Lawrence Fork 6 mi southwest of Redington in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T.18 N., R.52 W.-----	.36
Lawrence Fork 3 mi south of Redington in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T.18 N., R.52 W.-----	2.5
Lawrence Fork 2 mi south of Redington in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.18 N., R.52 W.-----	0
Lawrence Fork 1 mi east of Redington in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T.19 N., R.52 W.-----	0
Pumpkin Creek 4 mi east of Redington in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T.19 N., R.51 W.-----	2.7
Middle Creek 8 mi southeast of Redington in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T.18 N., R.51 W.-----	0
Middle Creek 6 mi southeast of Redington in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T.18 N., R.51 W.-----	.10
Middle Creek 6 mi southeast of Redington in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.18 N., R.51 W.-----	0
Middle Creek 7 mi east of Redington in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T.19 N., R.51 W.-----	0
Pumpkin Creek 5 mi south of Bridgeport in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T.19 N., R.50 W.-----	9.3
Greenwood Creek 12 mi southeast of Redington in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.17 N., R.51 W.-----	0
Greenwood Creek 12 mi south of Bridgeport in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T.18 N., R.50 W.-----	6.2
Greenwood Creek 10 mi south of Bridgeport in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T.18 N., R.50 W.-----	6.1
Greenwood Creek 8 mi south of Bridgeport in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.18 N., R.50 W.-----	7.8
Greenwood Creek 6 mi southeast of Bridgeport in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T.19 N., R.50 W.-----	.63
Pumpkin Creek 5 mi southeast of Bridgeport in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.19 N., R.50 W.-----	13
Pumpkin Creek 4 mi southeast of Bridgeport (gage) in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.19 N., R.50 W.-----	12

Blue Creek basin

Discharge measurements and observations of zero flow were made on Blue Creek in Garden County, Nebr., in November 1980. Conditions were good, as no rainfall occurred in the week prior to the measurements. Locations are listed in downstream order.

<u>Location</u>	<u>Observation of zero flow or measured discharge, in cubic feet per second</u>
	November 6-7, 1980
Blue Creek 20 mi north of Oshkosh in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21, T.20 N., R.44 W.-----	0
Blue Creek 18 mi north of Oshkosh in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T.20 N., R.44 W.-----	.60
Blue Creek 13 mi north of Oshkosh in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.19 N., R.44 W.-----	22
Blue Creek 12 mi northeast of Oshkosh in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, T.18 N., R.43 W.-----	43
Blue Creek 10 mi northeast of Oshkosh in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 14, T.18 N., R.43 W.-----	56
Blue Creek 10 mi northeast of Oshkosh in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T.18 N., R.42 W.-----	81
Blue Creek 6 mi northwest of Lewellen in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T.17 N., R.42 W.-----	92
Blue Creek 4 mi northwest of Lewellen in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T.16 N., R.42 W.-----	88
Blue Creek 2 mi west of Lewellen (gage) in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T.16 N., R.42 W.-----	93

PLATTE RIVER BASIN--Continued

Lodgepole Creek basin

Discharge measurements and observations of zero flow were made on Lodgepole Creek and tributaries in Kimball, Cheyenne, and Deuel Counties, Nebr., in October 1980. Conditions were good, as only trace amounts of precipitation had occurred in the area in the week prior to the measurements. Locations are listed in downstream order.

<u>Location</u>	<u>Observation of zero flow or measured discharge, in cubic feet per second</u>	
	October 30, 1980	
Lodgepole Creek at NE-WY State line in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T.14 N., R.59 W.-----	0	
Lodgepole Creek 6 mi southwest of Bushnell in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T.14 N., R.58 W.-----	0	
Lodgepole Creek tributary 4 mi southwest of Bushnell in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T.14 N., R.58 W.----	0	
Lodgepole Creek 3 mi southwest of Bushnell in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T.14 N., R.58 W.-----	.09	
Lodgepole Creek tributary at Bushnell in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T.15 N., R.57 W.-----	0	
Lodgepole Creek at Bushnell in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 31, T.15 N., R.57 W.-----	3.2	
Lodgepole Creek 2 mi east of Bushnell (gage) in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.15 N., R.57 W.-----	4.2	
Lodgepole Cr. 5 mi east of Bushnell in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.15 N., R.56 W. (below Oliver Res.)--	.50	
Lodgepole Creek 4 mi west of Kimball in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.15 N., R.56 W.-----	1.1	
Lodgepole Creek tributary 3 mi west of Kimball in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.15 N., R.56 W.-----	0	
Lodgepole Creek 2 mi west of Kimball in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T.15 N., R.56 W.-----	2.7	
Lodgepole Creek 1 mi north of Kimball in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T.15 N., R.55 W.-----	1.9	
Lodgepole Creek 3 mi NE of Kimball in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.15 N., R.55 W. (below Bennett Res.)--	.25	
Lodgepole Creek 2 mi northwest of Dix in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T.15 N., R.54 W.-----	0	
Lodgepole Creek tributary 2 mi northwest of Dix in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T.15 N., R.54 W.-----	0	
Lodgepole Creek 1 mi north of Dix in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.15 N., R.54 W.-----	0	
Lodgepole Creek 4 mi east of Dix in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T.15 N., R.53 W.-----	0	
Lodgepole Creek at Potter in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T.14 N., R.52 W.-----	0	
Lodgepole Creek tributary 2 mi east of Potter in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.14 N., R.52 W.-----	0	
Lodgepole Creek 3 mi east of Potter in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T.14 N., R.52 W.-----	3.2	
Lodgepole Creek 5 mi east of Potter in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.14 N., R.52 W.-----	3.0	
Lodgepole Creek 9 mi east of Potter in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T.14 N., R.51 W.-----	1.8	
Lodgepole Creek 7 mi northwest of Sidney in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T.14 N., R.50 W.-----	0	
Lodgepole Creek 5 mi northwest of Sidney in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 29, T.14 N., R.50 W.-----	0	
Sidney Draw 10 mi southwest of Sidney in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.13 N., R.51 W.-----	0	
Sidney Draw tributary 10 mi southwest of Sidney in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T.13 N., R.51 W.-----	0	
Sidney Draw 7 mi southwest of Sidney in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T.13 N., R.50 W.-----	0	
Sidney Draw 3 mi west of Sidney in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T.14 N., R.50 W.-----	0	
Lodgepole Creek 2 mi west of Sidney in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T.14 N., R.50 W.-----	0	
Lodgepole Creek at Sidney in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.14 N., R.49 W.-----	0	
Lodgepole Creek 2 mi east of Sidney in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T.14 N., R.49 W.-----	.88	
Lodgepole Creek tributary 3 mi south of Sidney in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.13 N., R.49 W.-----	0	
Lodgepole Creek tributary 4 mi east of Sidney in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T.14 N., R.49 W.-----	0	
Lodgepole Creek tributary 6 mi east of Sidney in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T.14 N., R.48 W.-----	0	
Lodgepole Creek 6 mi east of Sidney in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T.14 N., R.48 W.-----	0	
Lodgepole Creek 8 mi east of Sidney in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T.14 N., R.48 W.-----	0	
Lodgepole Creek 7 mi west of Lodgepole in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T.14 N., R.48 W.-----	0	
Lodgepole Creek tributary 7 mi northwest of Lodgepole in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T.14 N., R.47 W.----	0	
Lodgepole Creek tributary 5 mi west of Lodgepole in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T.14 N., R.47 W.-----	0	
Lodgepole Creek 3 mi west of Lodgepole in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T.14 N., R.47 W.-----	0	
Cow Creek 12 mi southwest of Lodgepole in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T.13 N., R.48 W.-----	0	
Cow Creek 7 mi southwest of Lodgepole in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T.13 N., R.47 W.-----	0	
Cow Creek 1 mi southeast of Lodgepole in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.14 N., R.46 W.-----	0	
Lodgepole Creek 2 mi southeast of Lodgepole in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.14 N., R.46 W.-----	.22	
Lodgepole Creek 4 mi northwest of Chappell in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.13 N., R.46 W.-----	0	
Lodgepole Creek 3 mi northwest of Chappell in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T.13 N., R.45 W.-----	.56	
Lodgepole Creek at Chappell in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 22, T.13 N., R.45 W.-----	0	
Lodgepole Creek 4 mi southeast of Chappell in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T.12 N., R.45 W.-----	0	
Lodgepole Creek 6 mi southeast of Chappell in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T.12 N., R.45 W.-----	0	

LOW-FLOW INVESTIGATIONS

PLATTE RIVER BASIN--Continued

Discharge measurements and observations of zero flow were made on Cedar River and Beaver Creek and their tributaries in Garfield, Wheeler, Greeley, Boone, and Nance Counties, Nebr., in March 1981. These measurements were made and furnished for publication by the Nebraska Department of Water Resources as part of their continuing monitoring of the streamflow in the area. Conditions were good, as precipitation during the week prior to the measurements was light--about 0.18 inch on March 22. Locations are listed in downstream order.

Cedar River basin

<u>Location</u>	<u>Observations of zero flow or measured discharge, in cubic feet per second</u>
	March 26, 1981
Big Cedar Creek 29 mi northwest of Erickson in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.24 N., R.15 W.-----	0
Big Cedar Creek 25 mi northwest of Erickson in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T.24 N., R.15 W.-----	.17
Big Cedar Creek 22 mi northwest of Erickson in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T.24 N., R.14 W.-----	.98
Little Cedar Creek 28 mi northwest of Erickson in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T.24 N., R.16 W.-----	0
Little Cedar Creek 26 mi northwest of Erickson in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 29, T.24 N., R.15 W.-----	.28
Little Cedar Creek 17 mi northwest of Erickson in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T.23 N., R.14 W.-----	2.4
Cedar Creek 16 mi northwest of Erickson in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T.23 N., R.14 W.-----	2.9
Cedar Creek 12 mi northwest of Erickson in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.23 N., R.13 W.-----	28
Cedar Creek 7 mi northwest of Erickson in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.22 N., R.12 W.-----	51
Dry Cedar Creek 5 mi west of Erickson in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T.21 N., R.13 W.-----	0
Cedar River 2 mi southeast of Erickson in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T.21 N., R.12 W.-----	96
Cedar River 8 mi southeast of Erickson in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.20 N., R.11 W.-----	119
Clear Creek 8 mi southeast of Erickson in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T.21 N., R.11 W.-----	.39
Cedar River 5 mi northwest of Spalding (gage) in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T.20 N., R.10 W.-----	158
Cedar River tributary 5 mi northwest of Spalding in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T.20 N., R.10 W.-----	Trace
Cedar River tributary 5 mi northwest of Spalding in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T.20 N., R.10 W.-----	0
Cedar River 1 mi south of Spalding in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T.20 N., R. 9 W.-----	147
Cedar River at Primrose in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T.19 N., R.8 W.-----	179
Cedar River 2 mi southeast of Primrose in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T.19 N., R.8 W.-----	173
Cedar River tributary 2 mi north of Cedar Rapids in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T.19 N., R.7 W.-----	0
Cedar River at Cedar Rapids in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T.18 N., R.7 W.-----	183
Cedar River at Belgrade in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.17 N., R.7 W.-----	186
Cedar River 3 mi south of Belgrade in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.17 N., R.6 W.-----	180
Ash Creek 3 mi south of Belgrade in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T.17 N., R.6 W.-----	0
Timber Creek 4 mi south of Belgrade in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T.17 N., R.7 W.-----	4.4
Cedar River 3 mi northwest of Fullerton (gage) in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.16 N., R.6 W.-----	194
Cedar River at Fullerton in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T.16 N., R.6 W.-----	205

Beaver Creek basin

Beaver Creek 7 mi northwest of Bartlett in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.23 N., R.11 W.-----	0
Beaver Creek 7 mi north of Bartlett in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T.23 N., R.11 W.-----	.33
Beaver Creek 6 mi northeast of Bartlett in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T.23 N., R.10 W.-----	1.2
Beaver Creek 8 mi northeast of Bartlett in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T.23 N., R.9 W.-----	3.8
Beaver Creek 12 mi northeast of Bartlett in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T.23 N., R.9 W.-----	12
Beaver Creek 10 mi northwest of Petersburg in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.22 N., R.8 W.-----	19
Beaver Creek 6 mi west of Petersburg in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T.22 N., R.8 W.-----	42
Beaver Creek tributary 5 mi west of Petersburg in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T.22 N., R.7 W.-----	0
Beaver Creek tributary 5 mi west of Petersburg in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T.22 N., R.7 W.-----	0
Beaver Creek 4 mi southwest of Petersburg in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T.22 N., R.7 W.-----	46
Beaver Creek 3 mi north of Loretto in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T.21 N., R.7 W.-----	49
Rae Creek 2 mi south of Petersburg in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.21 N., R.7 W.-----	0
Beaver Creek at Loretto (gage) in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T.21 N., R.7 W.-----	51
Beaver Creek 3 mi southeast of Loretto in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T.20 N., R.6 W.-----	55
Beaver Creek tributary 3 mi north of Albion in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T.20 N., R.6 W.-----	0

KANSAS RIVER BASIN

Republican River basin

Discharge measurements and observations of zero flow were made on the Republican River and tributaries from Naponee, Nebr., to the Nebraska-Kansas State line in Franklin, Webster, and Nuckolls Counties in October 1980. Conditions were good. Light rain had fallen in the area 4 days prior to the investigation, but no surface runoff was occurring directly to stream courses at the time of the measurements.

Location	Observation of zero flow or measured discharge, in cubic feet per second	
	October 20-21, 1980	
Turkey Creek 1 mi north of Naponee in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.2 N., R.16 W.-----	7.1	
Republican River 1 mi south of Naponee in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T.1 N., R.16 W.-----	16	
Rebecca Creek 2 mi southeast of Naponee in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T.1 N., R.16 W.-----	0	
Cottonwood Creek 7 mi northwest of Bloomington in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.2 N., R.16 W.-----	0	
Cottonwood Creek trib. 6 mi NW of Bloomington in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T.2 N., R.16 W.-----	0	
Cottonwood Creek 3 mi northwest of Bloomington in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T.2 N., R.16 W.-----	Ponded	
Cottonwood Creek 2 mi northwest of Bloomington in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.2 N., R.16 W.-----	1.8	
Cottonwood Creek 1 mi west of Bloomington in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.1 N., R.16 W.-----	3.2	
Lochile Creek 2 mi southwest of Bloomington in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T.1 N., R.16 W.-----	0	
Little Cottonwood Creek 3 mi north of Bloomington in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T.2 N., R.15 W.-----	0	
Little Cottonwood Creek at Bloomington in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.1 N., R.15 W.-----	1.5	
Republican River 2 mi south of Bloomington in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.1 N., R.15 W.-----	23	
Lost Creek 2 mi southeast of Bloomington in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T.1 N., R.15 W.-----	0	
Center Creek 8 mi northwest of Franklin in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T.3 N., R.15 W.-----	0	
Center Creek trib. 8 mi northwest of Franklin in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T.3 N., R.15 W.-----	0	
Center Creek 1 mi west of Franklin (gage) in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T.2 N., R.15 W.-----	5.0	
Republican River 1 mi south of Franklin in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.1 N., R.14 W.-----	30	
Coon Creek at Franklin in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.2 N., R.14 W.-----	0	
Walnut Run at Franklin in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 31, T.2 N., R.14 W.-----	.33	
Calumet Creek 2 mi southeast of Franklin in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T.1 N., R.14 W.-----	0	
Wasp Creek 2 mi east of Franklin in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.2 N., R.14 W.-----	0	
Coates Creek 2 mi east of Franklin in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.2 N., R.14 W.-----	.58	
Reams Creek 5 mi south of Franklin in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T.1 N., R.14 W.-----	0	
Reams Creek 3 mi southeast of Franklin in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.1 N., R.14 W.-----	Est. .01	
Republican River 3 mi southeast of Franklin in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.1 N., R.14 W.-----	32	
Lovely Creek 4 mi east of Franklin in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T.2 N., R.14 W.-----	.93	
Republican River tributary 3 mi west of Riverton in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T.2 N., R.13 W.-----	0	
Lohff Creek 4 mi southwest of Riverton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.1 N., R.13 W.-----	Est. .01	
School Creek 3 mi southwest of Riverton in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T.1 N., R.13 W.-----	0	
Lohff Creek 2 mi southwest of Riverton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T.1 N., R.13 W.-----	Trace	
Republican River at Riverton in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.1 N., R.13 W.-----	38	
West Branch Thompson Creek 11 mi NW of Riverton in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T.3 N., R.14 W.-----	0	
West Branch Thompson Creek 6 mi NW of Riverton in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, T.2 N., R.13 W.-----	.85	
Middle Branch Thompson Creek 6 mi north of Riverton in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.2 N., R.13 W.-----	0	
East Branch Thompson Creek 6 mi north of Riverton in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.2 N., R.13 W.-----	0	
Thompson Creek 3 mi north of Riverton in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T.2 N., R.13 W.-----	15	
Thompson Creek at Riverton (gage) in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T.1 N., R.13 W.-----	15	
Rock Creek 2 mi south of Riverton in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T.1 N., R.13 W.-----	0	
Farmers Creek 7 mi northeast of Riverton in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 5, T.2 N., R.12 W.-----	0	
West Fork Farmers Creek 7 mi northeast of Riverton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 31, T.3 N., R.12 W.-----	0	
East Fork Farmers Creek 6 mi northeast of Riverton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T.2 N., R.12 W.-----	0	
Farmers Creek 4 mi northeast of Riverton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T.2 N., R.12 W.-----	.79	
Farmers Creek 4 mi east of Riverton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.2 N., R.12 W.-----	1.2	
Walnut Creek 3 mi southwest of Inavale in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.1 N., R.12 W.-----	0	
Dry Creek 1 mi southwest of Inavale in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T.1 N., R.12 W.-----	0	
Republican River at Inavale in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.1 N., R.12 W.-----	51	
Spring Creek at Inavale in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.2 N., R.12 W.-----	0	
Buffalo Creek 1 mi south of Inavale in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.1 N., R.12 W.-----	0	
School Creek 1 mi east of Inavale in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T.2 N., R.12 W.-----	0	
Hungry Creek 2 mi southeast of Inavale in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.1 N., R.12 W.-----	0	
State Creek 3 mi southeast of Inavale in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T.1 N., R.11 W.-----	0	
Louisa Creek 4 mi southeast of Inavale in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T.1 N., R.11 W.-----	0	
Penny Creek 3 mi southwest of Red Cloud in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.1 N., R.11 W.-----	0	
Indian Creek 4 mi northwest of Red Cloud in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T.2 N., R.11 W.-----	0	
Indian Creek trib. 6 mi NW of Red Cloud in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T.2 N., R.11 W.-----	0	

KANSAS RIVER BASIN--Continued

Republican River basin--Continued

Location	Observation of zero flow or measured discharge, in cubic feet per second	
	October 20-21, 1980	
Indian Creek trib. 4 mi NW of Red Cloud in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T.2 N., R.11 W.-----	0.04	
Indian Creek 3 mi northwest of Red Cloud in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T.2 N., R.11 W.-----	.89	
Indian Creek 3 mi west of Red Cloud in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.2 N., R.11 W.-----	.69	
Republican River 2 mi south of Red Cloud in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.1 N., R.11 W.-----	54	
Republican River tributary 2 mi south of Red Cloud in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.1 N., R.11 W.-----	0	
Republican River tributary 2 mi SE of Red Cloud in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T.1 N., R.10 W.-----	0	
Crooked Creek 5 mi north of Red Cloud in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T.2 N., R.11 W.-----	0	
Crooked Creek 2 mi north of Red Cloud in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T.2 N., R.11 W.-----	.77	
Crooked Creek at Red Cloud in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T.2 N., R.11 W.-----	.51	
Dry Creek 3 mi northeast of Red Cloud in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T.2 N., R.10 W.-----	0	
Dry Creek 3 mi northeast of Red Cloud in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.2 N., R.10 W.-----	.09	
Dry Creek 3 mi east of Red Cloud in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.2 N., R.10 W.-----	.01	
Elm Creek 2 mi south of Cowles in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.2 N., R.10 W.-----	0	
Elm Creek 2 mi north of Amboy in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T.2 N., R.10 W.-----	9.0	
Elm Creek at Amboy (gage) in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.1 N., R.10 W.-----	12	
Hicks Creek 2 mi south of Amboy in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.1 N., R.10 W.-----	0	
Oak Creek 2 mi southeast of Amboy in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T.1 N., R.10 W.-----	0	
Willow Creek 3 mi northeast of Amboy in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.2 N., R.10 W.-----	0	
Willow Creek 2 mi east of Amboy in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T.2 N., R.10 W.-----	.70	
Courtland Canal 4 mi southwest of Superior (gage) in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.1 N., R.7 W.-----	0	
Republican River 2 mi southwest of Guide Rock (gage) in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T.1 N., R.9 W.-----	73	
Advent Creek 6 mi southwest of Guide Rock in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T.1 N., R.10 W.-----	0	
Advent Creek tributary 6 mi SW of Guide Rock in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.1 N., R.9 W.-----	0	
Advent Creek 3 mi southwest of Guide Rock in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T.1 N., R.9 W.-----	.08	
Minnie Soap Creek 1 mi north of Guide Rock in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.1 N., R.9 W.-----	0	
Republican River at Guide Rock in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.1 N., R.9 W.-----	69	
Soap Creek 1 mi northeast of Guide Rock in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.1 N., R.9 W.-----	0	
Ash Creek 5 mi south of Guide Rock in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.1 N., R.9 W.-----	0	
Ash Creek 1 mi south of Guide Rock in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T.1 N., R.9 W.-----	Trace	
Ayres Creek 3 mi southeast of Guide Rock in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.1 N., R.8 W.-----	0	
Crooked Auger Creek 5 mi southeast of Guide Rock in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.1 N., R.8 W.-----	0	
Gimlet Creek 7 mi southeast of Guide Rock in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.1 N., R.8 W.-----	0	
Gimlet Creek 6 mi southeast of Guide Rock in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T.1 N., R.8 W.-----	0	
Beaver Creek 6 mi north of Guide Rock in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T.2 N., R.9 W.-----	0	
Beaver Creek tributary 6 mi north of Guide Rock in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.2 N., R.9 W.-----	0	
Beaver Creek 4 mi northeast of Guide Rock in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T.2 N., R.9 W.-----	.05	
Beaver Creek tributary 6 mi NE of Guide Rock in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T.2 N., R.9 W.-----	0	
Beaver Creek tributary 5 mi NE of Guide Rock in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T.2 N., R.9 W.-----	Trace	
Beaver Creek 5 mi northeast of Guide Rock in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T.2 N., R.8 W.-----	.99	
Beaver Creek 5 mi southeast of Guide Rock in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T.1 N., R.8 W.-----	1.8	
Middle Creek 9 mi northwest of Superior in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.1 N., R.8 W.-----	0	
Middle Creek 8 mi northwest of Superior in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.1 N., R.8 W.-----	.06	
Oak Creek 7 mi southwest of Superior in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T.1 N., R.8 W.-----	0	
Oak Creek 7 mi northwest of Superior in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T.1 N., R.8 W.-----	0	
Republican River 7 mi northwest of Superior in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T.1 N., R.8 W.-----	73	
Cottonwood Creek 9 mi northwest of Superior in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T.2 N., R.8 W.-----	0	
Cottonwood Creek 8 mi northwest of Superior in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T.2 N., R.8 W.-----	.06	
Cottonwood Creek 7 mi northwest of Superior in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T.1 N., R.8 W.-----	.23	
Sand Creek 6 mi northwest of Superior in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T.1 N., R.8 W.-----	0	
Republican River tributary 3 mi NW of Superior in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, T.1 N., R.7 W.-----	0	
Republican River at Superior in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T.1 N., R.7 W.-----	78	
Lost Creek at Superior in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.1 N., R.7 W.-----	0	
Blakely Creek 2 mi north of Superior in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.1 N., R.7 W.-----	0	
Blakely Creek 1 mi northeast of Superior in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.1 N., R.7 W.-----	Trace	
Oak Creek 1 mi northeast of Superior in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.1 N., R.6 W.-----	0	
Crosby Creek 4 mi northeast of Superior in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T.1 N., R.6 W.-----	0	
Crosby Creek tributary 7 mi northeast of Superior in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.2 N., R.6 W.-----	0	
Crosby Creek tributary 6 mi northeast of Superior in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T.1 N., R.6 W.-----	.02	
Crosby Creek tributary 5 mi northeast of Superior in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 14, T.1 N., R.6 W.-----	.02	
Crosby Creek 4 mi east of Superior in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.1 N., R.6 W.-----	.22	
Republican River 1 mi SW of Hardy (gage) in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.1 S., R.5 W. (in Kansas)-----	89	
Forsha Creek at Hardy in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T.1 N., R.5 W.-----	0	
Republican River tributary 1 mi east of Hardy in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T.1 N., R.5 W.-----	0	

KANSAS RIVER BASIN--Continued

Big Blue River basin

Discharge measurements and observations of zero flow were made in the Big Blue River basin in Butler, Hamilton, York, Seward, Adams, Clay, Fillmore, Saline, Gage, and Jefferson Counties, Nebr., during the period October 30 to November 4, 1980. An early snowstorm had occurred on October 27 over part of the basin, but because of preceding dry conditions, surface runoff from snowmelt was minor. Some measurements on tributaries to West Fork Big Blue River were slightly affected by snowmelt. Release of water for power generation at Blue Springs caused flow to increase downstream to Barneston. Locations are listed in downstream order.

<u>Location</u>	<u>Observation of zero flow or measured discharge, in cubic feet per second</u>
Big Blue River at Surprise (gage) in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, T.13 N., R.1 E.-----	0
Big Blue River 3 mi east of Surprise in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.13 N., R.2 E.-----	Trace
North Branch Big Blue River 3 mi east of Rising City in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T.14 N., R.2 E.-----	0
North Branch Big Blue River 2 mi NW of Garrison in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.14 N., R.2 E.-----	0
North Branch Big Blue River 1 mi NW of Garrison in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T.14 N., R.2 E.-----	Ponded
North Branch Big Blue River 2 mi NW of Garrison in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, T.14 N., R.2 E.-----	1.4
Kezan Creek 3 mi northwest of Brainard in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.14 N., R.3 E.-----	.02
Kezan Creek 2 mi northwest of Brainard in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T.14 N., R.3 E.-----	.23
Kezan Creek 4 mi northeast of Garrison in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T.14 N., R.3 E.-----	.69
Kezan Creek 1 mi east of Garrison in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.14 N., R.3 E.-----	1.3
Kezan Creek 2 mi south of Garrison in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T.14 N., R.2 E.-----	Ponded
North Branch Big Blue River 3 mi south of Garrison in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T.13 N., R.2 E.-----	1.8
North Branch Big Blue River 2 mi north of Ulysses in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.13 N., R.2 E.-----	2.5
Big Blue River at Ulysses in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T.13 N., R.2 E.-----	4.1
Big Blue River 4 mi south of Ulysses in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.12 N., R.2 E.-----	5.6
Big Blue River 1 mi east of Staplehurst in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T.12 N., R.2 E.-----	4.7
Big Blue River 2 mi northwest of Seward in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T.11 N., R.3 E.-----	5.1
Lincoln Creek 6 mi northwest of Aurora in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T.11 N., R.7 W.-----	0
Lincoln Creek 3 mi northwest of Aurora in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.11 N., R.7 W.-----	0
Lincoln Creek at Aurora in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T.11 N., R.6 W.-----	.01
Lincoln Creek 3 mi northeast of Aurora in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T.11 N., R.5 W.-----	.01
Lincoln Creek 2 mi north of Hampton in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T.11 N., R.5 W.-----	0
Lincoln Creek 4 mi northeast of Hampton in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.11 N., R.5 W.-----	0
Lincoln Creek 2 mi northwest of Bradshaw in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T.11 N., R.4 W.-----	0
Lincoln Creek 3 mi northeast of Bradshaw in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T.11 N., R.4 W.-----	0
Lincoln Creek 5 mi northwest of York in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T.11 N., R.3 W.-----	0
Lincoln Creek 2 mi north of York in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T.11 N., R.2 W.-----	0
Coon Branch 4 mi northeast of York in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.11 N., R.2 W.-----	0
Lincoln Creek 2 mi southwest of Thayer in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.11 N., R.2 W.-----	0
Lincoln Creek 2 mi east of Thayer in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T.12 N., R.1 W.-----	0
Lincoln Creek tributary 2 mi NE of Thayer in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T.12 N., R.1 W.-----	0
Lincoln Creek 3 mi south of Gresham in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T.12 N., R.1 W.-----	0
Lincoln Creek 4 mi southeast of Gresham in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T.12 N., R.1 W.-----	0
Lincoln Creek 6 mi north of Utica in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T.12 N., R.1 E.-----	.60
Wildcat Creek 6 mi north of Utica in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T.12 N., R.1 E.-----	0
Lincoln Creek 5 mi west of Staplehurst in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T.12 N., R.1 E.-----	3.8
Lincoln Creek 2 mi west of Staplehurst in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.12 N., R.2 E.-----	7.9
Brush Creek 3 mi southwest of Staplehurst in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T.11 N., R.2 E.-----	Ponded
Brush Creek 2 mi southwest of Staplehurst in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.11 N., R.2 E.-----	.02
Lincoln Creek 2 mi west of Seward (gage) in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T.11 N., R.2 E.-----	7.5
Big Blue River at Seward (gage) in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T.11 N., R.3 E.-----	13
Plum Creek 1 mi south of Brainard in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.14 N., R.4 E.-----	Trace
Plum Creek tributary 1 mi east of Brainard in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.14 N., R.4 E.-----	Ponded
Plum Creek 2 mi southwest of Brainard in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.14 N., R.4 E.-----	.06
Plum Creek 3 mi southwest of Brainard in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.14 N., R.4 E.-----	.07
Plum Creek tributary 3 mi north of Dwight in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T.13 N., R.4 E.-----	.20
Plum Creek 3 mi north of Dwight in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T.13 N., R.3 E.-----	Ponded
Plum Creek 1 mi northwest of Dwight in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.13 N., R.3 E.-----	.50
Plum Creek 2 mi west of Dwight in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.13 N., R.3 E.-----	1.4
Plum Creek tributary 3 mi west of Dwight in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T.13 N., R.3 E.-----	Trace
Plum Creek tributary 4 mi southwest of Dwight in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T.13 N., R.3 E.-----	.37
Plum Creek 4 mi southwest of Dwight in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.12 N., R.3 E.-----	1.6
Plum Creek 1 mi west of Bee in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T.12 N., R.3 E.-----	3.0
Plum Creek 3 mi southwest of Bee in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T.12 N., R.3 E.-----	3.8
Big Weedy Creek 3 mi northwest of Bee in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T.12 N., R.3 E.-----	Ponded

KANSAS RIVER BASIN--Continued

Big Blue River basin--Continued

Location	Observation of zero flow or measured discharge, in cubic feet per second
Big Weedy Creek 3 mi southwest of Bee in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T.12 N., R.3 E.-----	0.13
Big Weedy Creek 4 mi southwest of Bee in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T.12 N., R.3 E.-----	.45
Plum Creek 2 mi northeast of Seward in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.11 N., R.3 E.-----	5.2
Plum Creek at Seward in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T.11 N., R.3 E.-----	6.8
Clark Creek 2 mi northeast of Seward in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.11 N., R.3 E.-----	.07
Clark Creek 2 mi southeast of Seward in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T.11 N., R.3 E.-----	.32
Big Blue River 2 mi southeast of Seward in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.10 N., R.3 E.-----	24
Crooked Creek 5 mi southwest of Seward in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T.10 N., R.3 E.-----	.01
Lonetree Creek 4 mi south of Seward in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T.10 N., R.3 E.-----	0
Crooked Creek 4 mi south of Seward in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.10 N., R.3 E.-----	.32
Big Blue River 3 mi north of Milford in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.10 N., R.3 E.-----	30
Wolf Creek 1 mi north of Milford in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T.10 N., R.3 E.-----	.06
Big Blue River at Milford in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.9 N., R.3 E.-----	32
Coon Creek 1 mi south of Milford in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T.9 N., R.3 E.-----	0
Coon Creek at Milford in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T.9 N., R.3 E.-----	.22
Big Blue River 2 mi southeast of Milford in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T.9 N., R.4 E.-----	30
Big Blue River 5 mi southeast of Milford in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T.9 N., R.4 E.-----	33
West Fork Big Blue River 2 mi north of Hastings in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T.8 N., R.10 W.-----	0
West Fork Big Blue River tributary at Hastings in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T.7 N., R.10 W.-----	0
West Fork Big Blue River tributary at Hastings in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T.8 N., R.10 W.-----	0
West Fork Big Blue River 1 mi northeast of Hastings in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T.8 N., R.9 W.-----	0
West Fork Big Blue River 4 mi east of Hastings in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.8 N., R.9 W.-----	3.6
West Fork Big Blue River trib. 5 mi north of Hastings in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T.8 N., R.10 W.-----	0
West Fork Big Blue River trib. 4 mi NE of Hastings in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.8 N., R.9 W.-----	0
West Fork Big Blue River 1 mi southeast of Trumbull in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.8 N., R.8 W.-----	5.8
West Fork Big Blue River trib. 3 mi SE of Trumbull in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, T.8 N., R.8 W.-----	0
West Fork Big Blue River 5 mi northwest of Harvard in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T.8 N., R.8 W.-----	4.7
West Fork Big Blue River 4 mi northwest of Harvard in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T.8 N., R.7 W.-----	4.6
West Fork Big Blue River 5 mi northeast of Harvard in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.8 N., R.7 W.-----	6.4
West Fork Big Blue River trib. 4 mi NE of Trumbull in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T.9 N., R.8 W.-----	0
West Fork Big Blue River trib. 2 mi SW of Giltner in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.8 N., R.8 W.-----	0
West Fork Big Blue River trib. 4 mi SE of Giltner in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T.9 N., R.7 W.-----	0
West Fork Big Blue River trib. 3 mi west of Stockham in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T.9 N., R.6 W.-----	0
West Fork Big Blue River 1 mi west of Stockham in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T.9 N., R.6 W.-----	8.3
West Fork Big Blue River 1 mi east of Stockham in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T.9 N., R.5 W.-----	3.9
West Fork Big Blue River trib. 6 mi SW of Stockham in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T.8 N., R.6 W.-----	0
West Fork Big Blue River trib. 4 mi south of Stockham in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T.8 N., R.6 W.-----	0
West Fork Big Blue River trib. 4 mi east of Stockham in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T.9 N., R.5 W.-----	0
West Fork Big Blue River 4 mi east of Stockham in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T.9 N., R.5 W.-----	3.8
West Fork Big Blue River 4 mi south of Henderson in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.9 N., R.4 W.-----	3.8
West Fork Big Blue River 1 mi SW of Lushton in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T.9 N., R.4 W.-----	5.1
South Fork School Creek 3 mi southeast of Harvard in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T.7 N., R.7 W.-----	0
South Fork School Creek 2 mi southeast of Harvard in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T.7 N., R.7 W.-----	0
North Fork School Creek 2 mi north of Harvard in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T.8 N., R.7 W.-----	0
North Fork School Creek 3 mi east of Harvard in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 31, T.8 N., R.6 W.-----	0
School Creek 3 mi southwest of Saronville in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T.7 N., R.6 W.-----	0
School Creek 1 mi south of Saronville in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T.7 N., R.6 W.-----	0
School Creek at Sutton in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.8 N., R.5 W.-----	0
School Creek tributary 1 mi north of Saronville in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T.8 N., R.5 W.-----	0
School Creek tributary 2 mi north of Sutton in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.8 N., R.5 W.-----	0
School Creek tributary 3 mi northeast of Sutton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.8 N., R.5 W.-----	Trace
School Creek 3 mi northeast of Sutton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.8 N., R.4 W.-----	.31
School Creek 5 mi northeast of Sutton in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.8 N., R.4 W.-----	0
School Creek 3 mi southwest of Lushton in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.8 N., R.4 W.-----	0
School Creek 2 mi south of Lushton in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T.8 N., R.4 W.-----	Ponded
West Fork Big Blue River 4 mi NE of Grafton in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.8 N., R.3 W.-----	5.3
West Fork Big Blue River trib. 2 mi north of Grafton in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T.8 N., R.4 W.-----	0
West Fork Big Blue River trib. 3 mi NE of Grafton in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T.8 N., R.3 W.-----	0
West Fork Big Blue River 4 mi SW of McCool Junction in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.8 N., R.3 W.-----	6.0
West Fork Big Blue River 1 mi south of McCool Junction in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.9 N., R.2 W.-----	4.4

KANSAS RIVER BASIN--Continued

Big Blue River basin--Continued

Location	Observation of zero flow or measured discharge, in cubic feet per second
West Fork Big Blue River trib. 1 mi NW of McCool Junction in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T.9 N., R.3 W.-----	0
West Fork Big Blue River 1 mi NE of McCool Junction in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T.9 N., R.2 W.-----	7.1
West Fork Big Blue River 3 mi east of McCool Junction in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T.9 N., R.2 W.-----	9.0
West Fork Big Blue River 7 mi NE of McCool Junction in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.9 N., R.1 W.-----	9.2
West Fork Big Blue River 6 mi west of Beaver Crossing in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T.9 N., R.1 W.-----	12
West Fork Big Blue River 4 mi west of Beaver Crossing in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T.9 N., R.1 E.-----	17
Beaver Creek 6 mi west of York in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T.10 N., R.3 W.-----	0
Beaver Creek 3 mi west of York in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T.10 N., R.3 W.-----	0
Beaver Creek tributary 2 mi west of York in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.10 N., R.3 W.-----	0
Beaver Creek at York in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.10 N., R.2 W.-----	0
Beaver Creek 4 mi east of York in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T.10 N., R.2 W.-----	2.7
Beaver Creek 5 mi east of York in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T.10 N., R.1 W.-----	2.1
Beaver Creek 8 mi southeast of York in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21, T.10 N., R.1 W.-----	2.0
Beaver Creek tributary 8 mi southeast of York in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T.10 N., R.1 W.-----	0
Beaver Creek 7 mi northwest of Beaver Crossing in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T.10 N., R.1 W.-----	1.7
Beaver Creek 5 mi northwest of Beaver Crossing in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T.10 N., R.1 E.-----	2.4
Sleepy Hollow Creek 4 mi northwest of Beaver Crossing in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T.10 N., R.1 E.-----	0
West Fork Big Blue River 2 mi NW of Beaver Crossing in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.10 N., R.1 E.-----	26
Indian Creek 2 mi south of Fairmont in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.7 N., R.2 W.-----	0
Indian Creek 2 mi southeast of Fairmont in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T.8 N., R.2 W.-----	.06
Indian Creek 4 mi northeast of Fairmont in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T.8 N., R.2 W.-----	.05
Indian Creek 6 mi northeast of Fairmont in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.8 N., R.2 W.-----	0
Indian Creek 4 mi north of Exeter in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T.9 N., R.1 W.-----	Trace
Indian Creek at Cordova in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T.9 N., R.1 E.-----	0
North Fork Indian Creek 3 mi NW of Cordova in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.9 N., R.1 W.-----	0
North Fork Indian Creek 2 mi north of Cordova in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T.9 N., R.1 E.-----	0
Indian Creek 2 mi north of Cordova in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.9 N., R.1 E.-----	0
Indian Creek 2 mi west of Beaver Crossing in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T.9 N., R.1 E.-----	0
West Fork Big Blue River at Beaver Crossing in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.9 N., R.1 E.-----	29
Walnut Creek 3 mi northeast of Beaver Crossing in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T.10 N., R.1 E.-----	0
Walnut Creek 2 mi northeast of Beaver Crossing in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T.10 N., R.2 E.-----	.01
Walnut Creek 2 mi southeast of Beaver Crossing in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T.9 N., R.2 E.-----	.91
West Fork Big Blue River 4 mi SE of Beaver Crossing in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, T.9 N., R.2 E.-----	41
West Fork Big Blue River 6 mi NW of Dorchester (gage) in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.9 N., R.2 E.-----	44
West Fork Big Blue River 4 mi north of Dorchester in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T.9 N., R.3 E.-----	43
North Fork Johnson Creek 3 mi SW of Cordova in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.8 N., R.1 W.-----	Ponded
North Fork Johnson Creek 1 mi SE of Cordova in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.9 N., R.1 E.-----	.05
North Fork Johnson Creek 3 mi east of Cordova in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T.9 N., R.1 E.-----	.01
South Fork Johnson Creek 2 mi southeast of Exeter in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T.8 N., R.1 W.-----	0
South Fork Johnson Creek 2 mi east of Exeter in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T.8 N., R.1 W.-----	.01
South Fork Johnson Creek 3 mi southeast of Cordova in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T.8 N., R.1 E.-----	0
South Fork Johnson Creek 5 mi southeast of Cordova in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.8 N., R.1 E.-----	Trace
Johnson Creek 5 mi east of Cordova in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T.9 N., R.2 E.-----	.02
Johnson Creek 6 mi east of Cordova in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T.9 N., R.2 E.-----	Ponded
Johnson Creek 5 mi northwest of Dorchester in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.9 N., R.2 E.-----	.03
Johnson Creek tributary 4 mi NW of Dorchester in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T.8 N., R.2 E.-----	0
Johnson Creek 3 mi north of Dorchester in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.8 N., R.3 E.-----	.09
West Fork Big Blue River 3 mi NE of Dorchester in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T.8 N., R.3 E.-----	40
West Fork Big Blue River 5 mi NW of Crete in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.8 N., R.4 E.-----	46
Big Blue River 3 mi north of Crete in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T.8 N., R.4 E.-----	73
Walnut Creek at Crete in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.8 N., R.4 E.-----	0
Walnut Creek at Crete in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T.8 N., R.4 E.-----	.02
Big Blue River at Crete in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.8 N., R.4 E.-----	71
Big Blue River 2 mi south of Crete (gage) in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.7 N., R.4 E.-----	91
Squaw Creek 4 mi west of Crete in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T.8 N., R.3 E.-----	0
Squaw Creek 3 mi southwest of Crete in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T.7 N., R.4 E.-----	0
Squaw Creek 4 mi south of Crete in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T.7 N., R.4 E.-----	0
Big Blue River 5 mi south of Crete in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 22, T.7 N., R.4 E.-----	92
Big Blue River 3 mi north of Wilber in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.7 N., R.4 E.-----	99
Big Blue River at Wilber in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 14, T.6 N., R.4 E.-----	101

KANSAS RIVER BASIN--Continued

Big Blue River basin--Continued

<u>Location</u>	<u>Observation of zero flow or measured discharge, in cubic feet per second</u>
Big Blue River 2 mi south of Wilber in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T.6 N., R.4 E.-----	108
Prairie Creek 2 mi south of Wilber in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T.6 N., R.4 E.-----	.04
Big Blue River 1 mi north of DeWitt in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.5 N., R.4 E.-----	100
Big Blue River at DeWitt in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.5 N., R.5 E.-----	88
Clatonia Creek 3 northeast of Clatonia in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T.6 N., R.5 E.-----	0
Clatonia Creek at Clatonia in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 22, T.6 N., R.5 E.-----	.33
Clatonia Creek 3 mi northeast of DeWitt in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.6 N., R.5 E.-----	.25
Clatonia Creek at DeWitt in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, T.5 N., R.5 E.-----	.10
Turkey Creek 3 mi west of Geneva in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T.7 N., R.3 W.-----	0
Turkey Creek tributary 3 mi west of Geneva in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T.7 N., R.3 W.-----	0
Turkey Creek 2 mi northeast of Geneva in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.7 N., R.3 W.-----	0
Turkey Creek 1 mi north of Geneva in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T.7 N., R.2 W.-----	.06
Turkey Creek 2 mi northeast of Geneva in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.7 N., R.2 W.-----	.38
Turkey Creek tributary 3 mi southwest of Geneva in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 14, T.6 N., R.3 W.-----	0
Turkey Creek tributary 2 mi south of Geneva in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T.6 N., R.3 W.-----	.08
Turkey Creek tributary 1 mi east of Geneva in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.6 N., R.2 W.-----	.10
Turkey Creek tributary 3 mi northeast of Geneva in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.7 N., R.2 W.-----	.17
Turkey Creek 4 mi northeast of Geneva in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.7 N., R.2 W.-----	.40
Turkey Creek 6 mi east of Geneva in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T.7 N., R.1 W.-----	.37
Turkey Creek 2 mi northwest of Milligan in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.6 N., R.1 W.-----	.48
South Fork Turkey Creek 2 mi northeast of Milligan in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.6 N., R.1 W.-----	0
Turkey Creek 3 mi northeast of Milligan in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T.7 N., R.1 E.-----	.48
Turkey Creek 4 mi southwest of Friend in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T.7 N., R.1 E.-----	2.3
Turkey Creek 3 mi southeast of Friend in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.8 N., R.2 E.-----	4.4
Turkey Creek tributary 5 mi southeast of Friend in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T.8 N., R.2 E.-----	0
Turkey Creek 4 mi southwest of Dorchester in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T.8 N., R.2 E.-----	3.3
Turkey Creek 2 mi south of Dorchester in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.7 N., R.3 E.-----	3.2
Turkey Creek 5 mi southeast of Dorchester in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T.7 N., R.3 E.-----	3.3
Spring Creek 6 mi south of Dorchester in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.7 N., R.3 E.-----	0
Spring Creek 5 mi south of Dorchester in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T.7 N., R.3 E.-----	Ponded
Spring Creek 5 mi southeast of Dorchester in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.7 N., R.3 E.-----	0
Turkey Creek 7 mi northwest of Wilber in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T.7 N., R.3 E.-----	3.2
Turkey Creek 4 mi northwest of Wilber in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.6 N., R.4 E.-----	3.1
Brush Creek 5 mi northwest of Wilber in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.6 N., R.3 E.-----	0
Brush Creek 3 mi northwest of Wilber in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T.6 N., R.4 E.-----	0
Dry Creek 5 mi northwest of Wilber in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.6 N., R.3 E.-----	0
Dry Creek 4 mi northwest of Wilber in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T.6 N., R.4 E.-----	0
Turkey Creek 3 mi west of Wilber (gage) in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 19, T.6 N., R.4 E.-----	4.2
Turkey Creek 2 mi southwest of Wilber in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T.6 N., R.4 E.-----	2.4
Turkey Creek 4 mi southwest of Wilber in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T.5 N., R.4 E.-----	3.2
North Fork Swan Creek 6 mi northeast of Milligan in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T.6 N., R.1 E.-----	0
North Fork Swan Creek 7 mi east of Milligan in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.6 N., R.1 E.-----	.01
North Fork Swan Creek 6 mi northwest of Western in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, T.6 N., R.2 E.-----	.11
North Fork Swan Creek tributary 5 mi NW of Western in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T.6 N., R.2 E.-----	Trace
North Fork Swan Creek 3 mi northeast of Western in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T.6 N., R.2 E.-----	.10
Spring Creek 3 mi northwest of Western in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.5 N., R.2 E.-----	0
Spring Creek 3 mi north of Western in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.5 N., R.2 E.-----	.30
Spring Creek 3 mi northeast of Western in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T.5 N., R.2 E.-----	.29
North Fork Swan Creek 2 mi NE of Western in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T.5 N., R.2 E.-----	.34
North Fork Swan Creek 3 mi west of Swanton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T.5 N., R.3 E.-----	.45
South Fork Swan Creek 4 mi southeast of Western in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.4 N., R.2 E.-----	0
South Fork Swan Creek tributary 5 mi SE of Western in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T.4 N., R.2 E.-----	0
South Fork Swan Creek 3 mi southwest of Swanton in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T.5 N., R.2 E.-----	Ponded
South Fork Swan Creek 2 mi west of Swanton in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T.5 N., R.3 E.-----	.22
South Fork Swan Creek tributary 1 mi SE of Swanton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T.5 N., R.3 E.-----	0
Walnut Grove Creek 1 mi north of Swanton in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T.5 N., R.3 E.-----	0
Swan Creek 3 mi northeast of Swanton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.5 N., R.4 E.-----	3.8
Plummers Branch 3 mi northeast of Swanton in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T.5 N., R.4 E.-----	0
Swan Creek 3 mi west of DeWitt in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T.5 N., R.4 E.-----	5.0
Turkey Creek 2 mi west of DeWitt in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, T.5 N., R.4 E.-----	8.5

KANSAS RIVER BASIN--Continued

Big Blue River basin--Continued

<u>Location</u>	<u>Observation of zero flow or measured discharge, in cubic feet per second</u>
Turkey Creek at DeWitt in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T.5 N., R.4 E.-----	9.4
Turkey Creek 2 mi southeast of DeWitt in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T.5 N., R.5 E.-----	11
Big Blue River 4 mi southeast of DeWitt in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.5 N., R.5 E.-----	106
Soap Creek 5 mi northeast of DeWitt in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T.5 N., R.5 E.-----	0
Soap Creek 4 mi northeast of DeWitt in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T.5 N., R.5 E.-----	.03
Soap Creek 4 mi southeast of DeWitt in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T.5 N., R.5 E.-----	.03
Big Blue River tributary 6 mi southeast of DeWitt in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T.4 N., R.5 E.-----	0
Snake Creek 6 mi southeast of DeWitt in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T.4 N., R.5 E.-----	0
Big Blue River 5 mi northwest of Beatrice in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T.4 N., R.5 E.-----	117
Cub Creek 3 mi southwest of Plymouth in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.3 N., R.4 E.-----	0
Cub Creek 4 mi south of Plymouth in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T.3 N., R.4 E.-----	.02
Cub Creek 7 mi west of Beatrice in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 28, T.4 N., R.5 E.-----	.05
Cub Creek 5 mi west of Beatrice in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.4 N., R.5 E.-----	.35
Bottle Creek 4 mi west of Beatrice in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.3 N., R.5 E.-----	Trace
Bottle Creek 2 mi west of Beatrice in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T.4 N., R.6 E.-----	.02
Big Blue River at Beatrice in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T.4 N., R.6 E.-----	116
Big Blue River at Beatrice (gage) in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.3 N., R.6 E.-----	109
Big Blue River 3 mi southeast of Beatrice in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.3 N., R.6 E.-----	120
Big Blue River at Holmesville in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T.3 N., R.7 E.-----	108
Big Blue River at Wymore in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T.3 N., R.7 E.-----	200
Bills Creek 4 mi south of Beatrice in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T.3 N., R.6 E.-----	0
Bills Creek 4 mi south of Beatrice in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T.3 N., R.6 E.-----	.01
Bills Creek 6 mi south of Beatrice in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.3 N., R.6 E.-----	0
Bills Creek at Wymore in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, T.2 N., R.7 E.-----	.02
Big Indian Creek 3 mi east of Jansen in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.3 N., R.4 E.-----	0
Big Indian Creek 4 mi southeast of Jansen in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T.2 N., R.4 E.-----	0
Big Indian Creek 2 mi northwest of Diller in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T.2 N., R.4 E.-----	0
Big Indian Creek tributary 1 mi west of Diller in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T.2 N., R.4 E.-----	0
Big Indian Creek 1 mi east of Diller in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T.2 N., R.4 E.-----	0
Spring Creek 1 mi east of Diller in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T.2 N., R.5 E.-----	0
Big Indian Creek 3 mi east of Diller in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.2 N., R.5 E.-----	Ponded
Elm Creek 6 mi northeast of Diller in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T.3 N., R.5 E.-----	0
Elm Creek 4 mi northeast of Diller in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, T.2 N., R.5 E.-----	0
Elm Creek 3 mi east of Diller in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T.2 N., R.5 E.-----	Ponded
Big Indian Creek 3 mi northwest of Odell in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.1 N., R.5 E.-----	.02
Big Indian Creek at Odell in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T.1 N., R.5 E.-----	.04
Ash Creek 5 mi northwest of Odell in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T.2 N., R.5 E.-----	0
Ash Creek 1 mi north of Odell in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T.1 N., R.6 E.-----	Ponded
Big Indian Creek 2 mi northeast of Odell in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T.1 N., R.6 E.-----	.17
West Fork Sicily Creek 10 mi northwest of Odell in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T.3 N., R.5 E.-----	0
East Fork Sicily Creek 10 mi northwest of Odell in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T.3 N., R.5 E.-----	0
Sicily Creek 7 mi north of Odell in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T.2 N., R.6 E.-----	Trace
Sicily Creek 6 mi northeast of Odell in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T.2 N., R.6 E.-----	.19
Sicily Creek 4 mi northeast of Odell in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T.2 N., R.6 E.-----	.46
Big Indian Creek 3 mi southwest of Wymore in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T.2 N., R.6 E.-----	1.5
Squaw Creek 5 mi southwest of Wymore in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.1 N., R.6 E.-----	0
Squaw Creek 3 mi southwest of Wymore in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T.2 N., R.6 E.-----	.16
Big Indian Creek 1 mi south of Wymore in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T.2 N., R.7 E.-----	2.8
Big Blue River 2 mi southeast of Wymore in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.2 N., R.7 E.-----	201
Big Blue River at Barneston (gage) in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T.1 N., R.7 E.-----	194

KANSAS RIVER BASIN--Continued

Discharge measurements and observations of zero flow were made in the Big Sandy Creek basin in Clay, Fillmore, and Thayer Counties, Nebr., and in the Little Blue River basin downstream from Fairbury in Jefferson County, Nebr., in October 1980. Rainfall had occurred in the area about 5 days prior to the measurements, but direct surface runoff was not occurring during the investigation. Locations are listed in downstream order.

<u>Big Sandy Creek basin</u>		Observation of zero flow or measured discharge, in cubic feet per second
<u>Location</u>		October 21, 1981
Big Sandy Creek 2 mi north of Fairfield in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T.6 N., R.7 W.-----		0
Big Sandy Creek 4 mi east of Fairfield in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.5 N., R.6 W.-----		0
Big Sandy Creek 2 mi north of Edgar in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.5 N., R.6 W.-----		Trace
Big Sandy Creek 5 mi southeast of Edgar in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.4 N., R.5 W.-----		.05
Big Sandy Creek 1 mi north of Davenport in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T.4 N., R.4 W.-----		0
Little Sandy Creek 1 mi south of Ong in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T.5 N., R.5 W.-----		0
Little Sandy Creek 3 mi southeast of Ong in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T.5 N., R.4 W.-----		Trace
Little Sandy Creek 1 mi north of Davenport in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.4 N., R.4 W.-----		0
Big Sandy Creek 2 mi east of Davenport in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T.4 N., R.4 W.-----		0
Big Sandy Creek 2 mi west of Carleton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.4 N., R.3 W.-----		.05
Big Sandy Creek tributary 2 mi south of Shickley in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T.5 N., R.4 W.-----		0
Big Sandy Creek tributary 1 mi northeast of Carleton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T.4 N., R.3 W.-----		0
Big Sandy Creek 1 mi southeast of Carleton in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T.4 N., R.3 W.-----		Trace
Big Sandy Creek 3 mi southeast of Carleton in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T.4 N., R.3 W.-----		.10
Big Sandy Creek 1 mi west of Belvidere in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T.3 N., R.2 W.-----		.10
South Fork Big Sandy Creek 1 mi south of Davenport in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.4 N., R.4 W.-----		0
South Fork Big Sandy Creek 3 mi SE of Davenport in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.3 N., R.4 W.-----		0
South Fork Big Sandy Creek 6 mi SE of Davenport in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T.3 N., R.4 W.-----		0
South Fork Big Sandy Creek 5 mi SW of Belvidere in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T.3 N., R.3 W.-----		.04
South Fork Big Sandy Creek 2 mi SW of Belvidere in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.3 N., R.2 W.-----		.10
Big Sandy Creek 3 mi east of Belvidere in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T.3 N., R.2 W.-----		.02
Big Sandy Creek tributary 3 mi NE of Belvidere in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.4 N., R.2 W.-----		0
Big Sandy Creek tributary 3 mi east of Belvidere in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.3 N., R.2 W.-----		0
Dry Sandy Creek 3 mi southeast of Shickley in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T.5 N., R.3 W.-----		0
Dry Sandy Creek 3 mi southeast of Strang in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.5 N., R.2 W.-----		.82
Dry Sandy Creek 1 mi northeast of Bruning in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.4 N., R.2 W.-----		1.3
Dry Sandy Creek 4 mi east of Bruning in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.4 N., R.1 W.-----		1.4
Dry Sandy Creek 6 mi southeast of Bruning in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T.4 N., R.1 W.-----		1.7
Dry Sandy Creek 3 mi west of Alexandria in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T.3 N., R.1 W.-----		1.6
Big Sandy Creek 2 mi west of Alexandria in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T.3 N., R.1 W.-----		15
Big Sandy Creek at Alexandria (gage) in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T.3 N., R.1 W.-----		22
<u>Little Blue River basin</u>		
Little Blue River 1 mi south of Fairbury (gage) in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T.2 N., R.2 E.-----		92
Brawner Creek at Fairbury in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 23, T.2 N., R.2 E.-----		0
Little Blue River 2 mi northwest of Endicott in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T.1 N., R.3 E.-----		93
Rose Creek 1 mi west of Endicott in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.1 N., R.3 E.-----		5.5
Smith Creek at Endicott in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 5, T.1 N., R.3 E.-----		0
Little Blue River at Endicott in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T.1 N., R.3 E.-----		108
Rock Creek 3 mi northeast of Endicott in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T.2 N., R.3 E.-----		.07
Elm Creek 2 mi north of Endicott in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T.2 N., R.3 E.-----		0
Rock Creek at Endicott in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T.1 N., R.3 E.-----		.22
Coon Creek 2 mi southeast of Endicott in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T.1 N., R.3 E.-----		.01
Little Blue River 1 mi south of Steele City in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T.1 N., R.4 E.-----		116

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEDUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
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NIOBRARA RIVER BASIN

06459350 - AINSWORTH CANAL NR JOHNSTOWN NE (LAT 42 33 30 LONG 100 05 14)

JUN , 1981											
01...	1540	70	182	8.8	28.5	66	.00	21	3.2	7.3	.4
JUL											
27...	1525	--	168	8.1	17.5	65	.00	21	3.1	6.4	.4
SEP											
29...	1630	34	172	8.8	19.0	66	16	21	3.4	6.8	.4

06462450 - PLUM CREEK AT JOHNSTOWN, NEBR (LAT 42 34 08 LONG 100 06 22)

OCT , 1980											
22...	1500	20	191	8.5	13.0	65	.00	21	3.0	6.5	.4
JUN , 1981											
01...	1450	19	215	8.1	26.0	67	.00	22	3.0	6.7	.4
JUL											
27...	1500	28	170	7.5	17.5	65	.00	21	3.0	6.4	.4
SEP											
29...	1600	18	226	7.6	18.5	73	.00	24	3.1	6.3	.3

06462470 - PLUM CREEK NEAR JOHNSTOWN, NEBR (LAT 42 40 01 LONG 100 03 26)

OCT , 1980											
22...	1615	59	178	8.2	12.0	67	.00	22	2.9	6.4	.3
JUN , 1981											
01...	1625	58	--	8.2	28.5	69	.00	23	2.9	7.1	.4
JUL											
27...	1750	75	178	7.2	15.0	64	.00	21	2.7	6.1	.3
SEP											
29...	1700	56	177	8.2	17.5	70	.00	23	3.1	6.9	.4

DATE	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 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)
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06459350 - AINSWORTH CANAL NR JOHNSTOWN NE (LAT 42 33 30 LONG 100 05 14)

JUN , 1981										
01...	5.5	79	1.6	.7	.3	44	131	.18	24.8	.07
JUL										
27...	6.0	72	<5.0	.8	.3	48	127	.17	--	.82
SEP										
29...	7.1	50	5.0	2.7	.4	49	156	.21	14.3	7.0

06462450 - PLUM CREEK AT JOHNSTOWN, NEBR (LAT 42 34 08 LONG 100 06 22)

OCT , 1980										
22...	5.7	75	3.5	1.7	.3	53	145	.20	7.8	1.2
JUN , 1981										
01...	5.4	72	1.0	2.4	.3	50	141	.19	7.2	1.6
JUL										
27...	5.7	68	2.0	2.0	.3	51	137	.19	10.4	.98
SEP										
29...	6.7	74	<5.0	3.2	.4	55	149	.20	7.2	1.0

06462470 - PLUM CREEK NEAR JOHNSTOWN, NEBR (LAT 42 40 01 LONG 100 03 26)

OCT , 1980										
22...	5.7	80	2.1	1.1	.3	58	150	.20	23.9	.73
JUN , 1981										
01...	5.8	76	1.0	.9	.3	56	145	.20	22.7	.49
JUL										
27...	5.4	73	<1.0	1.0	.3	54	136	.18	27.5	.68
SEP										
29...	6.7	80	<5.0	1.7	.4	61	157	.21	23.7	.71

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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)
NIOBRARA RIVER BASIN--Continued											
06463050 - LONG PINE CREEK AT LONG PINE, NEBR. (LAT 42 32 59 LONG 099 42 23)											
OCT , 1980											
23...	1530	55	125	7.9	9.0	46	.00	15	2.1	5.3	.3
JUN , 1981											
02...	1650	50	113	8.3	23.5	49	.00	16	2.3	5.9	.4
JUL											
28...	1640	55	138	7.6	21.0	52	4.0	17	2.2	5.5	.3
SEP											
30...	1530	46	113	7.7	14.5	47	.00	15	2.2	5.0	.3
06463090 - BONE CREEK AT AINSWORTH, NEBR (LAT 42 32 51 LONG 099 52 33)											
OCT , 1980											
23...	1200	1.9	177	7.8	6.5	64	.00	20	3.4	6.6	.4
JUN , 1981											
02...	1215	1.7	153	8.7	24.0	66	.00	21	3.3	6.9	.4
JUL											
28...	1245	2.4	180	8.0	18.5	67	.00	21	3.5	7.4	.4
SEP											
30...	1030	2.4	171	7.1	12.5	70	.00	22	3.6	7.2	.4
06463290 - SAND DRAW NR JOHNSTOWN NE (LAT 42 34 08 LONG 099 58 08)											
OCT , 1980											
23...	0845	.87	162	7.4	4.0	52	.00	17	2.4	5.7	.3
JUN , 1981											
02...	0810	.81	148	6.9	19.5	61	.00	20	2.7	6.1	.3
JUL											
28...	0815	1.4	174	7.2	14.5	67	.00	22	2.9	6.7	.4
SEP											
29...	1800	.86	134	7.6	17.5	52	.00	17	2.4	5.8	.4

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	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)	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 PFR AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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NIOBRARA RIVER BASIN--Continued

06463050 - LONG PINE CREEK AT LONG PINE, NEBR. (LAT 42 32 59 LONG 099 42 23)

OCT , 1980										
23...	4.2	57	2.0	.9	.2	55	124	.17	18.4	1.1
JUN , 1981										
02...	2.5	53	1.0	1.2	.2	55	120	.16	16.2	.97
JUL										
28...	8.3	48	<1.0	13	.2	56	133	.18	19.8	1.2
SEP										
30...	4.4	56	<5.0	.9	.3	55	122	.17	15.2	1.0

06463090 - BONE CREEK AT AINSWORTH, NEBR (LAT 42 32 51 LONG 099 52 33)

OCT , 1980										
23...	5.5	72	4.1	2.4	.2	51	147	.20	.75	2.3
JUN , 1981										
02...	4.7	70	1.0	2.0	.2	47	137	.19	.63	2.0
JUL										
28...	7.5	69	2.0	3.1	.2	48	142	.19	.92	1.8
SEP										
30...	5.5	73	5.0	4.1	.3	52	152	.21	.98	2.0

06463290 - SAND DRAW NR JOHNSTOWN NE (LAT 42 34 08 LONG 099 58 08)

OCT , 1980										
23...	5.4	67	1.3	1.6	.2	40	114	.16	.27	.13
JUN , 1981										
02...	4.4	69	1.5	.8	.2	32	109	.15	.24	.02
JUL										
28...	6.4	70	1.0	13	.3	42	137	.19	.52	.19
SEP										
29...	5.4	64	5.0	.8	.3	43	119	.16	.28	.20

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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)
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NIOBRARA RIVER BASIN--Continued

06463310 - SAND DRAW NR MEADVILLE NE (LAT 42 38 10 LONG 099 51 10)

OCT , 1980											
23...	1015	5.5	290	8.3	5.0	100	.00	31	5.8	18	.8
JUN , 1981											
02...	1015	3.8	260	8.0	23.0	100	.00	33	5.4	15	.6
JUL											
28...	1110	7.7	290	7.7	17.5	98	.00	30	5.5	15	.7
SEP											
30...	0815	5.4	279	7.6	12.5	100	.00	32	5.9	17	.8

06463350 - BONE CREEK NEAR LONG PINE, NEBR (LAT 42 40 16 LONG 099 46 06)

OCT , 1980											
23...	1330	36	256	8.2	7.0	88	.00	28	4.5	10	.5
JUN , 1981											
02...	1400	43	198	8.5	26.5	84	.00	27	4.1	9.9	.5
JUL											
28...	1340	95	245	8.0	22.0	80	.00	25	4.3	10	.5
SEP											
30...	1300	41	234	7.3	15.0	93	.00	30	4.5	9.7	.5

DATE	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)	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 PER AC-FT) (70303)	SOLIDS, DIS- SOLVED PER (TONS DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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06463310 - SAND DRAW NR MEADVILLE NE (LAT 42 38 10 LONG 099 51 10)

OCT , 1980										
23...	12	120	12	4.2	.2	33	203	.28	3.0	3.4
JUN , 1981										
02...	8.9	130	1.4	2.7	.2	21	175	.24	1.8	2.0
JUL										
28...	12	120	<1.0	4.6	.2	39	182	.25	3.8	2.3
SEP										
30...	10	120	5.0	5.1	.3	35	193	.26	2.8	2.4

06463350 - BONE CREEK NEAR LONG PINE, NEBR (LAT 42 40 16 LONG 099 46 06)

OCT , 1980										
23...	7.8	110	5.9	5.1	.3	51	186	.25	18.1	1.7
JUN , 1981										
02...	6.9	98	.8	6.6	.2	49	165	.22	19.2	.42
JUL										
28...	11	91	<5.0	6.8	.3	50	167	.23	42.8	1.1
SEP										
30...	9.5	110	5.0	4.7	.4	54	190	.26	21.0	1.4

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHNS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- CORALT UNITS) (00080)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS NONCAR- BONATE AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
NIOBRARA RIVER BASIN--Continued										
06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)										
APR , 1981										
21...	1100	17	277	7.9	15.5	5	120	9.0	39	
SEP										
23...	1440	12	278	8.5	22.0	5	120	.00	40	
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)										
APR , 1981										
21...	1005	7.2	269	8.0	13.0	15	130	.00	44	
SEP										
23...	1540	5.9	267	8.2	22.5	5	120	2.0	42	
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)										
APR , 1981										
20...	1350	12	190	8.6	13.0	5	86	.00	29	
SEP										
23...	1230	10	206	8.1	19.0	10	83	.00	28	
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)										
APR , 1981										
20...	1445	5.5	247	8.5	15.0	10	110	.00	38	
SEP										
23...	1330	3.4	257	8.2	21.0	15	110	.00	37	
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 LAR (MG/L AS CAC03) (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)
06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)										
APR , 1981										
21...	5.2	8.6	.3	5.5	110	2.5	3.3	.2	37	
SEP										
23...	4.9	9.0	.4	6.2	120	<5.0	3.3	.3	47	
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)										
APR , 1981										
21...	4.5	6.4	.2	4.5	130	.7	1.1	.3	45	
SEP										
23...	4.1	6.4	.3	5.4	120	<5.0	1.0	.3	58	
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)										
APR , 1981										
20...	3.2	6.8	.3	4.1	87	1.3	1.5	.2	42	
SEP										
23...	3.1	6.8	.3	4.9	83	<5.0	1.4	.3	50	
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)										
APR , 1981										
20...	4.1	7.8	.3	4.3	120	1.5	1.5	.3	41	
SEP										
23...	4.2	7.5	.3	5.9	110	<5.0	1.8	.3	50	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO ₂ +NO ₃ 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)
NIOBRARA RIVER BASIN--Continued								
06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)								
APR , 1981								
21...	187	.25	8.4	4.5	.110	5	30	4
SEP								
23...	185	.25	5.7	3.2	.350	30	28	8
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)								
APR , 1981								
21...	188	.26	3.6	.70	.020	10	30	10
SEP								
23...	197	.27	3.1	.65	.150	20	16	5
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)								
APR , 1981								
20...	147	.20	4.9	1.5	.060	5	50	8
SEP								
23...	155	.21	4.2	1.3	.220	20	32	4
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)								
APR , 1981								
20...	176	.24	2.6	1.3	.040	10	40	20
SEP								
23...	183	.25	1.7	1.2	.130	20	23	11

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
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PLATTE RIVER BASIN

06778860 - FARWELL CANAL AT HWY 58 ABV SHERMAN RES NE (LAT 41 22 23 LONG 099 00 44)

JUN , 1981											
03...	1530	264	207	8.7	24.0	80	.00	26	3.6	8.7	.4
JUL											
29...	1600	700	189	8.1	20.0	76	.00	24	3.8	6.8	.4

06781530 - DEER CREEK NEAR BOELUS NE (LAT 41 05 37 LONG 098 42 37)

NOV , 1980											
06...	1330	.01	1230	7.6	12.0	600	250	180	37	17	.3
JUN , 1981											
04...	1400	.05	1000	8.2	24.0	510	70	140	39	21	.4
JUL											
30...	1330	1.1	319	7.5	23.0	140	.00	41	8.6	5.4	.2

06784400 - OAK CREEK NEAR FARWELL NE (LAT 41 11 30 LONG 098 41 25)

NOV , 1980											
06...	1610	11	580	8.0	11.0	270	.00	80	18	17	.4
JUN , 1981											
04...	1430	16	527	8.1	22.5	230	.00	68	15	17	.5
JUL											
30...	1415	21	526	7.9	23.0	240	.00	70	15	16	.5

DATE	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)	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)
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06778860 - FARWELL CANAL AT HWY 58 ABV SHERMAN RES NE (LAT 41 22 23 LONG 099 00 44)

JUN , 1981										
03...	6.5	95	1.3	1.0	.3	59	164	.22	117	.19
JUL										
29...	6.1	91	1.0	1.0	.5	55	154	.21	291	.35

06781530 - DEER CREEK NEAR BOELUS NE (LAT 41 05 37 LONG 098 42 37)

NOV , 1980										
06...	30	350	300	20	.3	24	819	1.1	.02	.00
JUN , 1981										
04...	15	440	130	11	.3	36	657	.89	.09	.04
JUL										
30...	12	140	5.0	4.5	.5	26	189	.26	.56	.32

06784400 - OAK CREEK NEAR FARWELL NE (LAT 41 11 30 LONG 098 41 25)

NOV , 1980										
06...	12	300	17	5.3	.2	40	372	.51	11.0	.55
JUN , 1981										
04...	10	260	3.0	3.7	.3	45	323	.44	14.0	1.0
JUL										
30...	11	260	1.0	4.8	.5	51	330	.45	18.7	.97

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE 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)
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PLATTE RIVER BASIN--Continued

06784500 - OAK CREEK NR DANNEBROG NEBR (LAT 41 07 10 LONG 098 36 45)

NOV , 1980											
06...	1205	20	640	7.8	10.5	300	.00	88	19	19	.5
JUN , 1981											
04...	1300	21	611	8.1	22.0	270	.00	81	16	18	.5
JUL											
30...	1230	32	551	7.9	20.5	240	.00	71	15	17	.5

06784505 - DRY C NR DANNEBROG NE (LAT 41 06 18 LONG 098 36 16)

NOV , 1980											
06...	1225	2.2	890	7.8	11.0	410	57	120	26	35	.8
JUN , 1981											
04...	1330	2.2	930	8.0	20.0	410	51	120	27	36	.8
JUL											
30...	1245	3.5	690	7.8	21.0	310	26	88	21	24	.6

06784750 - TURKEY CREEK NEAR NYSTED NE (LAT 41 10 48 LONG 098 36 50)

NOV , 1980											
06...	1440	2.1	814	7.7	13.5	340	.00	93	26	45	1.1
JUN , 1981											
04...	1515	1.7	800	8.2	26.5	340	.00	93	26	45	1.1
JUL											
30...	1445	4.0	--	7.8	25.0	210	.00	60	15	12	.4

DATE	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)	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 AC-FT) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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06784500 - OAK CREEK NR DANNEBROG NEBR (LAT 41 07 10 LONG 098 36 45)

NOV , 1980										
06...	12	320	29	7.5	.3	39	408	.55	22.0	.30
JUN , 1981										
04...	11	290	30	5.5	.3	46	388	.53	22.0	1.4
JUL										
30...	12	260	1.0	6.5	.5	49	333	.45	28.8	.96

06784505 - DRY C NR DANNEBROG NE (LAT 41 06 18 LONG 098 36 16)

NOV , 1980										
06...	14	350	100	14	.3	41	576	.78	3.4	3.5
JUN , 1981										
04...	13	360	130	11	.3	41	609	.83	3.6	3.3
JUL										
30...	18	280	67	18	.5	43	456	.62	4.3	1.8

06784750 - TURKEY CREEK NEAR NYSTED NE (LAT 41 10 48 LONG 098 36 50)

NOV , 1980										
06...	17	400	31	13	.3	31	502	.68	2.9	1.1
JUN , 1981										
04...	15	400	31	9.6	.3	31	496	.67	2.3	.93
JUL										
30...	12	230	1.0	5.3	.5	39	285	.39	3.1	.38

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHQS) (00095)	PH (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)
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PLATTE RIVER BASIN--Continued

06784810 - TURKEY CREEK NORTHEAST OF DANNEBROG NE (LAT 41 09 28 LONG 098 31 06)

NOV , 1980											
06...	1110	6.0	786	7.8	11.0	330	.00	91	24	40	1.0
JUN , 1981											
04...	1125	5.6	802	8.1	19.5	320	.00	92	23	42	1.0
JUL											
30...	1115	22	557	7.8	20.5	230	.00	65	16	28	.9

06784820 - TURKEY CREEK TRIBUTARY NR ST PAUL NE (LAT 41 10 55 LONG 098 29 39)

NOV , 1980											
06...	1040	.94	660	7.5	10.0	320	.00	90	22	15	.4
JUN , 1981											
04...	1015	.56	587	8.0	21.5	270	.00	72	22	16	.4
JUL											
30...	1045	1.7	469	7.7	22.5	280	.00	79	20	35	1.0

06785020 - UNNAMED CREEK AT ST PAUL NE (LAT 41 12 48 LONG 098 28 35)

NOV , 1980											
06...	1015	.52	687	8.0	7.5	330	24	91	26	17	.4
JUN , 1981											
04...	0945	.17	570	8.3	18.0	270	2.0	66	26	17	.4
JUL											
30...	1015	5.4	260	7.9	22.5	110	.00	34	7.0	8.9	.4

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB DIS- SOLVED (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 AS (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
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06784810 - TURKEY CREEK NORTHEAST OF DANNEBROG NE (LAT 41 09 28 LONG 098 31 06)

NOV , 1980											
06...	18	360	48	14	.3	36	496	.67	8.0	1.9	
JUN , 1981											
04...	15	360	49	10	.3	35	492	.67	7.4	2.1	
JUL											
30...	16	260	6.0	13	.5	42	355	.48	21.1	2.8	

06784820 - TURKEY CREEK TRIBUTARY NR ST PAUL NE (LAT 41 10 55 LONG 098 29 39)

NOV , 1980											
06...	12	320	37	10	.3	27	407	.55	1.0	.37	
JUN , 1981											
04...	7.2	280	23	4.8	.3	28	342	.47	.52	.06	
JUL											
30...	17	320	<1.0	--	.3	43	387	.53	1.8	.00	

06785020 - UNNAMED CREEK AT ST PAUL NE (LAT 41 12 48 LONG 098 28 35)

NOV , 1980											
06...	15	310	59	10	.3	20	425	.58	.60	.00	
JUN , 1981											
04...	11	270	40	5.3	.3	20	348	.47	.16	.02	
JUL											
30...	8.3	130	1.0	1.6	.5	47	186	.25	2.7	.00	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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--Continued

06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

APR , 1981									
23...	1410	.33	769	7.9	15.5	20	370	35	110
SEP									
22...	1620	12	192	7.7	19.0	10	75	.00	24

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

APR , 1981									
23...	1535	.91	586	8.6	19.0	20	280	.00	75
SEP									
21...	1250	2.7	393	7.4	16.5	10	160	.00	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)	FLUD- 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)

APR , 1981									
23...	22	25	.6	18	330	54	16	.3	37
SEP									
22...	3.7	6.7	.4	6.6	81	45.0	.9	.4	57

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

APR , 1981									
23...	23	26	.7	15	310	34	6.2	.3	25
SEP									
21...	10	14	.5	10	180	45.0	2.6	.3	52

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)

APR , 1981								
23...	487	.66	.43	1.4	.590	70	30	130
SEP								
22...	153	.21	4.9	.33	.090	20	41	8

06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

APR , 1981								
23...	394	.54	.96	.50	.420	90	50	310
SEP								
21...	251	.34	1.8	1.1	.080	50	12	150

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (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)
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PLATTE RIVER BASIN--Continued

06790245 - AUGER CREEK AT ELBA NE (LAT 41 17 38 LONG 098 34 26)

NOV , 1980											
06...	0915	.70	580	7.6	6.0	290	.00	83	19	16	.4
JUN , 1981											
04...	0845	.85	629	7.9	18.5	290	.00	83	20	17	.4
JUL											
30...	0900	.13	510	7.9	21.0	250	.00	72	16	14	.4

06790255 - UNNAMED CREEK SOUTH OF ELBA NE (LAT 41 16 22 LONG 098 33 24)

NOV , 1980											
06...	0945	.05	512	7.8	8.0	250	.00	69	19	9.7	.3
JUN , 1981											
04...	0930	.03	400	7.9	18.0	180	.00	46	17	9.1	.3
JUL											
30...	1000	.05	496	8.2	22.5	240	.00	63	20	10	.3

DATE	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)	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 AS (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)
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06790245 - AUGER CREEK AT ELBA NE (LAT 41 17 38 LONG 098 34 26)

NOV , 1980										
06...	10	300	19	6.7	.3	40	375	.51	.71	.25
JUN , 1981										
04...	8.8	310	26	6.2	.3	41	391	.53	.90	.43
JUL										
30...	10	260	1.0	7.4	.5	43	321	.44	.11	.24

06790255 - UNNAMED CREEK SOUTH OF ELBA NE (LAT 41 16 22 LONG 098 33 24)

NOV , 1980										
06...	7.4	280	7.1	2.9	.3	34	318	.43	.04	.00
JUN , 1981										
04...	2.5	210	.7	.2	.3	20	222	.30	.02	.02
JUL										
30...	10	260	1.0	3.3	.5	30	294	.40	.04	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	OXYGEN, DTS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	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)
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PLATTE RIVER BASIN--Continued

06805499 - MILL CREEK AT LOUISVILLE NEBR (LAT 41 00 13 LONG 096 09 35)

MAR , 1981
23... 1100 .94 445 8.3 7.0 5 15.6 K42 190 2.0 52 15

06805525 - CEDAR CREEK NEAR LOUISVILLE NEBR (LAT 41 00 05 LONG 096 07 15)

MAR , 1981
23... 1220 2.1 420 8.5 9.0 10 16.4 K7 180 .00 48 15

06805565 - FOURMILE CREEK NEAR PLATTSMOUTH, NEBR. (LAT 41 01 02 LONG 095 57 46)

MAR , 1981
23... 1315 5.4 445 8.6 10.5 15 16.7 K17 220 7.0 59 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 (MG/L AS K) (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 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)
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06805499 - MILL CREEK AT LOUISVILLE NEBR (LAT 41 00 13 LONG 096 09 35)

MAR , 1981
23... 25 .8 4.3 190 34 11 .3 6.8 268 .36 .68

06805525 - CEDAR CREEK NEAR LOUISVILLE NEBR (LAT 41 00 05 LONG 096 07 15)

MAR , 1981
23... 25 .8 2.9 190 25 6.6 .3 6.0 250 .34 1.4

06805565 - FOURMILE CREEK NEAR PLATTSMOUTH, NEBR. (LAT 41 01 02 LONG 095 57 46)

MAR , 1981
23... 18 .5 2.3 210 27 4.7 .3 14 282 .38 4.1

DATE	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)	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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06805499 - MILL CREEK AT LOUISVILLE NEBR (LAT 41 00 13 LONG 096 09 35)

MAR , 1981
23... 1.2 1.2 .070 1.0 1.10 2.3 .110 .070 50 50 380

06805525 - CEDAR CREEK NEAR LOUISVILLE NEBR (LAT 41 00 05 LONG 096 07 15)

MAR , 1981
23... 1.4 1.4 .070 1.0 1.10 2.5 .120 .070 40 20 320

06805565 - FOURMILE CREEK NEAR PLATTSMOUTH, NEBR. (LAT 41 01 02 LONG 095 57 46)

MAR , 1981
23... 2.8 2.8 .060 .94 1.00 3.8 .220 .150 30 20 540

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	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)
WEEPING WATER CREEK BASIN												
06806460 - WEEPING WATER CR AT WEEPING WATER, NEBR. (LAT 40 51 18 LONG 096 07 10)												
MAR , 1981 23...	1000	8.5	550	8.2	7.0	5	13.6	450	230	11	63	18
06806495 - S BR WEEPING WATER CREEK NEAR UNION NEBR (LAT 40 48 45 LONG 095 56 43)												
MAR , 1981 23...	1530	13	410	8.6	12.0	15	15.9	K7	170	.00	50	12
06806501 - WEEPING WATER C NR UNION, NEBR. (LAT 40 47 46 LONG 095 54 17)												
MAR , 1981 23...	1440	22	465	8.8	10.0	20	17.3	K0	210	.00	59	15
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 (MG/L AS K) (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)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS ST02) (00955)	SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)
06806460 - WEEPING WATER CR AT WEEPING WATER, NEBR. (LAT 40 51 18 LONG 096 07 10)												
MAR , 1981 23...	37	1.1	4.9	220	64	8.1	.3	7.0	341	.46	7.8	
06806495 - S BR WEEPING WATER CREEK NEAR UNION NEBR (LAT 40 48 45 LONG 095 56 43)												
MAR , 1981 23...	20	.7	2.9	190	26	5.3	.3	9.1	246	.33	8.6	
06806501 - WEEPING WATER C NR UNION, NEBR. (LAT 40 47 46 LONG 095 54 17)												
MAR , 1981 23...	23	.7	3.6	210	36	6.9	.3	5.9	281	.38	16.7	
DATE		NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00630)	NITRO- GEN, 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)	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)
06806460 - WEEPING WATER CR AT WEEPING WATER, NEBR. (LAT 40 51 18 LONG 096 07 10)												
MAR , 1981 23...	1.4	1.4	.060	1.1	1.20	2.6	5.50	5.50	120	<10	210	
06806495 - S BR WEEPING WATER CREEK NEAR UNION NEBR (LAT 40 48 45 LONG 095 56 43)												
MAR , 1981 23...	1.3	1.3	.060	1.1	1.20	2.5	.190	.120	30	20	370	
06806501 - WEEPING WATER C NR UNION, NEBR. (LAT 40 47 46 LONG 095 54 17)												
MAR , 1981 23...	1.1	1.1	.030	1.3	1.30	2.4	.270	.130	60	40	340	

GROUND-WATER LEVELS

ADAMS COUNTY

403403098244001. Local number 7N-10W-23AB.

LOCATION.--Lat 40°34'03", long 98°24'40", NW1/4NE1/4 sec.23, T.7 N., R.10 W., Hydrologic Unit 10270206, 0.5 mi (0.8 km) west of the west junction of Routes 281 and 6, in the south part of Hastings. Owner: Henry Fricke.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 8 in (0.20 m), depth 155 ft (47.2 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,927 ft (587 m). Measuring point: Top of casing 1.0 ft (0.30 m) 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 (30.46 m) below land-surface datum, Jan. 22, 1935; lowest, 128.82 ft (39.26 m) below land-surface datum, July 10, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	120.58	120.02	119.65	.....	118.92	118.75	118.56	118.40	119.12	122.66	121.40	120.40
10	120.63	120.00	119.61	119.30	118.98	118.64	118.38	118.39	119.25	128.82	121.12	120.27
15	120.46	119.90	119.43	119.25	118.82	118.66	118.42	119.15	118.52	125.21	120.82	120.33
20	120.32	119.87	119.48	119.15	118.77	118.50	118.43	118.24	119.56	124.22	120.75	120.23
25	120.26	119.81	119.26	119.10	118.93	118.53	118.31	118.17	123.07	123.10	120.86	120.01
BOM	120.13	120.66	119.31	118.96	118.80	118.57	118.32	118.12	123.09	121.77	121.54	120.03

WTR YEAR 1981 MAX 118.06 MAY 31, 1981 MIN 128.82 JUL 10, 1981

BLAINE COUNTY

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 (152 m) 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 (0.03 m), depth 13 ft (4.0 m), screened 11 to 13 ft (3.4 to 4.0 m).

DATUM.--Altitude of land-surface datum is 2,618 ft (798 m). Measuring point: Top of casing 1.40 ft (0.43 m) above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.04 ft (0.32 m) below land-surface datum, Mar. 8, 1950; lowest, 6.97 ft (2.12 m) below land-surface datum, Aug. 8, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

GROUND-WATER LEVELS

401

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 (1.6 km) 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 (0.03 m), depth 22 ft (6.7 m), screened 20 to 22 ft (6.1 to 6.7 m).

DATUM.--Altitude of land-surface datum is 1,762 ft (537 m). Measuring point: Top of casing 2.90 ft (0.88 m) 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, 8.57 ft (2.61 m) below land-surface datum, May 4, 1973; lowest, 15.17 ft (4.62 m) below land-surface datum, Oct. 26, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	12.15	MAY 14	12.16						

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 miles (5.8 km) south and 2.8 mi (4.5 km) 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 (0.03 m), depth 204 ft (62.2 m), screened 190 to 193 ft (57.9 to 58.8 m).

DATUM.--Altitude of land-surface datum is 4,032.95 ft (1,229.24 m). Measuring point: Top of pipe 2.00 ft (0.61 m) 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 (19.25 m) below land-surface datum, Jan. 25, 1950; lowest, 96.14 ft (29.30 m) below land-surface datum, Oct. 31, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	96.14	MAR 4	94.75						

GROUND-WATER LEVELS

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 (1.9 km) 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 (0.15 m), depth 52 ft (15.8 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,511.44 ft (765.49 m). Measuring point: Top of casing 0.20 ft (0.06 m) 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, 33.63 ft (10.25 m) below land-surface datum, Jan. 10, 1980; lowest, 40.96 ft (12.48 m) below land-surface datum, Sept. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	35.03	34.74	34.66	34.70	34.87	34.95	35.13	35.30	35.45	35.52	36.20	35.83
10	34.99	34.74	34.65	34.79	34.92	35.00	35.13	35.35	35.48	35.59	36.19	35.81
15	34.94	34.70	34.67	34.79	34.89	35.00	35.16	35.35	35.50	35.70	36.18	35.81
20	34.85	34.70	34.72	34.79	34.92	35.01	35.17	35.38	35.47	35.86	36.19	35.78
25	34.82	34.70	34.66	34.80	34.94	35.05	35.22	35.40	35.49	36.01	36.11	35.67
EOM	34.78	34.66	34.72	34.82	34.95	35.08	35.25	35.41	35.49	36.10	35.95	35.58

WTR YEAR 1981 MAX 34.60 NOV 29, 1980 MIN 36.20 AUG 5, 1981

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 (2.1 km) north of the intersection of Route 30 and the North-South range-line road on the east side of Gibbon, then 0.5 mi (0.8 km) 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 (0.20 m), depth 38 ft (11.6 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,060.43 ft (628.02 m). Measuring point: Top of casing 0.80 ft (0.24 m) 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 (4.68 m) below land-surface datum, June 11, 1952; lowest, 29.22 ft (8.91 m) below land-surface datum, Aug. 10, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	27.40	26.91	26.62	26.47	26.32	26.20	26.13	26.00	25.87	27.07	28.49	28.41
10	27.24	26.87	26.60	26.47	26.30	26.18	26.05	25.98	25.86	27.87	28.35	28.28
15	27.15	26.81	26.57	26.44	26.26	26.15	26.09	25.94	25.86	28.40	28.26	28.15
20	27.09	26.75	26.59	26.39	26.24	26.14	26.04	25.94	25.82	28.87	28.59	28.01
25	27.03	26.71	26.55	26.36	26.22	26.12	26.00	25.90	25.96	28.82	28.96	27.87
EOM	26.97	26.65	26.48	26.33	26.23	26.10	26.00	25.88	26.56	28.63	28.53	27.76

WTR YEAR 1981 MAX 25.80 JUN 19, 1981 MIN 29.03 AUG 23, 1981

GROUND-WATER LEVELS

403

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 (7.6 km) 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 (0.61 m), depth 54 ft (16.5 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,102.16 ft (640.74 m). Measuring point: Hole in pump base 0.70 ft (0.21 m) 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 (6.87 m) below land-surface datum, June 9, 1931; lowest, 35.20 ft (10.73 m) below land-surface datum, Aug. 30, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 9	34.94	MAR 24	32.95								

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 (3.2 km) 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 (0.13 m), depth 210.0 ft (64.01 m), perforated 199 to 210 ft (60.7 to 64.0 m).

DATUM.--Altitude of land-surface datum is 1,618 ft (493 m). 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, 104.24 ft (31.77 m) below land-surface datum, Apr. 7, 1980; lowest, 174.50 ft (53.19 m) below land-surface datum, Aug. 3, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981												
LOWEST WATER LEVEL FOR THE DAY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	116.69	-----	107.83	-----	106.32	105.68	105.64	-----	105.95	-----	-----	-----
10	115.22	-----	107.78	106.50	-----	105.69	105.53	105.92	-----	-----	-----	117.60
15	114.27	109.31	107.29	106.27	-----	105.69	105.54	105.84	-----	169.28	-----	115.91
20	-----	-----	-----	106.21	-----	105.64	105.54	105.80	-----	170.33	-----	-----
25	-----	-----	-----	-----	-----	105.64	105.36	105.36	-----	-----	-----	-----
END	-----	-----	-----	-----	-----	105.64	-----	-----	-----	-----	-----	112.19

WTR YEAR 1981 MAX 105.33 APR 26, 1981 MIN 170.33 JUL 20, 1981

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 (0.8 km) north of Imperial. Owner: Roy Hust.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled unused observation water-table well, diameter 18 in (0.46 m), depth 143 ft (43.6 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,284.6 ft (1,001.1 m). Measuring point: Top of casing 0.30 ft (0.09 m) 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 (22.20 m) below land-surface datum, June 29, 1964; lowest measured, 106.90 ft (32.58 m) below land-surface datum, Oct. 6, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	104.85										

CHASE COUNTY

403235101395501. Local number 7N-38W-29CBB.

LOCATION.--Lat 40°32'35", long 101°39'55", NW1/4NW1/4SW1/4 sec.29, T.2 N., R.38 W., Hydrologic Unit 10250005, 0.5 mi (0.8 km) north and 1 mi (1.6 km) west of Imperial on U.S. Highway 6, then 0.5 mi (0.8 km) 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 (0.14 m), depth 230 ft (70.1 m), perforated 190 to 230 ft (57.9 to 70.1 m).

DATUM.--Altitude of land-surface datum is 3,290.30 ft (1,002.88 m). Measuring point: Top of casing 0.50 ft (0.15 m) 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 (17.03 m) below land-surface datum, July 4, 1964; lowest, 93.05 ft (28.36 m) below land-surface datum, Aug. 25, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	89.67	87.97	86.42	85.08	83.87	83.16	82.59	81.65	80.76	85.70	91.62	91.65
10	.....	87.72	86.20	84.99	83.95	83.07	82.05	81.51	80.80	87.26	91.28	91.82
15	89.07	87.43	85.85	84.79	83.55	82.83	82.15	81.09	80.82	89.34	92.32	91.50
20	88.88	87.22	85.80	84.54	83.48	82.50	81.86	81.18	80.97	89.66	90.55	91.03
25	88.62	86.99	85.40	84.30	83.30	82.57	81.56	80.97	82.57	90.66	92.02	90.58
END	88.28	86.50	85.26	84.04	83.34	82.50	81.65	80.95	85.25	89.66	92.25	90.33

WTR YEAR 1981 MAX 80.32 JUN 13, 1981 MIN 92.61 SEP 2, 1981

424100103243501. Local number 31N-52W-3DC.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981									
WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
NOV 1	21.26	MAR 17	19.52						

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	16.09	16.49	16.58	16.61	16.74	16.85	16.93	16.77	15.42	16.32	13.56	13.48
10	16.24	16.55	16.60	16.67	16.75	16.85	16.89	16.72	15.26	20.72	13.63	13.47
15	16.29	16.58	16.56	16.69	16.73	16.87	16.87	16.60	15.17	21.47	13.62	13.60
20	16.38	16.67	16.61	16.68	16.77	16.86	16.85	16.33	15.10	20.62	14.02	13.61
25	16.45	-----	16.58	16.69	16.81	16.87	16.81	16.05	15.30	16.66	13.95	13.69
EOB	16.46	-----	16.60	16.71	16.84	16.91	16.83	15.67	-----	14.73	13.57	13.85

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 22	8-29										

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 (5.6 km) east of Haiqler on U.S. Highway 34 and 0.5 mi (0.8 km) north. Well is within 0.5 mi (0.8 km) 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 (0.15 m), depth 48.8 ft (14.87 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,205 ft (977 m). Measuring point: South side of casing 1.6 ft (0.49 m) 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, 16.39 ft (5.00 m) below land-surface datum, June 23, 1981; lowest, 20.97 ft (6.39 m) below land-surface datum, Sept. 12, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	19.28	18.53	18.08	17.90	-----	-----	-----	16.86	16.53	16.45	16.84	16.85
10	19.46	18.44	18.03	17.83	17.58H	-----	17.15	16.81	16.49	16.58	17.12	16.76
15	19.06	18.36	17.98	-----	-----	-----	17.13	16.75	16.46	16.90	17.12	16.86
20	18.90	18.27	17.93	-----	-----	-----	17.09	16.71	16.42	16.91	16.93	17.05
25	18.76	18.22	17.88	-----	-----	-----	17.00	16.66	16.57	17.15	16.84	16.96
EOB	18.62	18.13	18.03	-----	-----	-----	16.93	16.58	16.56	16.80	17.04	16.85

WTR YEAR 1981 MAX 16.39 JUN 23, 1981 MIN 19.46 OCT 10, 1980

H TAPE MEASUREMENT

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 (0.13 m), depth 260.0 ft (79.25 m), perforated 100 to 260 ft (30.5 to 79.25 m).

DATUM.--Altitude of land-surface datum is 1651 ft (503 m). Measuring point: Top of casing 1.5 ft (0.46 m) 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, 90.92 ft (27.71 m) below land-surface datum, Apr. 17, 1978; lowest, 96.91 ft (29.54 m) below land-surface datum, Sept. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	96.55	96.17	95.98	95.51	95.27	95.09	94.95	94.65	94.32	95.40	96.62	96.70
10	96.65	96.20	95.87	95.59	95.36	95.00	94.73	94.54	94.40	95.81	96.56	96.63
15	96.37	96.10	95.72	95.60	95.12	95.00	94.75	94.36	94.41	96.15	96.60	96.67H
20	96.40	96.10	95.75	95.50	95.00	94.80	94.73	94.40	94.40	96.36	96.54	96.63
25	96.40	96.10	95.56	95.52	95.16	94.87	94.55	94.36	95.13	96.45	96.67	96.52
EOB	96.25	95.94	95.63	95.25	95.18	94.91	94.68	94.31	95.00	96.50	96.80	96.67

WTR YEAR 1981 MAX 93.95 JUN 17, 1981 MIN 96.80 AUG 31, 1981

H TAPE MEASUREMENT

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 (4.0 km) west on Route 6 from the principal street of Exeter, then 0.4 mi (0.6 km) south. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 40 ft (12.2 m), perforated 25 to 40 ft (7.6 to 12.2 m).

DATUM.--Altitude of land-surface datum is 1,610 ft (491 m). 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, 1.98 ft (0.60 m) below land-surface datum, Apr. 3, 1980; lowest, 24.16 ft (7.36 m) below land-surface datum, July 10, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	10.80	10.48	10.75	11.11	11.35	11.51	11.50	11.29	9.91	10.53	9.90	10.08
10	10.95	10.58	10.87	11.20	11.37	11.52	11.44	11.20	10.15	10.55	9.69	10.12
15	10.97	10.65	10.82	11.17	11.38	11.40	11.65	11.16	10.35	10.59	9.66	10.40
20	10.46	10.67	11.08	11.14	11.39	11.47	11.57	9.65	10.45	10.26	9.75	10.37
25	10.51	10.78	11.10	11.08	11.42	11.48	11.25	9.80	10.60	10.15	9.80	10.56
EOH	10.46	10.64	11.00	11.30	11.52	11.35	11.30	9.83	10.64	10.05	9.87	10.57

WTR YEAR 1981 MAX 9.59 AUG 13, 1981 MIN 11.65 APR 15, 1981

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 (3.2 km) west and 0.5 mi (0.8 km) 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 (0.03 m), depth 23 ft (7.0 m), screened 21 to 23 ft (6.4 to 7.0 m).

DATUM.--Altitude of land-surface datum is 2,134 ft (650 m). Measuring point: Top of casing 1.00 ft (0.30 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.60 ft (1.40 m) below land surface datum, Aug. 22, 1978; lowest, 17.69 ft (5.39 m) below land-surface datum, Feb. 8, 1946.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 6	12.10	JUN 12	11.00	JUL 1	10.90	AUG 3	9.70	AUG 21	9.20	SEP 15	10.20
MAY 5	11.30										

GARDEN COUNTY

414413102244501. Local number 20N-44W-5DB.

LOCATION.--Lat 41°44'13", long 102°24'45", NW1/4SE1/4 sec.5, T.20 N., R.44 W., Hydrologic Unit 10180009, 2.6 mi (4.2 km) southeast of Humber. Owner: Crescent Lake Migratory Bird Refuge.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.50 in (0.04 m), depth 20 ft (6.1 m), screened 18 to 20 ft (5.5 to 6.1 m).

DATUM.--Altitude of land-surface datum is 3,798.19 ft (1,157.69 m). Measuring point: Top of casing 2.50 ft (0.76 m) above land-surface datum.

PERIOD OF RECORD.--August 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.54 ft (1.38 m) below land-surface datum, Oct. 14, 1934; lowest, 8.70 ft (2.65 m) below land-surface datum, Apr. 11, 1941.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	6.97	DEC 11	7.02	APR 24	6.97	JUL 9	7.01				

414124102230101. Local number 20N-44W-22CB.

AQUIFER.--Sand deposits of Pleistocene age.

DATUM.--Altitude of land-surface datum is 3783.16 ft (1153.12 m). Measuring point: Top of casing 1.61 ft (0.49 m) above land-surface datum.

PERIOD OF RECORD.--August 1934-39; 1943 to current year.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

G MEASUREMENT MADE BY ANOTHER AGENCY

GARFIELD COUNTY

414718099083201. Local number 21N-16W-14CB.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

DATUM.--Altitude of land-surface datum is 2,174 ft (663 m). Measuring point: Hole in turbine base 2.00 ft (0.61 m) above land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--October 1950 to current year.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	24.30								

GOSPER COUNTY

403626099451401. Local number 7N-21W-6BC.

AQUIFER.--Oqallala Formation of Pliocene age.

DATUM.--Altitude of land-surface datum is 2,466.95 ft (751.93 m). Measuring point: Top of casing 0.40 ft (0.12 m) above land-surface datum.

PERIOD OF RECORD.--September 1934 to July 1940; January 1948 to current year.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

[illegible]

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 (1.6 km) north and 2.0 mi (3.2 km) 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 (0.15 m), depth 65 ft (19.8 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,924.0 ft (586.4 m). Measuring point: Top of casing 2.00 ft (0.61 m) 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, 21.66 ft (6.60 m) below land-surface datum, June 25, 1978; lowest, 25.98 ft (7.92 m) below land-surface datum, Aug. 31, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	24.79	24.63	24.52	24.42	24.34	24.27	24.20	24.14	24.10	24.68	25.86	25.94
10	24.76	24.61	24.49	24.41	24.32	24.25	24.18	24.14	24.12	24.85	25.88	25.82
15	24.74	24.59	24.48	24.39	24.31	24.24	24.18	24.18	24.18	25.02	25.89	25.72
20	24.71	24.58	24.46	24.38	24.30	24.23	24.16	24.21	24.29	25.23	25.93	25.72
25	24.68	24.56	24.45	24.37	24.28	24.22	24.14	24.14	24.41	25.48	25.97	25.66
EOM	24.66	24.54	24.43	24.36	24.28	24.20	24.14	24.12	24.56	25.75	25.98	25.60
WTR YEAR 1981 MAX 24.09 JUN 5, 1981 MIN 25.98 AUG 31, 1981												

HAMILTON COUNTY

404825097583301. Local number 10N-6W-26BC.

LOCATION.--Lat 40°48'25", long 97°58'33", SW1/4NW1/4 sec.26, T.10 N., R.6 W., Hydrologic Unit 10270203, 4 mi (6.4 km) south of junction of Route 14 and U.S. Highway 34 in Aurora, then 1.0 mi (1.6 km) east and 0.3 mi (0.48 km) south. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 131 ft (39.9 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,790.5 ft (545.7 m). Measuring point: Top of casing 1.50 ft (0.46 m) above land-surface datum.

REMARKS.--Water levels affected by pumping at nearby irrigation wells.

PERIOD OF RECORD.--March 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.90 ft (25.88 m) below land-surface datum, June 20, 1956; lowest, 106.97 ft (32.60 m) below land-surface datum, Sept. 8, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	105.60	104.50	103.77	103.12	102.52	102.09	101.67	101.31	100.97	102.10	105.40	105.61
10	105.46	104.37	103.63H	103.00	102.42	102.06	101.61	101.26	100.91	102.65	105.40	105.60
15	105.30	104.25	103.54	102.90	102.34	101.99	101.56	101.20	100.86	103.70	105.40	105.55
20	105.07	104.13	103.45	102.81	102.26	101.84	101.50	101.15	100.82	104.52	105.39	105.45
25	104.86	104.02	103.34	102.72	102.19	101.79	101.43	101.10	100.79	105.05	105.53	105.32
EOM	104.65	103.88	103.20	102.63	102.16	101.71	101.37	101.04	101.05	105.30	105.62	105.20
WTR YEAR 1981 MAX 100.79 JUN 25, 1981 MIN 105.62 AUG 31, 1981												

H TAPE MEASUREMENT

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 (3.2 km) east on paved road from O'Neill, then 2 mi (3.2 km) north, 4 mi (6.4 km) east, 2 mi (3.2 km) north, 2 mi (3.2 km) east, and 0.5 mi (0.8 km) north. Owner: William J. Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 85 ft (25.9 m), perforated 25.5 to 85 ft (7.8 to 25.9 m).

DATUM.--Altitude of land-surface datum is 1,952 ft (595 m). Measuring point: Top of casing 1.00 ft (0.30 m) 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 (10.79 m) below land-surface datum, Oct. 21, 1966; lowest, 53.07 ft (16.18 m) below land-surface datum, Sept. 30, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	51.72	51.86	51.92	51.93	51.87	51.79	51.73	51.69	51.70	51.96	52.48	52.89
10	51.74	51.87	51.92	51.93	51.86	51.78	51.73	51.68	51.71	52.02	52.51	52.94
15	51.76	51.87	51.92	51.92	-----	51.78	51.71	51.69	51.73	52.09	52.57	52.97
20	51.79	51.88	51.93	51.92	-----	51.76	51.70	51.69	51.74	52.17	52.64	53.00
25	51.81	51.89	51.94	51.90	-----	51.76	51.69	51.69	51.76	52.29	52.74	53.03
EOM	51.85	51.89	51.93	51.89	51.81	51.74	51.69	51.69	51.89	52.41	52.84	53.07

WTR YEAR 1981 MAX 51.68 MAY 10, 1981 MIN 53.07 SEP 30, 1981

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 (9.7 km) north from Atkinson on Route 11, then 2 mi (3.2 km) east. Owner: Elmer Goldfuss.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 72 ft (21.9 m), perforated 32 to 72 ft (9.8 to 21.9 m).

DATUM.--Altitude of land-surface datum is 2,080 ft (634 m). 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 (9.42 m) below land-surface datum, July 7, 1966; lowest, 43.30 ft (13.20 m) below land-surface datum, Sept. 10, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	39.81	39.36	39.04	38.78	38.62	38.42	38.33	38.42	38.33	39.24	40.82	41.25
10	39.72	39.32	39.01	38.74	38.58	38.42	38.26	38.41	38.38	39.38	40.72	41.27
15	39.64	39.28	38.95	38.69	38.53	38.38	38.30	38.47	38.47	39.75	40.92	41.33
20	39.59	39.23	38.94	38.64	38.51	38.37	38.24	38.46	38.48	40.20	41.09	41.31
25	39.51	39.19	38.89	38.58	38.47	38.35	38.22	38.39	38.68	40.55	41.28	41.18
EOM	39.43	39.13	38.80	38.65	38.46	38.30	38.36	38.37	39.01	40.75	41.16	41.06

WTR YEAR 1981 MAX 38.22 APR 25, 1981 MIN 41.34 SEP 17, 1981

GROUND-WATER LEVELS

KEARNEY COUNTY

403053098581501. Local number 6N-15W-1CB.

LOCATION.--Lat 40°30'53", long 98°58'15", NW1/4SW1/4 sec.1, T.6 N., R.15 W., Hydrologic Unit 10270206, 1 mi (1.6 km) west and 1 mi (1.6 km) north of intersection of U.S. Highway 6 and State Highway 10 in Minden.
Owner: Roy Youngson.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in (0.46 m), depth 176 ft (53.6 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,171.80 ft (661.96 m). Measuring point: Hole in turbine base 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--June 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.50 ft (13.87 m) below land-surface datum, Oct. 21, 1975; lowest, 71.36 ft (21.75 m) below land-surface datum, June 29, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	49.00	MAR 23	47.38								

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 (7.2 km) south and 2.5 mi (4.0 km) 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 (0.15 m), depth 210 ft (64.0 m), cased with steel, perforated 190 to 210 ft (57.9 to 64.0 m).

DATUM.--Altitude of land-surface datum is 2,210 ft (674 m). Measuring point: Top of casing 1.00 ft (0.30 m) 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, 79.29 ft (24.17 m) below land-surface datum, May 29, 1976; lowest, 119.43 ft (36.40 m) below land-surface datum, Aug. 27, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	86.69	85.54	84.43	83.86	83.27	82.68	82.55	81.97	81.33	84.69	87.26	94.69
10	86.52	85.35	84.53	83.94	83.16	82.81	82.13	81.84	81.68	114.55	84.40	83.80
15	86.08	85.32	84.18	83.69	82.90	82.45	82.57	81.60	81.47	118.53	83.88	83.65
20	86.10	85.02	84.63	83.42	82.82	82.44	82.09	81.71	81.81	88.40	104.55	82.99
25	85.88	85.07	84.39	83.12	82.73	82.44	81.74	81.43	83.54	98.43	86.54	82.94
EOY	85.65	84.38	83.87	83.34	82.90	82.25	82.34	81.40	107.35	94.63	84.66	82.83

WTR YEAR 1981 MAX 81.06 JUN 8, 1981 MIN 118.65 JUL 16, 1981

411416103361101. Local number 15N-55W-26CC.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	53.47	MAR 11	49.08						

[illegible][illegible]

GROUND-WATER LEVELS

LANCASTER COUNTY

404730096440401. Local number 10N-6E-34CA.

LOCATION.--Lat 40°47'30", long 96°44'04", NE1/4SW1/4 sec.34, T.10 N., R.6 E., Hydrologic Unit 10200203, 0.3 mi (0.5 km) west of intersection of Folsom and South Streets in Lincoln. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 36 ft (11.0 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,149 ft (350 m). Measuring point: Top of casing 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--December 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft (2.80 m) below land-surface datum, Oct. 15, 1973; lowest, 18.53 ft (5.65 m) below land-surface datum, Feb. 20, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 20	12.60										

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 (0.41 m), depth 170 ft (51.8 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,200 ft (366 m). Measuring point: Top of casing 1.00 ft (0.30 m) above land-surface datum.

REMARKS.--Recorder removed in January. Well measured in spring and fall thereafter.

PERIOD OF RECORD.--August 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 50.32 ft (15.34 m) below land-surface datum, June 2, 1980; lowest 71.19 ft (21.70 m) below land-surface datum, Sept. 5, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	50.86	50.83	50.78	50.81	.....	.....	.....	.....	.....	.....	.....	.....
10	50.94	50.98	50.90	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	50.76	50.95	50.61	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	50.91	50.90	51.09	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	50.95	51.03	51.04	.....	.....	.....	.....	.....	.....	.....	.....	.....
EOM	50.87	50.65	50.69	.....	.....	.....	.....	50.58	.....	.....	.....	.....

WTR YEAR 1981 MAX 50.58 MAY 28, 1981 MIN 51.09 DEC 20, 1980

HERRICK COUNTY

410143098090301. Local number 12N-7W-7AA.

LOCATION.--Lat 41°01'43", long 98°09'03", NE1/4NE1/4 sec.7, T.12 N., R.7 W., Hydrologic Unit 10200103, 0.5 mi (0.8 km) north and 0.5 mi (0.8 km) west of Chapman. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in (0.03 m), depth 13 ft (4.0 m), screened 11 to 13 ft (3.4 to 4.0 m).

DATUM.--Altitude of land-surface datum is 1,762.16 ft (537.11 m). Measuring point: Top of casing 1.00 ft (0.30 m) above land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season and by evapotranspiration.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.84 ft (1.17 m) below land-surface datum, Feb. 14, 1974; lowest, 10.75 ft (3.28 m) below land-surface datum, Dec. 3, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981	
DATE	WATER LEVEL
OCT 23	8.90
MAY 21	8.49

HERRICK COUNTY

405755098111301. Local number 12N-8W-36BC.

LOCATION.--Lat 40°57'55", long 98°11'13", SW1/4NW1/4 sec.36, T.12 N., R.8 W., Hydrologic Unit 10200103, 2 mi (3.2 km) southwest of the intersection of the main street in Chapman and U.S. Highway 30, then 2.6 mi (4.2 km) south. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Jettied observation water-table well, diameter 6 in (0.15 m), depth 7.75 ft (2.36 m), perforated 5 to 8 ft (1.5 to 2.4 m).

DATUM.--Altitude of land-surface datum is 1,785.38 ft (544.18 m). Measuring point: Top of casing 1.00 ft (0.30 m) above land-surface datum.

REMARKS.--Recorder removed in January. Well measured in spring and fall thereafter.

PERIOD OF RECORD.--July 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.02 ft (0.31 m) below land-surface datum, June 13, 1967; lowest, 6.21 ft (1.89 m) below land-surface datum, Aug. 31, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	5.72	5.29	5.04	4.74	-----	-----	-----	-----	-----	-----	-----	-----
10	5.68	5.23	5.02	4.74	-----	-----	-----	-----	-----	-----	-----	-----
15	5.66	5.18	4.95	4.73	-----	-----	4.48	-----	-----	-----	-----	-----
20	5.54	5.13	4.92	-----	-----	-----	-----	-----	-----	-----	-----	-----
25	5.47	5.10	4.93	-----	-----	-----	-----	-----	-----	-----	-----	-----
ECM	5.36	5.06	4.79	-----	-----	-----	-----	-----	-----	-----	-----	-----

WTR YEAR 1981 MAX 4.48 APR 15, 1981 MIN 5.72 OCT 5, 1980

PLATTE COUNTY

412955097192001. Local number 18N-1E-28CD.

LOCATION.--Lat 41°29'55", long 97°19'20", SE1/4SW1/4 sec.28, T.18 N., R.1 E., Hydrologic Unit 10200201, 3 mi (4.8 km) south and 8.5 mi (13.7 km) east of Platte Center. Owner: Loup River Public Power District.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in (0.05 m), depth 99 ft (30.2 m), screened 97 to 99 ft (29.6 to 30.2 m).

DATUM.--Altitude of land-surface datum is 1,511.8 ft (460.8 m). Measuring point: Top of casing 0.50 ft (0.15 m) above land-surface datum.

PERIOD OF RECORD.--November 1935 to August 1940; March 1942 to November 1953; November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.30 ft (18.38 m) below land-surface datum, Mar. 27, 1940; lowest, 72.81 ft (22.19 m) below land-surface datum, Oct. 9, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	68.68										

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 (0.13 m), depth 151 ft (46.0 m), perforated 142 to 151 ft (43.3 to 46.0 m).

DATUM.--Altitude of land-surface datum is 1,496 ft (456 m). 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 (29.43 m) below land-surface datum, Mar. 16, 1963; lowest, 107.15 ft (32.66 m) below land-surface datum, Aug. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981												
LOWEST WATER LEVEL FOR THE DAY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	104.60	-----	103.72	103.57	103.22	103.06	103.29	102.87	102.40	103.70	104.12	103.89
10	104.63	-----	103.84	103.79	103.32	103.05	102.70	102.72	102.65	103.98	104.20	103.75
15	103.74	104.22	103.43	103.60	-----	102.85	103.30	102.50	102.66	104.31	103.87	104.15
20	103.65	103.97	104.29	103.27	102.92	102.90	102.78	102.70	102.40	104.45	103.87	103.39
25	103.75	104.24	104.09	103.06	103.10	102.85	102.58	102.51	103.64	104.53	103.60	103.77
FROM	-----	103.55	103.41	103.27	103.25	102.94	102.79	102.50	103.69	104.23	104.01	103.42

WTR YEAR 1981 MAX 102.05 APR 3, 1981 MIN 104.67 JUL 21, 1981

GROUND-WATER LEVELS

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 (3.2 km) 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 (0.03 m), depth 12 ft (3.7 m), screened 10 to 12 ft (3.0 to 3.7 m).

DATUM.--Altitude of land-surface datum is 1,065.22 ft (324.68 m). Measuring point: Top of casing 4.50 ft (1.37 m) above land-surface datum.

REMARKS.--Water levels affected by pumping of nearby wells in City of Lincoln well field.

PERIOD OF RECORD.--October 1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.48 ft (0.15 m) below land-surface datum, July 31, 1948; lowest, 9.65 ft (2.94 m) below land-surface datum, Oct. 18, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	9.00	DEC 25	9.12	FEB 25	7.64	APR 25	7.17	JUN 25	8.00	AUG 25	8.00
NOV 25	9.03	JAN 25	7.65	MAR 25	8.36	MAY 25	7.24	JUL 25	8.75	SEP 25	7.53

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 (6.4 km) south from the intersection of Routes 92 and 692 near Mead, then 0.65 mi (1.05 km) east and 0.4 mi (0.64 km) 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 (0.15 m), depth 80 ft (24.4 m), screened 60 to 80 ft (18.3 to 24.4 m).

DATUM.--Altitude of land-surface datum is 1,171 ft (357 m). Measuring point: Top of casing 0.5 ft (0.15 m) 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, 42.47 ft (12.94 m) below land-surface datum, May 5, 1974; lowest, 46.98 ft (14.32 m) below land-surface datum, Sept. 25, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	46.46	46.40	46.27	46.19	46.15	46.11	46.12	46.14	46.20	46.42	46.81	46.96
10	46.44	46.38	46.27	-----	46.13	46.14	46.11	46.12	46.20	46.46	46.80	46.95
15	46.43	46.35	46.25	-----	46.10	46.10	46.13	46.11	46.20	46.53	46.85	46.97
20	46.44	46.32	-----	-----	46.08	46.10	46.12	46.14	46.20	46.58	46.86	46.95
25	46.44	46.32	-----	46.18	46.10	46.10	46.10	46.18	46.33	46.65	46.94	46.98
EOB	46.40	46.26	-----	46.19	46.16	46.10	46.15	46.17	46.40	46.78	46.95	46.95

WTR YEAR 1981 MAX 46.00 APR 3, 1981 MIN 46.98 SEP 25, 1981

GROUND-WATER LEVELS

421

SCOTTS BLUFF COUNTY

415325103392801. Local number 22N-55W-11DDC.

LOCATION.--Lat 41°53'25", long 103°39'28", SW1/4NE1/4 sec.11, T.22 N., R.55 W., Hydrologic Unit 10180009, 0.5 mi (0.8 km) north of the west intersection of Routes 71 and 26 in Scottsbluff, then 0.8 mi (1.3 km) 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 (0.15 m), depth 32 ft (9.8 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,953 ft (1,205 m). Measuring point: Top of casing 0.00 ft (0.00 m) above land-surface datum.

REMARKS.--Recorder removed in January. Well measured in spring and fall thereafter.

PERIOD OF RECORD.--August 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.05 ft (7.03 m) below land-surface datum, Sept. 25, 1974; lowest, 26.72 ft (8.14 m) below land-surface datum, May 31, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	24.70	25.05	25.40	25.55	-----	-----	26.01H	-----	-----	-----	-----	-----
10	24.80	25.09	25.43	25.60	-----	-----	-----	-----	-----	-----	-----	-----
15	24.88	25.16	25.43	25.64	-----	-----	-----	-----	-----	-----	-----	-----
20	24.89	25.20	25.45	25.72	-----	-----	-----	-----	-----	-----	-----	-----
25	24.93	25.33	25.49	-----	-----	25.98H	-----	-----	-----	-----	-----	-----
EOY	24.99	25.35	25.52	-----	-----	-----	-----	-----	-----	-----	-----	-----

WTE YEAR 1981 MAX 24.70 OCT 5, 1980 MIN 26.01 APR 5, 1981

H TAPE MEASUREMENT

SCOTTS BLUFF 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 (6.4 km) north and 2 mi (3.2 km) 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 (0.15 m), depth 118 ft (36.0 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 4,087.7 ft (1,245.9 m). Measuring point: Hole in pump base 0.7 ft (0.21 m) 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 (8.91 m) below land-surface datum, Oct. 26, 1949; lowest, 41.04 ft (12.51 m) below land-surface datum, Oct. 6, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	38.88	MAR 25	40.28								

GROUND-WATER LEVELS

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 (7.2 km) 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 (0.13 m), depth 123 ft (37.5 m), perforated 112 to 123 ft (34.1 to 37.5 m).

DATUM.--Altitude of land-surface datum is 1,550 ft (472 m). Measuring point: Top of casing 0.00 ft (0.00 m) 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 (23.28 m) below land-surface datum, Dec. 20, 1965; lowest, 90.17 ft (27.48 m) below land-surface datum, Aug. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	-----	88.32	87.69	87.50	87.36	86.90	-----	86.71H	-----	-----	88.45	88.37
10	88.77	88.46	87.87	87.72	-----	-----	-----	-----	86.43	-----	88.57	89.03
15	88.47	88.37	87.51	-----	-----	-----	87.36	-----	86.60	88.70	88.35	89.30
20	88.65	88.11	88.24	-----	-----	-----	-----	-----	-----	88.75	88.37	88.71
25	88.59	88.25	87.91	-----	-----	86.76	-----	-----	87.75	88.67	88.40	88.86
DOM	88.45	87.57	87.44	-----	-----	-----	-----	-----	-----	88.48	88.30	88.95

WTR YEAR 1981 MAX 86.18 JUN 1, 1981 MIN 89.30 SEP 15, 1981

H TAPE MEASUREMENT

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 (18.5 km) 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 (0.15 m), depth 100 ft (30.5 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,794.5 ft (1,156.6 m). Measuring point: Top of casing 1.5 ft (0.46 m) 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 (9.90 m) below land-surface datum, Aug. 25, 1969; lowest, 39.27 ft (11.97 m) below land-surface datum, July 13, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	37.61	37.54	37.57	37.62	37.60	37.68	37.82	38.13	38.20	38.89	39.03	38.83
10	37.63	37.55	37.60	37.69	37.62	37.73	37.87	38.16	38.23	39.18	38.32	38.58
15	37.60	37.57	37.60	37.68	-----	37.71	38.05	-----	38.26	39.19	38.42	38.32
20	37.61	37.54	37.61	-----	37.74	37.68	38.05	38.18	38.29	39.01	38.41	38.17
25	37.55	37.55	37.60	37.58	37.71	37.74	38.05	38.22	38.49	39.10	38.44	38.12
DOM	37.55	37.52	37.65	37.62	37.72	37.75	38.09	38.20	38.70	38.76	38.92	38.11

WTR YEAR 1981 MAX 37.48 NOV 29, 1980 MIN 39.27 JUL 13, 1981

GROUND-WATER LEVELS

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 (1.6 km) south and 0.25 mi (0.4 km) 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 (0.20 m), depth 16.9 ft (5.2 m), casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,686 ft (514 m). Measuring point: Top of casing 1.1 ft (0.3 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.34 ft (0.41 m) below land-surface datum, July 11, 1951; lowest, 10.56 ft (3.22 m) below land-surface datum, Apr. 5, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 6	9.60	MAY 4	9.25								

YORK COUNTY

404620097482501. Local number 9N-4W-6DD.

LOCATION.--Lat 40°46'20", long 97°48'25", SE1/4SE1/4 sec.6, T.9 N., R.4 W., Hydrologic Unit 10270203, 0.5 mi (0.8 km) south of Henderson. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 18 in (0.46 m), depth 171 ft (52.1 m), casing perforated 83 to 171 ft (25.3 to 52.1 m).

DATUM.--Altitude of land-surface datum is 1,718 ft (524 m). Measuring point: Top of casing 0.0 ft (0.0 m) above land-surface datum.

REMARKS.--Well destroyed in September.

PERIOD OF RECORD.--May 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 79.44 ft (24.21 m) below land-surface datum, June 20, 1959; lowest, 95.48 ft (29.10 m) below land-surface datum, Sept. 4, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	92.30	91.67	91.13	90.47	89.96	89.67	89.36	88.97	88.55	90.57	92.77	92.88
10	92.32	91.70	91.05	90.53	90.05	89.53	89.13	88.86	88.64	91.52	92.95	92.74
15	92.11	91.50	90.75	90.46	89.78	89.50	89.15	88.70	88.67	92.46	92.82	.....
20	92.05	91.40	90.87	90.31	89.70	89.32	89.08	88.69	88.56	92.75	92.83	.....
25	91.97	91.35	90.70	90.20	89.72	89.32	88.90	88.63	88.85	92.29	92.86	.....
BOM	91.80	91.11	90.60	89.94	89.76	89.35	88.98	.....	89.60	92.72	.....	.....

WTR YEAR 1981 MAX 88.36 JUN 17, 1981 MIN 92.96 AUG 21, 1981

GROUND-WATER LEVELS

425

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 (0.20 m), depth 165 ft (50.3 m), perforated below water table.

DATUM.--Altitude of land-surface datum is 1,659 ft (506 m). Measuring point: Top of casing 1.6 ft (0.5 m) 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 (27.02 m) below land-surface datum, Apr. 20, 1970; lowest, 120.81 ft (36.82 m) below land-surface datum, July 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	99.46	98.26	97.89	97.50	97.21	96.74	96.69	.....	97.88	104.86	101.24	99.83
10	99.60	98.39	97.95	97.41	.....	96.89	97.15	96.65	98.13	109.50	100.66	99.15
15	99.15	97.96	97.82	97.33	.....	96.82	97.05	.....	97.58	113.54	100.65	99.59
20	99.02	98.21	97.55	97.16	.....	97.00	96.90	.....	100.59	108.27	101.20	99.37
25	98.80	98.00	.....	97.45	.....	96.86	97.24	.....	103.65	103.16	100.63	98.78
EOH	98.52	98.06	97.59	97.55	.....	96.81	.....	.....	103.71	101.25	99.83	98.83

WTR YEAR 1981 MAX 96.62 MAY 7, 1981 MIN 114.77 JUL 18, 1981

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

(Local identifier: indicates location by township, range, and section. Geologic unit: 110 QRNR, Quaternary System; 110 WDBS, Quaternary windblown sand deposits; 112 SDGV, sand and gravel deposits; 121 OGLL, Ogallala Formation; 122 ARKR, Arikaree Group; 123 BRUL, Brule Formation, 123 CDRNB, Chadron Formation, basal sand and gravel; 211 DKOT, Dakota Sandstone; 211 NBRR, Niobrara Formation)

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	GEOLOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPF-CIFIC CONDUCTANCE (UMHOS) (00095)
ADAMS									
402727098261901	6N 10W28DA 1	40 27 27	098 26 19	01	112SDGV	81-06-24	0830	--	356
402753098391801	6N 12W27AB 1	40 27 53	098 39 18	01	112SDGV	81-06-24	0915	190	490
403710098395101	8N 12W34BC 1	40 37 10	098 39 51	01	110SDGV	81-06-23	1545	130	285
ANTELOPE									
415955098061901	23N 7W 3AADD1	41 59 55	098 06 19	01	112SDGV	81-07-07	1245	260	556
420100097563401	24N 5W31BAAB1	42 01 00	097 56 34	01	112SDGV	81-07-07	1200	120	452
BOYD									
425428098405801	34N 12W24BC 1	42 54 28	098 40 58	01	211DKOT	81-08-27	--	--	1550
BROWN									
423107099423501	29N 20W 6BAC 1	42 31 07	099 42 35	01	112SDGV	80-10-23	1500	--	115
					112SDGV	81-06-02	1530	--	100
					112SDGV	81-07-28	1515	--	120
					112SDGV	81-09-30	1445	--	100
423308099512001	30N 22W23DDB 1	42 33 08	099 51 20	01	121OGLL	80-10-23	1115	--	230
423252099510901	30N 22W26AAA 1	42 32 52	099 51 09	01	112SDGV	81-06-02	1110	55	202
					112SDGV	81-07-28	1205	55	208
					112SDGV	81-09-30	1200	55	189
423259099515701	30N 22W26BAB 1	42 32 59	099 51 57	01	121OGLL	81-06-02	1100	360	193
					121OGLL	81-07-28	1150	360	212
423415100032401	30N 23W18ACC 1	42 34 15	100 03 24	01	121OGLL	81-09-30	1145	360	188
					112SDGV	80-10-22	1545	--	118
					112SDGV	81-06-01	1550	--	118
					112SDGV	81-07-27	--	--	105
					112SDGV	81-09-30	1010	--	78
BUFFALO									
404446098503601	9N 14W13DB 1	40 44 46	098 50 36	01	112SDGV	81-09-01	1400	55	1530
405137098443501	10N 13W 2DD 1	40 51 37	098 44 35	01	112SDGV	81-09-01	1500	75	509
404758098485601	10N 13W32BRB 1	40 47 58	098 48 56	01	112SDGV	80-11-17	1300	38	1170
					112SDGV	81-02-26	1035	38	1250
					112SDGV	81-05-14	1330	38	1280
404758098485602	10N 13W32BRB 2	40 47 58	098 48 56	02	112SDGV	81-09-03	0925	38	1190
					112SDGV	80-11-17	1325	54	1100
					112SDGV	81-02-26	1045	54	1200
					112SDGV	81-05-14	1350	54	1220
					112SDGV	81-09-03	0910	54	1060
404758098485603	10N 13W32BRB 3	40 47 58	098 48 56	03	112SDGV	80-11-17	1340	70	916
					112SDGV	81-02-26	1055	70	940
					112SDGV	81-05-14	1315	70	890
					112SDGV	81-09-03	0935	70	930
405506098465201	11N 13W16DD 1	40 55 06	098 46 52	01	112SDGV	81-09-01	1545	120	437
BURT									
414714096302801	21N 8E28CCDR1	41 47 14	096 30 28	01	211DKOT	81-07-09	1030	307	2220
415710096283101	23N 8E248D 1	41 57 10	096 28 31	01	110SDGV	81-07-09	1130	86	622
415559096154401	23N 10E26CDAR1	41 55 59	096 15 44	01	211DKOT	81-08-19	1315	--	762
CEDAR									
423935097151401	31N 1E13DDB 1	42 39 35	097 15 14	01	211DKOT	81-08-26	--	820	2120

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)
ADAMS											
402727098261901	81-06-24	7.1	17.5	--	140	.00	45	6.5	15	.6	6.8
402753098391801	81-06-24	7.2	14.5	--	210	39	68	9.4	17	.5	8.0
403710098395101	81-06-23	7.2	14.5	--	110	4.0	36	5.9	11	.4	5.5
ANTELOPE											
415955098061901	81-07-07	7.2	14.5	--	260	.00	81	13	12	.3	17
420100097563401	81-07-07	7.2	14.5	--	210	2.0	65	12	8.6	.3	8.7
BOYD											
425428098405801	81-08-27	6.9	29.0	--	710	630	220	40	66	1.1	17
BROWN											
423107099423501	80-10-23	7.4	11.5	--	39	.00	13	1.6	4.4	.3	3.6
	81-06-02	7.5	23.0	--	42	.00	14	1.7	5.1	.3	1.7
	81-07-28	7.7	19.5	--	42	.00	14	1.7	4.9	.3	4.4
	81-09-30	6.9	13.5	--	39	.00	13	1.6	4.7	.3	3.8
423308099512001	80-10-23	7.1	12.0	--	91	10	28	5.0	8.6	.4	6.0
423252099510901	81-06-02	7.0	20.0	--	77	5.0	24	4.2	10	.5	2.4
	81-07-28	7.6	15.0	--	73	1.0	23	3.8	8.8	.5	6.1
	81-09-30	6.9	13.0	--	74	2.0	23	4.1	9.7	.5	5.9
423259099515701	81-06-02	7.6	22.0	--	83	.00	27	3.9	6.7	.3	4.6
	81-07-28	7.8	16.5	--	81	.00	26	3.9	6.9	.3	7.1
423415100032401	81-09-30	7.0	15.0	--	81	.00	26	4.0	6.9	.3	6.4
	80-10-22	6.7	14.5	--	35	.00	11	1.8	4.9	.4	2.5
	81-06-01	7.2	26.5	--	31	4.0	10	1.5	5.1	.4	2.0
	81-07-27	6.9	16.0	--	--	14	--	1.6	4.6	--	2.9
	81-09-30	6.8	15.5	--	27	1.0	8.8	1.3	4.2	.4	2.7
BUFFALO											
404446098503601	81-09-01	7.2	12.5	--	590	310	188	38	110	2.0	14
405137098443501	81-09-01	7.4	13.0	--	250	1.0	84	9.9	8.9	.3	4.8
404758098485601	80-11-17	7.3	12.0	--	450	48	140	24	68	1.4	15
	81-02-26	7.0	11.0	.1	530	112	170	26	64	1.2	15
	81-05-14	7.2	12.5	.1	560	130	180	28	70	1.3	15
404758098485602	81-09-03	6.9	12.0	.5	490	91	157	24	65	1.3	18
	80-11-17	7.3	11.5	--	490	190	160	23	35	.7	10
	81-02-26	7.1	11.0	.1	580	220	190	25	39	.7	11
	81-05-14	7.4	12.5	.1	600	240	200	25	40	.7	10
	81-09-03	7.0	12.0	.5	510	180	169	22	31	.6	10
404758098485603	80-11-17	--	12.0	--	450	140	150	19	21	.4	9.0
	81-02-26	7.0	11.0	1.0	460	147	150	20	25	.5	8.7
	81-05-14	7.7	12.5	1.3	430	130	140	19	20	.4	7.9
	81-09-03	7.0	12.0	1.1	450	140	149	19	20	.4	8.4
405506098465201	81-09-01	7.5	15.0	--	220	.00	74	8.1	6.4	.2	3.5
BURT											
414714096302801	81-07-09	7.2	13.0	--	830	630	250	49	180	2.7	28
415710096283101	81-07-09	7.3	14.5	--	300	.00	84	21	21	.5	3.5
415559096154401	81-08-19	--	14.5	--	380	18	110	25	26	.6	6.7
CEDAR											
423935097151401	81-08-26	6.9	21.5	--	740	600	230	41	120	2.0	21

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION	NUMBFR	DATE OF SAMPLE	ALKA- LITY (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLN- 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 SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, 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)
ADAMS												
402727098261901		81-06-24	150	22	4.6	.3	39	--	235	--	--	1.2
402753098391801		81-06-24	170	57	8.1	.3	31	--	317	--	--	3.7
403710098395101		81-06-23	110	15	2.5	.2	34	--	183	--	--	1.5
ANTELOPE												
415955098061901		81-07-07	280	5.0	1.3	.3	37	--	339	--	--	.82
420100097563401		81-07-07	210	11	2.9	.3	40	--	284	--	--	2.1
BOYD												
425428098405801		81-08-27	83	610	110	1.2	12	--	1130	--	--	.14
BROWN												
423107099423501		80-10-23	46	5.1	1.0	.2	52	--	114	.16	--	1.3
		81-06-02	48	.8	1.2	.1	53	--	113	--	--	1.4
		81-07-28	49	<1.0	.6	.2	54	--	112	--	--	1.6
		81-09-30	44	<5.0	1.8	.2	54	--	112	--	--	1.2
423308099512001		80-10-23	81	8.1	2.5	.2	55	--	182	.25	--	4.6
423252099510901		81-06-02	72	4.1	2.6	.1	52	--	164	--	--	4.9
		81-07-28	72	3.0	2.4	.2	54	--	166	--	--	4.8
		81-09-30	72	5.0	4.0	.2	55	--	168	--	--	4.0
423259099515701		81-06-02	94	1.6	1.0	.3	62	--	166	--	--	.43
		81-07-28	97	<1.0	1.3	.3	61	--	166	--	--	.60
		81-09-30	100	5.0	1.7	.4	63	--	174	--	--	.16
423415100032401		80-10-22	37	9.3	1.9	.1	34	--	94	.13	--	1.5
		81-06-01	36	5.0	1.1	.1	36	--	84	--	--	1.8
		81-07-27	25	<5.0	1.2	.1	37	--	--	--	--	2.0
		81-09-30	26	6.0	1.2	.1	36	--	83	--	--	1.7
BUFFALO												
404446098503601		81-09-01	280	370	90	.2	38	--	1080	--	--	15
405137098443501		81-09-01	250	<5.0	8.4	.2	53	--	325	--	--	.64
404758098485601		80-11-17	400	210	17	--	--	--	--	--	.11	--
		81-02-26	420	260	16	--	--	--	--	--	.00	--
		81-05-14	430	280	16	--	--	--	--	--	.93	--
		81-09-03	400	250	16	.2	--	--	--	--	.15	--
404758098485602		80-11-17	300	250	19	--	--	--	--	--	.48	--
		81-02-26	360	290	20	--	--	--	--	--	.38	--
		81-05-14	--	280	20	--	--	--	--	--	.38	--
		81-09-03	330	240	18	.1	--	630	--	--	.83	--
404758098485603		80-11-17	310	170	15	--	--	--	--	--	.45	--
		81-02-26	310	200	15	--	--	--	--	--	.29	--
		81-05-14	--	150	13	--	--	--	--	--	.42	--
		81-09-03	310	190	12	.1	--	--	--	--	.62	--
405506098465201		81-09-01	220	<5.0	5.2	.2	54	--	325	--	--	.59
BURT												
414714096302801		81-07-09	200	850	130	1.9	9.1	--	1620	--	--	.00
415710096283101		81-07-09	300	48	4.9	.2	27	--	393	--	--	.59
415559096154401		81-08-19	360	72	4.4	.4	22	--	485	--	--	.00
CEDAR												
423935097151401		81-08-26	140	700	55	2.2	11	--	1270	--	--	.19

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION	NUMBER	DATE OF SAMPLE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARTUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
ADAMS												
402727098261901	81-06-24	--	--	--	--	--	--	--	20	--	--	--
402753098391801	81-06-24	--	--	--	--	--	--	--	20	--	--	--
403710098395101	81-06-23	--	--	--	--	--	--	--	20	--	--	--
ANTELOPE												
415955098061901	81-07-07	--	--	--	--	--	--	--	120	--	--	--
420100097563401	81-07-07	--	--	--	--	--	--	--	80	--	--	--
BOYD												
425428098405801	81-08-27	--	--	--	--	--	1	23	130	<1	10	8
BROWN												
423107099423501	80-10-23	--	--	--	--	--	--	--	--	--	--	--
	81-06-02	--	--	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--	--	--
423308099512001	80-10-23	--	--	--	--	--	--	--	--	--	--	--
423252099510901	81-06-02	--	--	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--	--	--
423259099515701	81-06-02	--	--	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--	--	--
423415100032401	80-10-22	--	--	--	--	--	--	--	--	--	--	--
	81-06-01	--	--	--	--	--	--	--	--	--	--	--
	81-07-27	--	--	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--	--	--
BUFFALO												
404446098503601	81-09-01	--	--	--	--	--	--	--	340	--	--	--
405137098443501	81-09-01	--	--	--	--	--	--	--	40	--	--	--
404758098485601	80-11-17	1.30	.40	1.70	1.8	--	--	--	--	--	--	--
	81-02-26	1.10	1.5	2.60	2.6	--	--	--	--	--	--	--
	81-05-14	1.10	2.0	3.10	4.0	--	--	--	--	--	--	--
404758098485602	81-09-03	1.10	.90	2.00	2.2	--	--	--	--	--	--	--
	80-11-17	.180	.24	.42	.90	--	--	--	--	--	--	--
	81-02-26	.030	.38	.41	.79	--	--	--	--	--	--	--
	81-05-14	.090	.44	.53	.91	--	--	--	--	--	--	--
	81-09-03	.140	.78	.92	1.8	--	--	--	--	--	--	--
404758098485603	80-11-17	.080	.39	.47	.92	--	--	--	--	--	--	--
	81-02-26	.050	1.7	1.70	2.0	--	--	--	--	--	--	--
	81-05-14	.060	.41	.47	.89	--	--	--	--	--	--	--
	81-09-03	.100	.78	.88	1.5	--	--	--	--	--	--	--
405506098465201	81-09-01	--	--	--	--	--	--	--	40	--	--	--
BURT												
414714096302801	81-07-09	--	--	--	--	--	--	--	700	--	--	--
415710096283101	81-07-09	--	--	--	--	--	--	--	100	--	--	--
415559096154401	81-08-19	--	--	--	--	0	60	150	<1	0	1	1
CEDAR												
423935097151401	81-08-26	--	--	--	--	4	30	390	<1	10	4	4

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PR) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELF- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)
ADAMS											
402727098261901	81-06-24	<10	--	3	--	--	--	--	--	--	--
402753098391801	81-06-24	<10	--	4	--	--	--	--	--	--	--
403710098395101	81-06-23	<10	--	2	--	--	--	--	--	--	--
ANTELOPE											
415955098061901	81-07-07	<10	--	<1	--	--	--	--	--	--	--
420100097563401	81-07-07	10	--	1	--	--	--	--	--	--	--
BOYD											
425428098405801	81-08-27	5800	0	340	.0	0	0	21	--	.9	<30
BROWN											
423107099423501	80-10-23	--	--	--	--	--	--	--	--	--	--
	81-06-02	--	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--	--
423308099512001	80-10-23	--	--	--	--	--	--	--	--	--	--
423252099510901	81-06-02	--	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--	--
423259099515701	81-06-02	--	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--	--
423415100032401	81-09-30	--	--	--	--	--	--	--	--	--	--
	80-10-22	--	--	--	--	--	--	--	--	--	--
	81-06-01	--	--	--	--	--	--	--	--	--	--
	81-07-27	--	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--	--
BUFFALO											
404446098503601	81-09-01	20	--	5	--	--	--	--	--	--	--
405137098443501	81-09-01	<10	--	<1	--	--	--	--	--	--	--
404758098485601	80-11-17	--	--	--	--	--	--	--	--	--	--
	81-02-26	--	--	--	--	--	--	--	--	--	--
	81-05-14	--	--	--	--	--	--	--	--	--	--
	81-09-03	--	--	--	--	--	--	--	--	--	--
404758098485602	80-11-17	--	--	--	--	--	--	--	--	--	--
	81-02-26	--	--	--	--	--	--	--	--	--	--
	81-05-14	--	--	--	--	--	--	--	--	--	--
	81-09-03	--	--	--	--	--	--	--	--	--	--
404758098485603	80-11-17	--	--	--	--	--	--	--	--	--	--
	81-02-26	--	--	--	--	--	--	--	--	--	--
	81-05-14	--	--	--	--	--	--	--	--	--	--
	81-09-03	--	--	--	--	--	--	--	--	--	--
405506098465201	81-09-01	<10	--	<1	--	--	--	--	--	--	--
BURT											
414714096302801	81-07-09	220	--	130	--	--	--	--	--	--	--
415710096283101	81-07-09	<10	--	810	--	--	--	--	--	--	--
415559096154401	81-08-19	2000	0	170	.0	0	0	24	6.3	--	9.3
CEDAR											
423935097151401	81-08-26	1600	3	94	.0	0	0	20	--	--	<31

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	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 SR/ YI-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YI-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
ADAMS										
402727098261901	81-06-24	--	--	--	--	--	--	--	--	--
402753098391801	81-06-24	--	--	--	--	--	--	--	--	--
403710098395101	81-06-23	--	--	--	--	--	--	--	--	--
ANTELOPE										
415955098061901	81-07-07	--	--	--	--	--	--	--	--	--
420100097563401	81-07-07	--	--	--	--	--	--	--	--	--
BOYD										
425428098405801	81-08-27	1.3	18	.9	17	.8	.41	--	.07	--
BROWN										
423107099423501	80-10-23	--	--	--	--	--	--	--	--	--
	81-06-02	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--
423308099512001	80-10-23	--	--	--	--	--	--	--	--	--
423252099510901	81-06-02	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--
423259099515701	81-06-02	--	--	--	--	--	--	--	--	--
	81-07-28	--	--	--	--	--	--	--	--	--
423415100032401	81-09-30	--	--	--	--	--	--	--	--	--
	80-10-22	--	--	--	--	--	--	--	--	--
	81-06-01	--	--	--	--	--	--	--	--	--
	81-07-27	--	--	--	--	--	--	--	--	--
	81-09-30	--	--	--	--	--	--	--	--	--
BUFFALO										
404446098503601	81-09-01	--	--	--	--	--	--	--	--	--
405137098443501	81-09-01	--	--	--	--	--	--	--	--	--
404758098485601	80-11-17	--	--	--	--	--	--	--	--	10
	81-02-26	--	--	--	--	--	--	--	--	26
	81-05-14	--	--	--	--	--	--	--	--	7.4
404758098485602	81-09-03	--	--	--	--	--	--	--	--	2.4
	80-11-17	--	--	--	--	--	--	--	--	17
	81-02-26	--	--	--	--	--	--	--	--	27
	81-05-14	--	--	--	--	--	--	--	--	6.1
	81-09-03	--	--	--	--	--	--	--	--	1.4
404758098485603	80-11-17	--	--	--	--	--	--	--	--	19
	81-02-26	--	--	--	--	--	--	--	--	11
	81-05-14	--	--	--	--	--	--	--	--	14
	81-09-03	--	--	--	--	--	--	--	--	.9
405506098465201	81-09-01	--	--	--	--	--	--	--	--	--
BURT										
414714096302801	81-07-09	--	--	--	--	--	--	--	--	--
415710096283101	81-07-09	--	--	--	--	--	--	--	--	--
415559096154401	81-08-19	<.4	13	<.4	12	<.4	1.3	--	.38	--
CEDAR										
423935097151401	81-08-26	<.4	18	<.4	17	<.4	.90	--	.25	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	LOCAL IDENT- IFIER	LAT- ITUDE	LONG- ITUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHQS) (00095)
CLAY									
402207097580801	5N 6W26CD 1	40 22 07	097 58 08	01	112SDGV	81-06-23	1330	183	657
403123098031401	6N 7W 1AA 1	40 31 23	098 03 14	01	112SDGV	81-06-23	1200	--	728
403001098152903	6N 8W 8CB 3	40 30 01	098 15 29	03	112SDGV	81-06-23	1415	192	308
CUMING									
414646096483001	21N 5E23AD 1	41 46 46	096 48 30	01	112SDGV	81-07-08	1430	90	623
415442096501301	22N 5E 3BDDR1	41 54 42	096 50 13	01	112SDGV	81-07-08	1130	80	933
415026096442601	22N 6E33BA 1	41 50 26	096 44 26	01	111ALVM	81-07-08	1400	36	773
415900096591601	23N 4E 8AC 1	41 59 00	096 59 16	01	112SDGV	81-07-08	1030	87	368
DAKOTA									
422704096335601	29N 7E35AA 1	42 27 04	096 33 56	01	211DKUT	81-08-26	--	--	1099
422757096243901	29N 9E2RAR 1	42 27 57	096 24 39	01	211DKUT	81-08-26	0800	--	2140
422757096243902	29N 9E2RAR 2	42 27 57	096 24 39	02	112SDGV	81-08-26	--	--	1830
DAWSON									
404313099513201	9N 22W29CBAD1	40 43 13	099 51 32	01	112SDGV	81-07-20	1250	300	950
405224100083801	11N 25W35CCDC1	40 52 24	100 08 38	01	112SDGV	81-07-20	1110	71	755
DIXON									
423348096423001	30N 6E22AC 1	42 33 48	096 42 30	01	211DKUT	81-08-26	--	--	1320
DODGE									
412629096224201	17N 9F14CA 1	41 26 29	096 22 42	01	110SDGV	81-07-09	1600	24	1100
413118096342301	18N 7E248BAD1	41 31 18	096 34 23	01	211DKUT	81-08-19	1130	314	1640
412958096273501	18N 9E30CB 1	41 29 58	096 27 35	01	110SDGV	81-07-09	1710	37	350
413844096482501	19N 5E 1CR 1	41 38 44	096 48 25	01	112SDGV	81-07-08	1715	70	1040
413857096405301	19N 6E 1AC 1	41 38 57	096 40 53	01	112SDGV	81-07-08	1630	86	522
413909096334001	19N 7E 1AA 1	41 39 09	096 33 40	01	112SDGV	81-07-09	0915	100	559
414424096373801	20N 7E 4BB 1	41 44 24	096 37 38	01	112SDGV	81-07-08	1530	90	814
414147096325501	20N 8E20ABBD1	41 41 47	096 32 55	01	112SDGV	81-07-09	0930	127	1030
DOUGLAS									
411719096135501	15N 11E 7BRDC1	41 17 19	096 13 55	01	211DKUT	81-08-19	0945	238	659
412236096185801	16N 10W 8AB 1	41 22 36	096 18 58	01	112SDGV	81-07-09	1745	15	751
FILLMORE									
402516097272001	5N 1W 8BA 1	40 25 16	097 27 20	01	112SDGV	81-06-23	1030	--	951
402500097431401	5N 4W12BD 1	40 25 00	097 43 14	01	112SDGV	81-06-23	1100	131	433
FRANKLIN									
400330099053001	1N 16W14ARBA1	40 03 30	099 05 30	01	112SDGV	81-07-22	1030	80	1040
401019098452801	2N 13W 2BDBR1	40 10 19	098 45 28	01	112SDGV	81-07-22	1300	220	365
400847098581901	2N 15W11DDDD1	40 08 47	098 58 19	01	112SDGV	81-07-22	1130	--	405
401353098515301	3N 14W14ARCA1	40 13 53	098 51 53	01	112SDGV	81-07-22	1640	226	510
401804098440301	4N 13W24AC 1	40 18 04	098 44 03	01	112SDGV	81-06-24	1130	164	589
401733099012501	4N 15W21CCDD1	40 17 33	099 01 25	01	112SDGV	81-07-22	1740	273	635
FURNAS									
400436099534001	1N 23W 3DDBA1	40 04 36	099 53 40	01	112SDGV	81-07-21	1510	--	920
400133099580101	1N 23W308CBC1	40 01 33	099 58 01	01	112SDGV	81-07-21	1040	60	1020
400851099411101	2N 21W 9DDDD1	40 08 51	099 41 11	01	112SDGV	81-07-21	1350	50	740
400917100084101	2N 25W 9DBBR1	40 09 17	100 08 41	01	112SDGV	81-07-21	0930	340	475
401413099510201	3N 22W 7CCAA1	40 14 13	099 51 02	01	112SDGV	81-07-21	0735	227	560
401454099592001	3N 24W11AAAB1	40 14 54	099 59 20	01	112SDGV	81-07-24	0755	241	435
GOSPER									
402247099421201	5N 21W28AABA1	40 22 47	099 42 12	01	121UGLL	81-07-23	1645	260	590
402236100013201	5N 24W27ARCD1	40 22 36	100 01 32	01	121UGLL	81-07-24	0855	172	480

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)
CLAY											
402207097580801	81-06-23	7.1	15.0	--	260	39	84	12	37	1.0	6.7
403123098031401	81-06-23	7.4	13.0	--	300	67	99	12	36	.9	8.9
403001098152903	81-06-23	7.3	16.5	--	120	.00	39	5.7	15	.6	4.9
CUMING											
414646096483001	81-07-08	7.2	16.5	--	270	.00	82	17	27	.7	3.9
415442096501301	81-07-08	7.1	18.0	--	430	7.0	120	31	29	.6	9.7
415026096442601	81-07-08	7.1	13.0	--	340	.00	95	25	35	.8	7.0
415900096591601	81-07-08	7.5	15.0	--	170	5.0	48	11	7.8	.3	6.4
DAKOTA											
422704096335601	81-08-26	7.4	14.0	--	450	140	130	30	49	1.1	13
422757096243901	81-08-26	7.3	14.0	--	890	360	230	77	120	1.8	9.2
422757096243902	81-08-26	7.6	14.0	--	710	350	200	51	88	1.5	13
DAWSON											
404313099513201	81-07-20	7.7	14.5	--	300	85	99	14	74	1.9	10
405224100083801	81-07-20	8.2	18.0	--	250	58	68	19	79	2.3	12
DIXON											
423348096423001	81-08-26	7.2	14.0	--	560	340	170	32	54	1.0	16
DODGE											
412629096224201	81-07-09	7.0	18.5	--	500	170	150	31	32	.6	5.3
413118096342301	81-08-19	7.3	13.5	--	540	240	160	35	170	3.4	17
412958096273501	81-07-09	7.0	15.5	--	140	14	41	10	15	.5	5.6
413844096482501	81-07-08	7.2	16.0	--	430	87	120	31	62	1.3	16
413857096405301	81-07-08	7.2	13.0	--	230	.00	67	15	24	.7	4.1
413909096334001	81-07-09	7.3	17.5	--	260	7.0	78	15	19	.5	9.5
414424096373801	81-07-08	7.0	16.0	--	420	25	120	28	29	.6	2.7
414147096325501	81-07-09	7.2	16.0	--	440	16	130	27	57	1.2	11
DOUGLAS											
411719096135501	81-08-19	--	16.0	--	290	1.0	85	19	16	.4	8.3
412236096185801	81-07-09	7.4	13.5	--	380	120	120	20	21	.5	4.5
FILLMORE											
402516097272001	81-06-23	7.2	14.5	--	460	210	140	27	26	.5	9.9
402500097431401	81-06-23	7.5	14.5	--	160	10	51	8.0	24	.8	5.0
FRANKLIN											
400330099053001	81-07-22	7.2	13.0	--	480	130	153	24	46	1.0	12
401019098452801	81-07-22	6.9	13.5	--	150	21	48	7.6	15	.6	6.4
400847098581901	81-07-22	7.0	14.5	--	180	4.0	59	9.0	11	.4	6.7
401353098515301	81-07-22	7.0	14.5	--	210	41	68	10	20	.6	8.6
401804098440301	81-06-24	7.0	15.0	--	270	48	86	13	16	.4	7.5
401733099012501	81-07-22	7.4	14.5	--	290	85	91	14	20	.5	10
FURNAS											
400436099534001	81-07-21	7.1	15.0	--	480	77	143	29	14	.3	9.5
400133099580101	81-07-21	7.2	14.0	--	460	77	137	28	42	.9	16
400851099411101	81-07-21	7.1	13.5	--	340	41	102	21	25	.6	12
400917100084101	81-07-21	7.3	14.5	--	190	.00	50	17	8.9	.3	8.4
401413099510201	81-07-21	7.1	15.0	--	250	31	74	16	6.8	.2	9.1
401454099592001	81-07-24	7.3	15.5	--	210	1.0	55	18	7.5	.2	9.3
GOSPER											
402247099421201	81-07-23	7.2	15.0	--	240	1.0	70	16	7.8	.2	9.6
402236100013201	81-07-24	7.2	15.0	--	210	3.0	64	13	9.9	.3	8.8

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	ALKA-LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE 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)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
CLAY											
402207097580801	81-06-23	220	50	17	.3	35	--	416	--	--	9.5
403123098031401	81-06-23	230	80	32	.3	27	--	466	--	--	7.4
403001098152903	81-06-23	130	11	4.2	.3	27	--	191	--	--	1.4
CUMING											
414646096483001	81-07-08	320	2.4	2.3	.3	28	--	358	--	--	.69
415442096501301	81-07-08	420	71	8.3	.4	35	--	580	--	--	5.2
415026096442601	81-07-08	350	32	8.4	.4	38	--	493	--	--	9.5
415900096591601	81-07-08	160	27	1.7	.3	39	--	240	--	--	.03
DAKOTA											
422704096335601	81-08-26	310	200	26	1.0	18	--	657	--	--	.11
422757096243901	81-08-26	530	270	200	.3	25	--	1270	--	--	.14
422757096243902	81-08-26	360	500	48	.6	17	--	1140	--	--	.56
DAWSON											
404313099513201	81-07-20	220	210	25	.3	45	--	614	--	--	.93
405224100083801	81-07-20	190	190	21	.5	33	--	540	--	--	.61
DIXON											
423348096423001	81-08-26	220	370	34	1.4	19	--	837	--	--	1.7
DODGE											
412629096224201	81-07-09	330	120	23	.4	16	--	591	--	--	3.2
413118096342301	81-08-19	300	470	75	1.0	12	--	1120	--	--	.01
412958096273501	81-07-09	130	18	2.3	.2	33	--	246	--	--	9.6
413844096482501	81-07-08	340	230	9.5	.7	14	--	689	--	--	.15
413857096405301	81-07-08	270	2.0	1.2	.3	30	--	310	--	--	.59
413909096334001	81-07-09	250	49	6.8	.5	46	--	385	--	--	2.3
414424096373801	81-07-08	390	75	3.5	.3	33	--	527	--	--	.03
414147096325501	81-07-09	420	140	16	.7	26	--	664	--	--	.01
DOUGLAS											
411719096135501	81-08-19	290	26	3.0	.2	37	--	382	--	--	2.8
412236096185801	81-07-09	260	130	11	.4	14	--	478	--	--	.00
FILLMORE											
402516097272001	81-06-23	250	170	24	.4	43	--	608	--	--	3.9
402500097431401	81-06-23	150	36	18	.4	30	--	267	--	--	.87
FRANKLIN											
400330099053001	81-07-22	350	150	38	.3	42	--	725	--	--	11
401019098452801	81-07-22	130	31	5.9	.2	36	--	241	--	--	2.9
400847098581901	81-07-22	180	15	4.9	.2	47	--	269	--	--	1.9
401353098515301	81-07-22	170	58	15	.2	35	--	337	--	--	4.4
401804098440301	81-06-24	220	54	11	.2	44	--	376	--	--	2.6
401733099012501	81-07-22	200	53	34	.2	44	--	420	--	--	7.5
FURNAS											
400436099534001	81-07-21	400	15	4.8	.2	62	--	533	--	--	3.3
400133099580101	81-07-21	380	120	38	.3	41	--	680	--	--	5.0
400851099411101	81-07-21	300	59	23	.4	48	--	487	--	--	3.6
400917100084101	81-07-21	200	9.0	2.4	.6	63	--	286	--	--	1.5
401413099510201	81-07-21	220	31	11	.2	57	--	346	--	--	2.0
401454099592001	81-07-24	210	8.0	2.3	.5	65	--	300	--	--	1.8
GOSPER											
402247099421201	81-07-23	240	9.0	3.3	.3	65	--	336	--	--	2.5
402236100013201	81-07-24	210	15	6.6	.5	65	--	323	--	--	3.1

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION	NUMBER	DATE OF SAMPLE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARTUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
CLAY												
402207097580801	81-06-23	--	--	--	--	--	--	--	30	--	--	--
403123098031401	81-06-23	--	--	--	--	--	--	--	30	--	--	--
403001098152903	81-06-23	--	--	--	--	--	--	--	20	--	--	--
CUMING												
414646096483001	81-07-08	--	--	--	--	--	--	--	100	--	--	--
415442096501301	81-07-08	--	--	--	--	--	--	--	120	--	--	--
415026096442601	81-07-08	--	--	--	--	--	--	--	180	--	--	--
415900096591601	81-07-08	--	--	--	--	--	--	--	110	--	--	--
DAKOTA												
422704096335601	81-08-26	--	--	--	--	5	110	210	<1	10	8	
422757096243901	81-08-26	--	--	--	--	12	300	230	1	10	16	
422757096243902	81-08-26	--	--	--	--	1	30	190	<1	0	7	
DAWSON												
404313099513201	81-07-20	--	--	--	--	--	--	--	110	--	--	--
405224100083801	81-07-20	--	--	--	--	--	--	--	120	--	--	--
DIXON												
423348096423001	81-08-26	--	--	--	--	2	70	260	<1	10	8	
DODGE												
412629096224201	81-07-09	--	--	--	--	--	--	--	80	--	--	--
413118096342301	81-08-19	--	--	--	--	2	30	520	<1	0	1	
412958096273501	81-07-09	--	--	--	--	--	--	--	90	--	--	--
413844096482501	81-07-08	--	--	--	--	--	--	--	420	--	--	--
413857096405301	81-07-08	--	--	--	--	--	--	--	100	--	--	--
413909096334001	81-07-09	--	--	--	--	--	--	--	110	--	--	--
414424096373801	81-07-08	--	--	--	--	--	--	--	130	--	--	--
414147096325501	81-07-09	--	--	--	--	--	--	--	240	--	--	--
DOUGLAS												
411719096135501	81-08-19	--	--	--	--	4	180	40	<1	0	3	
412236096185801	81-07-09	--	--	--	--	--	--	--	80	--	--	--
FILLMORE												
402516097272001	81-06-23	--	--	--	--	--	--	--	60	--	--	--
402500097431401	81-06-23	--	--	--	--	--	--	--	190	--	--	--
FRANKLIN												
400330099053001	81-07-22	--	--	--	--	--	--	--	110	--	--	--
401019098452801	81-07-22	--	--	--	--	--	--	--	30	--	--	--
400847098581901	81-07-22	--	--	--	--	--	--	--	30	--	--	--
401353098515301	81-07-22	--	--	--	--	--	--	--	40	--	--	--
401804098440301	81-06-24	--	--	--	--	--	--	--	30	--	--	--
401733099012501	81-07-22	--	--	--	--	--	--	--	40	--	--	--
FURNAS												
400436099534001	81-07-21	--	--	--	--	--	--	--	50	--	--	--
400133099580101	81-07-21	--	--	--	--	--	--	--	110	--	--	--
400851099411101	81-07-21	--	--	--	--	--	--	--	70	--	--	--
400917100084101	81-07-21	--	--	--	--	--	--	--	50	--	--	--
401413099510201	81-07-21	--	--	--	--	--	--	--	40	--	--	--
401454099592001	81-07-24	--	--	--	--	--	--	--	50	--	--	--
GOSPER												
402247099421201	81-07-23	--	--	--	--	--	--	--	50	--	--	--
402236100013201	81-07-24	--	--	--	--	--	--	--	50	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION	NUMBER	DATE OF SAMPLE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)
CLAY												
402207097580801	81-06-23		<10	--	2	--	--	--	--	--	--	--
403123098031401	81-06-23		30	--	10	--	--	--	--	--	--	--
403001098152903	81-06-23		<10	--	1	--	--	--	--	--	--	--
CUMING												
414646096483001	81-07-08		10	--	1	--	--	--	--	--	--	--
415442096501301	81-07-08		10	--	20	--	--	--	--	--	--	--
415026096442601	81-07-08		<10	--	5	--	--	--	--	--	--	--
415900096591601	81-07-08		1900	--	310	--	--	--	--	--	--	--
DAKOTA												
422704096335601	81-08-26		2100	0	160	.0	0	0	86	--	.4	<18
422757096243901	81-08-26		13000	2	1500	.1	0	0	70	--	1.1	<30
422757096243902	81-08-26		1400	0	490	.0	0	0	28	--	1.4	<25
DAWSON												
404313099513201	81-07-20		15	--	9	--	--	--	--	--	--	--
405224100083801	81-07-20		18	--	6	--	--	--	--	--	--	--
DIXON												
423348096423001	81-08-26		28	5	63	.0	1	0	22	--	--	<20
DODGE												
412629096224201	81-07-09		<10	--	610	--	--	--	--	--	--	--
413118096342301	81-08-19		950	2	130	.0	0	0	12	--	--	<31
412958096273501	81-07-09		10	--	8	--	--	--	--	--	--	--
413844096482501	81-07-08		270	--	90	--	--	--	--	--	--	--
413857096405301	81-07-08		1200	--	1	--	--	--	--	--	--	--
413909096334001	81-07-09		340	--	450	--	--	--	--	--	--	--
414424096373801	81-07-08		50	--	1100	--	--	--	--	--	--	--
414147096325501	81-07-09		2500	--	980	--	--	--	--	--	--	--
DOUGLAS												
411719096135501	81-08-19		<10	2	13	.0	4	0	4	--	--	<12
412236096185801	81-07-09		<10	--	520	--	--	--	--	--	--	--
FILLMORE												
402516097272001	81-06-23		20	--	350	--	--	--	--	--	--	--
402500097431401	81-06-23		<10	--	5	--	--	--	--	--	--	--
FRANKLIN												
400330099053001	81-07-22		<10	--	8	--	--	--	--	--	--	--
401019098452801	81-07-22		<10	--	1	--	--	--	--	--	--	--
400847098581901	81-07-22		<10	--	1	--	--	--	--	--	--	--
401353098515301	81-07-22		<10	--	1	--	--	--	--	--	--	--
401804098440301	81-06-24		<10	--	<1	--	--	--	--	--	--	--
401733099012501	81-07-22		12	--	1	--	--	--	--	--	--	--
FURNAS												
400436099534001	81-07-21		110	--	6	--	--	--	--	--	--	--
400133099580101	81-07-21		6300	--	1000	--	--	--	--	--	--	--
400851099411101	81-07-21		12	--	4	--	--	--	--	--	--	--
400917100084101	81-07-21		<10	--	<1	--	--	--	--	--	--	--
401413099510201	81-07-21		42	--	5	--	--	--	--	--	--	--
401454099592001	81-07-24		14	--	1	--	--	--	--	--	--	--
GOSPER												
402247099421201	81-07-23		<10	--	<1	--	--	--	--	--	--	--
402236100013201	81-07-24		13	--	<1	--	--	--	--	--	--	--

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STATION	NUMBER	DATE OF SAMPLE	GROSS ALPHA, SUSP.	GROSS BETA, DIS-	GROSS BETA, SUSP.	GROSS BETA, DIS-	GROSS BETA, SUSP.	RADIUM 226, DIS-	URANIUM NATURAL DIS-	URANIUM DIS- SOLVED, EXTRAC-	CARBON, ORGANIC DIS-
			TOTAL (UG/L AS U-NAT) (80040)	SOLVED (PCI/L AS CS-137) (03515)	TOTAL (PCI/L AS CS-137) (03516)	SOLVED (PCI/L AS SR/ YT-90) (80050)	TOTAL (PCI/L AS SR/ YT-90) (80060)	SOLVED, RADON METHOD (PCI/L) (09511)	NATURAL SOLVED (UG/L AS U) (22703)	SOLVED, TION (UG/L) (80020)	SOLVED (MG/L AS C) (00681)
CLAY											
402207097580801	81-06-23		--	--	--	--	--	--	--	--	--
403123098031401	81-06-23		--	--	--	--	--	--	--	--	--
403001098152903	81-06-23		--	--	--	--	--	--	--	--	--
CUMING											
414646096483001	81-07-08		--	--	--	--	--	--	--	--	--
415442096501301	81-07-08		--	--	--	--	--	--	--	--	--
415026096442601	81-07-08		--	--	--	--	--	--	--	--	--
415900096591601	81-07-08		--	--	--	--	--	--	--	--	--
DAKOTA											
422704096335601	81-08-26		.6	13	.7	13	.7	2.1	--	.14	--
422757096243901	81-08-26		1.6	<19	1.3	<18	1.3	.32	2.8	--	--
422757096243902	81-08-26		2.1	15	1.6	14	1.5	1.1	--	1.2	--
DAWSON											
404313099513201	81-07-20		--	--	--	--	--	--	--	--	--
405224100083801	81-07-20		--	--	--	--	--	--	--	--	--
DIXON											
423348096423001	81-08-26		<.4	20	.5	19	.5	.26	3.3	--	--
DODGE											
412629096224201	81-07-09		--	--	--	--	--	--	--	--	--
413118096342301	81-08-19		<.4	24	<.4	23	<.4	2.9	1.1	--	--
412958096273501	81-07-09		--	--	--	--	--	--	--	--	--
413844096482501	81-07-08		--	--	--	--	--	--	--	--	--
413857096405301	81-07-08		--	--	--	--	--	--	--	--	--
413909096334001	81-07-09		--	--	--	--	--	--	--	--	--
414424096373801	81-07-08		--	--	--	--	--	--	--	--	--
414147096325501	81-07-09		--	--	--	--	--	--	--	--	--
DOUGLAS											
411719096135501	81-08-19		<.4	9.4	<.4	8.8	<.4	.28	5.7	--	--
412236096185801	81-07-09		--	--	--	--	--	--	--	--	--
FILLMORE											
402516097272001	81-06-23		--	--	--	--	--	--	--	--	--
402500097431401	81-06-23		--	--	--	--	--	--	--	--	--
FRANKLIN											
400330099053001	81-07-22		--	--	--	--	--	--	--	--	--
401019098452801	81-07-22		--	--	--	--	--	--	--	--	--
400847098581901	81-07-22		--	--	--	--	--	--	--	--	--
401353098515301	81-07-22		--	--	--	--	--	--	--	--	--
401804098440301	81-06-24		--	--	--	--	--	--	--	--	--
401733099012501	81-07-22		--	--	--	--	--	--	--	--	--
FURNAS											
400436099534001	81-07-21		--	--	--	--	--	--	--	--	--
400133099580101	81-07-21		--	--	--	--	--	--	--	--	--
400851099411101	81-07-21		--	--	--	--	--	--	--	--	--
400917100084101	81-07-21		--	--	--	--	--	--	--	--	--
401413099510201	81-07-21		--	--	--	--	--	--	--	--	--
401454099592001	81-07-24		--	--	--	--	--	--	--	--	--
GOSPER											
402247099421201	81-07-23		--	--	--	--	--	--	--	--	--
402236100013201	81-07-24		--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	LOCAL IDENT- IFIER	LAT- I- TUDE	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)
GOSPER									
402713099530301	6N 23W25CCDA1	40 27 13	099 53 03	01	1210GLL	81-07-24	0930	250	580
403220099561801	7N 23W33BABA1	40 32 20	099 56 18	01	1210GLL	81-07-20	1540	340	595
403827099530201	8N 23W25BBBA1	40 38 27	099 53 02	01	1210GLL	81-07-24	1005	360	855
HALL									
404557098352501	9N 11W 7AD 1	40 45 57	098 35 25	01	112SDGV	81-09-01	1000	--	965
404659098395601	9N 12W 4AAD 1	40 46 59	098 39 56	01	112SDGV	81-02-27	1010	34	1070
					112SDGV	81-05-15	0855	34	1060
					112SDGV	81-09-03	1050	34	1150
404659098395602	9N 12W 4AAD 2	40 46 59	098 39 56	02	112SDGV	81-02-27	1030	51	952
					112SDGV	81-05-15	0915	51	958
					112SDGV	81-09-03	1100	51	926
404620098425601	9N 12W 6CDC 1	40 46 20	098 42 56	01	112SDGV	80-11-14	1300	58	948
					112SDGV	81-02-26	1135	58	930
					112SDGV	81-05-15	1035	58	928
					112SDGV	81-09-03	1000	58	901
404643098435201	9N 13W 1X 1	40 46 43	098 43 52	01	112SDGV	81-09-01	1315	61	1260
404321098441801	9N 13W25BC 1	40 43 21	098 44 18	01	112SDGV	81-09-01	1215	--	886
405201098281501	10N 10W 5BC 1	40 52 01	098 28 15	01	112SDGV	81-09-01	0830	--	530
405125098271901	10N 10W 8AAA 1	40 51 25	098 27 19	01	112SDGV	80-11-12	1600	70	546
					112SDGV	81-02-24	1530	70	555
					112SDGV	81-05-14	0925	70	568
					112SDGV	81-09-02	0950	70	570
404832098283301	10N 10W30AD 1	40 48 32	098 28 33	01	112SDGV	81-09-01	0900	65	1180
404832098283302	10N 10W30AD 2	40 48 32	098 28 33	02	112SDGV	81-09-01	0900	70	920
404832098283303	10N 10W30AD 3	40 48 32	098 28 33	03	112SDGV	81-09-01	0900	72	1080
405212098293701	10N 11W 1AAD 1	40 52 12	098 29 37	01	112SDGV	80-11-13	0915	34	1440
					112SDGV	81-02-25	1010	34	1460
					112SDGV	81-05-13	1020	34	1440
405212098293702	10N 11W 1AAD 2	40 52 12	098 29 37	02	112SDGV	80-11-13	0945	49	1010
					112SDGV	81-02-25	1025	49	990
					112SDGV	81-05-13	0950	49	958
					112SDGV	81-09-01	1455	49	992
405212098293703	10N 11W 1AAD 3	40 52 12	098 29 37	03	112SDGV	80-11-13	1010	64	900
					112SDGV	81-02-25	1040	64	915
					112SDGV	81-05-13	1045	64	902
					112SDGV	81-09-01	1515	64	875
405001098315501	10N 11W15DAD 1	40 50 01	098 31 55	01	112SDGV	80-11-13	1315	55	525
					112SDGV	81-02-25	1535	55	530
					112SDGV	81-05-14	1000	55	550
					112SDGV	81-09-02	1500	55	538
405027098330301	10N 11W16ADD 1	40 50 27	098 33 03	01	112SDGV	80-11-13	1100	37	1310

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	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)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
GOSPER											
402713099530301	81-07-24	7.4	15.0	--	260	1.0	70	21	8.5	.2	12
403220099561801	81-07-20	7.9	16.5	--	260	13	69	22	10	.3	12
403827099530201	81-07-24	7.3	16.0	--	340	130	103	20	40	1.0	12
HALL											
404557098352501	81-09-01	7.5	--	--	330	100	91	25	82	2.1	7.7
404659098395601	81-02-27	6.5	12.0	6.4	460	346	140	26	28	.6	28
	81-05-15	6.7	12.5	6.5	460	330	140	27	29	.6	27
	81-09-03	6.4	12.5	5.5	490	340	150	29	33	.7	33
404659098395602	81-02-27	6.6	11.5	.6	420	320	130	22	26	.6	12
	81-05-15	6.8	12.5	1.5	420	310	130	22	27	.6	12
	81-09-03	7.1	12.5	1.0	420	310	134	21	25	.6	12
404620098425601	80-11-14	7.5	12.0	.1	390	150	120	22	30	.7	24
	81-02-26	7.1	11.5	--	420	190	130	22	31	.7	21
	81-05-15	7.2	12.5	.1	420	190	130	23	31	.7	19
	81-09-03	7.2	12.5	.2	410	170	126	22	29	.7	19
404643098435201	81-09-01	7.2	12.5	--	580	260	179	32	54	1.0	21
404321098441801	81-09-01	7.6	17.5	--	340	130	104	20	71	1.8	6.2
405201098281501	81-09-01	7.7	13.5	--	230	30	74	11	14	.4	11
405125098271901	80-11-12	7.0	13.0	3.0	250	80	77	14	11	.3	10
	81-02-24	6.7	12.5	--	250	87	76	14	12	.3	8.8
	81-05-14	6.8	12.5	3.5	240	76	73	13	11	.3	9.2
	81-09-02	6.9	13.0	3.0	260	85	79	14	11	.3	9.3
404832098283301	81-09-01	7.4	16.5	--	390	150	116	24	100	2.3	7.0
404832098283302	81-09-01	7.6	16.5	--	370	180	110	22	51	1.2	5.7
404832098283303	81-09-01	7.5	16.5	--	360	130	103	24	99	2.4	6.5
405212098293701	80-11-13	7.1	8.0	7.1	670	350	200	41	42	.7	27
	81-02-25	7.1	11.5	6.4	590	270	170	40	49	.9	30
	81-05-13	7.1	12.0	6.3	600	270	170	42	48	.9	31
405212098293702	80-11-13	7.6	11.0	5.9	410	91	130	21	50	1.1	17
	81-02-25	7.1	11.5	3.8	410	91	130	21	47	1.0	17
	81-05-13	7.3	12.0	3.5	380	52	120	20	44	1.0	18
	81-09-01	7.3	12.5	4.0	380	94	116	23	66	1.5	12
405212098293703	80-11-13	7.9	11.0	.2	370	44	120	18	46	1.0	15
	81-02-25	7.4	11.5	.1	400	59	130	18	46	1.0	15
	81-05-13	7.3	12.0	.2	380	28	120	19	47	1.1	16
	81-09-01	7.3	12.5	.2	380	54	124	18	43	1.0	14
405001098315501	80-11-13	--	11.0	7.5	220	92	69	12	12	.4	10
	81-02-25	7.0	12.5	8.4	220	99	68	12	13	.4	8.7
	81-05-14	6.8	12.0	7.5	220	99	68	12	13	.4	9.2
	81-09-02	6.9	13.0	8.4	220	98	69	11	11	.3	9.6
405027098330301	80-11-13	7.5	11.5	.7	590	270	180	35	34	.6	15

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	ALKA-LINITY LAB (MG/L AS CAC03) (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 ST02) (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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
GOSPER											
402713099530301	81-07-24	260	17	2.2	.3	67	--	365	--	--	2.3
403220099561801	81-07-20	250	23	2.4	.3	70	--	372	--	--	2.9
403827099530201	81-07-24	210	190	22	.2	56	--	576	--	--	1.5
HALL											
404557098352501	81-09-01	230	250	27	.5	23	--	646	--	--	.14
404659098395601	81-02-27	110	320	28	--	--	--	--	--	24	--
	81-05-15	130	320	27	--	--	--	--	--	2.5	--
	81-09-03	150	320	46	.1	--	--	--	--	3.5	--
404659098395602	81-02-27	100	330	14	--	--	--	--	--	15	--
	81-05-15	110	330	12	--	--	--	--	--	12	--
	81-09-03	110	340	11	.1	--	--	--	--	14	--
404620098425601	80-11-14	240	210	22	--	--	--	--	--	2.0	--
	81-02-26	230	250	23	--	--	--	--	--	2.1	--
	81-05-15	230	230	21	--	--	--	--	--	.15	--
	81-09-03	240	210	23	.2	--	--	--	--	2.2	--
404643098435201	81-09-01	320	300	47	.3	34	--	876	--	--	3.7
404321098441801	81-09-01	210	250	19	.3	30	--	633	--	--	1.5
405201098281501	81-09-01	200	51	10	.3	18	--	346	--	--	3.8
405125098271901	80-11-12	170	59	20	--	--	--	--	--	7.0	--
	81-02-24	160	62	19	--	--	--	--	--	26	--
	81-05-14	160	63	21	--	--	--	--	--	.05	--
	81-09-02	170	65	18	.1	--	--	--	--	9.5	--
404832098283301	81-09-01	240	320	34	.3	21	--	785	--	--	4.1
404832098283302	81-09-01	190	250	23	.3	20	--	603	--	--	1.6
404832098283303	81-09-01	230	290	30	.3	19	--	727	--	--	3.8
405212098293701	80-11-13	320	150	68	--	--	--	--	--	58	--
	81-02-25	320	120	68	--	--	--	--	--	60	--
	81-05-13	330	140	61	--	--	--	--	--	1.8	--
405212098293702	80-11-13	320	140	16	--	--	--	--	--	21	--
	81-02-25	320	130	13	--	--	--	--	--	18	--
	81-05-13	330	120	15	--	--	--	--	--	1.8	--
	81-09-01	290	200	16	--	--	--	--	--	7.4	--
405212098293703	80-11-13	330	120	16	--	--	--	--	--	4.3	--
	81-02-25	340	150	13	--	--	--	--	--	.69	--
	81-05-13	350	140	13	--	--	--	--	--	.08	--
	81-09-01	330	130	12	--	--	--	--	--	.21	--
405001098315501	80-11-13	130	41	13	--	--	--	--	--	22	--
	81-02-25	120	44	10	--	--	--	--	--	23	--
	81-05-14	120	44	11	--	--	--	--	--	6.8	--
	81-09-02	120	41	11	.1	--	--	--	--	3.6	--
405027098330301	80-11-13	320	130	62	--	--	--	--	--	67	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA (MG/L AS N) (00610)	NITROGEN, ORGANIC (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
GOSPER											
402713099530301	81-07-24	--	--	--	--	--	--	50	--	--	--
403220099561801	81-07-20	--	--	--	--	--	--	60	--	--	--
403827099530201	81-07-24	--	--	--	--	--	--	70	--	--	--
HALL											
404557098352501	81-09-01	--	--	--	--	--	--	80	--	--	--
404659098395601	81-02-27	.040	2.2	2.20	26	--	--	--	--	--	--
	81-05-15	.070	.73	.80	3.3	--	--	--	--	--	--
	81-09-03	<.090	--	1.30	4.8	--	--	--	--	--	--
404659098395602	81-02-27	.040	.96	1.00	16	--	--	--	--	--	--
	81-05-15	.060	1.0	1.10	13	--	--	--	--	--	--
	81-09-03	<.090	--	1.30	15	--	--	--	--	--	--
404620098425601	80-11-14	.090	.58	.67	2.7	--	--	--	--	--	--
	81-02-26	.040	.49	.53	2.6	--	--	--	--	--	--
	81-05-15	.090	.56	.65	.80	--	--	--	--	--	--
	81-09-03	<.090	--	.95	3.2	--	--	--	--	--	--
404643098435201	81-09-01	--	--	--	--	--	--	250	--	--	--
404321098441801	81-09-01	--	--	--	--	--	--	80	--	--	--
405201098281501	81-09-01	--	--	--	--	--	--	110	--	--	--
405125098271901	80-11-12	.060	1.2	1.30	8.3	--	--	--	--	--	--
	81-02-24	.020	2.2	2.20	28	--	--	--	--	--	--
	81-05-14	.050	.63	.68	.73	--	--	--	--	--	--
	81-09-02	<.090	--	1.60	11	--	--	--	--	--	--
404832098283301	81-09-01	--	--	--	--	--	--	90	--	--	--
404832098283302	81-09-01	--	--	--	--	--	--	50	--	--	--
404832098283303	81-09-01	--	--	--	--	--	--	90	--	--	--
405212098293701	80-11-13	.060	2.2	2.30	60	--	--	--	--	--	--
	81-02-25	.030	1.6	1.60	62	--	--	--	--	--	--
	81-05-13	.150	2.0	2.10	3.9	--	--	--	--	--	--
405212098293702	80-11-13	.070	1.0	1.10	22	--	--	--	--	--	--
	81-02-25	.040	3.3	3.30	21	--	--	--	--	--	--
	81-05-13	.130	2.2	2.30	4.1	--	--	--	--	--	--
	81-09-01	.110	.89	1.00	8.4	--	--	--	--	--	--
405212098293703	80-11-13	.090	.54	.63	4.9	--	--	--	--	--	--
	81-02-25	.040	.38	.42	1.1	--	--	--	--	--	--
	81-05-13	.140	1.6	1.70	1.8	--	--	--	--	--	--
	81-09-01	.110	.17	.28	.49	--	--	--	--	--	--
405001098315501	80-11-13	.080	1.3	1.40	23	--	--	--	--	--	--
	81-02-25	.030	.97	1.00	24	--	--	--	--	--	--
	81-05-14	.070	2.4	2.50	9.3	--	--	--	--	--	--
	81-09-02	<.090	--	.86	4.5	--	--	--	--	--	--
405027098330301	80-11-13	.070	1.8	1.90	69	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION	NUMBER	DATE OF SAMPLE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVFD (UG/L AS PB) (01049)	MANGA- NFSF, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVFD (UG/L AS HG) (71890)	SELF- NTUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS 7N) (01090)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)
GOSPER												
402713099530301	81-07-24	<10	--	<1	--	--	--	--	--	--	--	--
403220099561801	81-07-20	<10	--	2	--	--	--	--	--	--	--	--
403827099530201	81-07-24	<10	--	<1	--	--	--	--	--	--	--	--
HALL												
404557098352501	81-09-01	14	--	1200	--	--	--	--	--	--	--	--
404659098395601	81-02-27	--	--	--	--	--	--	--	--	--	--	--
	81-05-15	--	--	--	--	--	--	--	--	--	--	--
	81-09-03	--	--	--	--	--	--	--	--	--	--	--
404659098395602	81-02-27	--	--	--	--	--	--	--	--	--	--	--
	81-05-15	--	--	--	--	--	--	--	--	--	--	--
	81-09-03	--	--	--	--	--	--	--	--	--	--	--
404620098425601	80-11-14	--	--	--	--	--	--	--	--	--	--	--
	81-02-26	--	--	--	--	--	--	--	--	--	--	--
	81-05-15	--	--	--	--	--	--	--	--	--	--	--
	81-09-03	--	--	--	--	--	--	--	--	--	--	--
404643098435201	81-09-01	<10	--	87	--	--	--	--	--	--	--	--
404321098441801	81-09-01	<10	--	4	--	--	--	--	--	--	--	--
405201098281501	81-09-01	22	--	120	--	--	--	--	--	--	--	--
405125098271901	80-11-12	--	--	--	--	--	--	--	--	--	--	--
	81-02-24	--	--	--	--	--	--	--	--	--	--	--
	81-05-14	--	--	--	--	--	--	--	--	--	--	--
	81-09-02	--	--	--	--	--	--	--	--	--	--	--
404832098283301	81-09-01	23	--	4	--	--	--	--	--	--	--	--
404832098283302	81-09-01	14	--	6	--	--	--	--	--	--	--	--
404832098283303	81-09-01	19	--	2	--	--	--	--	--	--	--	--
405212098293701	80-11-13	--	--	--	--	--	--	--	--	--	--	--
	81-02-25	--	--	--	--	--	--	--	--	--	--	--
	81-05-13	--	--	--	--	--	--	--	--	--	--	--
405212098293702	80-11-13	--	--	--	--	--	--	--	--	--	--	--
	81-02-25	--	--	--	--	--	--	--	--	--	--	--
	81-05-13	--	--	--	--	--	--	--	--	--	--	--
	81-09-01	--	--	--	--	--	--	--	--	--	--	--
405212098293703	80-11-13	--	--	--	--	--	--	--	--	--	--	--
	81-02-25	--	--	--	--	--	--	--	--	--	--	--
	81-05-14	--	--	--	--	--	--	--	--	--	--	--
	81-09-02	--	--	--	--	--	--	--	--	--	--	--
405001098315501	80-11-13	--	--	--	--	--	--	--	--	--	--	--
	81-02-25	--	--	--	--	--	--	--	--	--	--	--
	81-05-14	--	--	--	--	--	--	--	--	--	--	--
405027098330301	80-11-13	--	--	--	--	--	--	--	--	--	--	--

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STATION	NUMBER	DATE OF SAMPLE	GRUSS	GRUSS	GRUSS	GRUSS	GRUSS	RADIUM	URANIUM	URANIUM	CARBON,
			ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	BETA, DIS- SOLVED (PCI/L AS CS-137) (03516)	BETA, DIS- SOLVED (PCI/L AS CS-137) (03516)	226, DIS- SOLVED (PCI/L AS CS-137) (03516)	NATURAL DIS- SOLVED (UG/L AS U) (22703)	DIS- SOLVED (UG/L AS U) (22703)	ORGANIC DIS- SOLVED (MG/L AS C) (00681)
GOSPER											
402713099530301	81-07-24	--	--	--	--	--	--	--	--	--	--
403220099561801	81-07-20	--	--	--	--	--	--	--	--	--	--
403827099530201	81-07-24	--	--	--	--	--	--	--	--	--	--
HALL											
404557098352501	81-09-01	--	--	--	--	--	--	--	--	--	--
404659098395601	81-02-27	--	--	--	--	--	--	--	--	--	5.3
	81-05-15	--	--	--	--	--	--	--	--	--	3.0
	81-09-03	--	--	--	--	--	--	--	--	--	2.5
404659098395602	81-02-27	--	--	--	--	--	--	--	--	--	2.3
	81-05-15	--	--	--	--	--	--	--	--	--	3.5
	81-09-03	--	--	--	--	--	--	--	--	--	.9
404620098425601	80-11-14	--	--	--	--	--	--	--	--	--	5.5
	81-02-26	--	--	--	--	--	--	--	--	--	6.1
	81-05-15	--	--	--	--	--	--	--	--	--	20
	81-09-03	--	--	--	--	--	--	--	--	--	1.7
404643098435201	81-09-01	--	--	--	--	--	--	--	--	--	--
404321098441801	81-09-01	--	--	--	--	--	--	--	--	--	--
405201098281501	81-09-01	--	--	--	--	--	--	--	--	--	--
405125098271901	80-11-12	--	--	--	--	--	--	--	--	--	3.3
	81-02-24	--	--	--	--	--	--	--	--	--	12
	81-05-14	--	--	--	--	--	--	--	--	--	10
	81-09-02	--	--	--	--	--	--	--	--	--	1.0
404832098283301	81-09-01	--	--	--	--	--	--	--	--	--	--
404832098283302	81-09-01	--	--	--	--	--	--	--	--	--	--
404832098283303	81-09-01	--	--	--	--	--	--	--	--	--	--
405212098293701	80-11-13	--	--	--	--	--	--	--	--	--	13
	81-02-25	--	--	--	--	--	--	--	--	--	7.5
	81-05-13	--	--	--	--	--	--	--	--	--	5.1
405212098293702	80-11-13	--	--	--	--	--	--	--	--	--	4.6
	81-02-25	--	--	--	--	--	--	--	--	--	8.9
	81-05-13	--	--	--	--	--	--	--	--	--	5.9
	81-09-01	--	--	--	--	--	--	--	--	--	3.1
405212098293703	80-11-13	--	--	--	--	--	--	--	--	--	5.4
	81-02-25	--	--	--	--	--	--	--	--	--	6.7
	81-05-13	--	--	--	--	--	--	--	--	--	9.1
	81-09-01	--	--	--	--	--	--	--	--	--	1.9
405001098315501	80-11-13	--	--	--	--	--	--	--	--	--	5.8
	81-02-25	--	--	--	--	--	--	--	--	--	5.1
	81-05-14	--	--	--	--	--	--	--	--	--	6.9
	81-09-02	--	--	--	--	--	--	--	--	--	1.1
405027098330301	80-11-13	--	--	--	--	--	--	--	--	--	5.5

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	LOCAL IDENT- IFIER	LAT- ITUDE	LONG- ITUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHQS) (00095)
HALL									
405027098330301	10N 11W16ADD 1	40 50 27	098 33 03	01	112SDGV	81-02-25	1330	37	1670
					112SDGV	81-05-14	1035	37	1800
					112SDGV	81-09-02	1415	37	1250
405027098330302	10N 11W16ADD 2	40 50 27	098 33 03	02	112SDGV	80-11-13	1120	50	830
					112SDGV	81-02-25	1345	50	840
					112SDGV	81-05-14	1055	50	920
					112SDGV	81-09-02	1425	50	843
405027098330303	10N 11W16ADD 3	40 50 27	098 33 03	03	112SDGV	80-11-13	1135	61	685
					112SDGV	81-02-21	1400	61	699
					112SDGV	81-05-14	1110	61	730
					112SDGV	81-09-02	1435	61	692
404925098355901	10N 11W19BD 1	40 49 25	098 35 59	01	112SDGV	81-09-01	1115	212	502
404850098293701	10N 11W30ABA 1	40 48 50	098 29 37	01	112SDGV	80-11-14	1040	62	734
					112SDGV	81-02-25	1505	62	710
					112SDGV	81-05-14	1140	62	775
					112SDGV	81-09-03	1145	62	786
404712098421301	10N 11W31DDD 1	40 47 12	098 42 13	01	112SDGV	80-11-14	1330	60	944
					112SDGV	81-02-27	0940	60	975
					112SDGV	81-05-15	1010	60	1020
					112SDGV	81-09-03	1025	60	997
405120098362901	10N 12W12AAD 1	40 51 20	098 36 29	01	112SDGV	80-11-14	1010	67	930
					112SDGV	81-02-25	1430	67	920
					112SDGV	81-05-13	1150	67	908
					112SDGV	81-09-02	1545	67	911
404817098391301	10N 12W27DRC 1	40 48 17	098 39 13	01	112SDGV	80-11-14	1115	36	860
					112SDGV	81-02-26	1320	36	1100
					112SDGV	81-05-13	1310	36	1140
					112SDGV	81-09-02	1300	36	942
404817098391302	10N 12W27DRC 2	40 48 17	098 39 13	02	112SDGV	80-11-14	1130	52	1000
					112SDGV	81-02-26	1335	52	1020
					112SDGV	81-05-13	1335	52	1020
					112SDGV	81-09-02	1320	52	975
404817098391303	10N 12W27DRC 3	40 48 17	098 39 13	03	112SDGV	80-11-14	1145	68	948
					112SDGV	81-02-26	1350	68	960
					112SDGV	81-05-13	1355	68	970
					112SDGV	81-09-02	1340	68	896
404850098395601	10N 12W28AAA 1	40 48 50	098 39 56	01	112SDGV	80-11-17	1100	63	995
					112SDGV	81-02-27	0855	63	1100
					112SDGV	81-05-14	1245	63	1130
					112SDGV	81-09-03	1130	63	1120

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)
HALL											
405027098330301	81-02-25	6.7	13.0	7.5	770	400	230	47	36	.6	19
	81-05-14	6.8	12.5	7.0	--	420	--	--	36	--	18
	81-09-02	6.9	14.0	8.6	520	240	157	30	32	.6	15
405027098330302	80-11-13	7.4	11.5	4.4	360	130	110	20	32	.7	11
	81-02-25	6.9	12.0	4.9	360	140	110	20	30	.7	12
	81-05-14	6.9	12.0	6.0	390	160	120	22	29	.6	12
405027098330303	81-09-02	7.0	13.5	5.3	350	120	110	19	27	.7	12
	80-11-13	7.4	11.5	1.0	300	81	94	16	22	.6	10
	81-02-21	7.0	12.0	1.3	310	86	96	16	22	.5	11
	81-05-14	6.9	12.0	1.9	310	95	98	17	22	.5	11
404925098355901 404850098293701	81-09-02	7.2	12.5	1.1	300	68	93	16	21	.6	11
	81-09-01	7.6	13.5	--	210	.00	62	14	24	.8	8.7
	80-11-14	7.4	12.0	6.9	300	78	93	16	25	.6	12
	81-02-25	7.0	12.0	6.8	310	88	97	16	27	.7	12
404712098421301	81-05-14	7.0	12.5	6.8	320	90	100	17	27	.7	12
	81-09-03	7.5	13.0	7.3	330	95	106	17	27	.7	12
	80-11-14	7.4	11.0	.6	390	150	120	23	32	.7	15
	81-02-27	7.0	11.5	.8	440	190	140	23	35	.7	14
	81-05-15	7.1	12.0	.5	450	190	140	24	34	.7	14
405120098362901	81-09-03	7.1	12.0	.7	460	200	143	24	32	.7	15
	80-11-14	7.2	11.5	8.0	380	110	120	20	37	.8	14
	81-02-25	6.8	12.0	8.4	380	110	120	20	39	.9	13
	81-05-13	7.3	12.0	6.5	380	100	120	20	34	.8	13
404817098391301	81-09-02	7.0	13.0	8.0	380	110	120	19	35	.8	13
	80-11-14	7.3	11.5	5.6	350	110	110	18	31	.7	18
	81-02-26	7.0	11.5	9.5	440	200	140	23	33	.7	20
	81-05-13	7.3	12.0	6.8	450	190	140	25	38	.8	20
404817098391302	81-09-02	7.2	13.0	8.9	390	120	122	21	31	.7	18
	80-11-14	7.3	12.0	6.5	420	130	130	24	43	.9	14
	81-02-26	7.0	11.5	6.5	420	--	130	24	45	1.0	14
	81-05-13	7.7	11.5	5.3	420	110	130	24	44	.9	14
404817098391303	81-09-02	7.2	13.0	6.9	410	130	128	23	42	.9	14
	80-11-14	7.3	12.0	4.3	390	84	120	23	39	.9	13
	81-02-26	7.0	11.5	4.4	420	120	130	22	40	.9	12
	81-05-13	7.2	11.5	4.4	390	74	120	23	43	.9	13
404850098395601	81-09-02	7.3	13.5	4.3	390	96	120	21	39	.9	12
	80-11-17	7.0	11.0	8.3	320	75	95	19	72	1.8	18
	81-02-27	6.7	12.0	5.5	330	98	100	19	83	2.0	18
	81-05-14	7.0	12.0	--	390	150	120	21	77	1.7	18
	81-09-03	7.2	12.5	--	390	150	123	21	73	1.7	17

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	ALKA-LINITY LAB (MG/L AS CAC03) (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 SI02) (00955)	SOLIDS, RESIDUE AT 180 DEG. C SOLVFD (MG/L) (70300)	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)
HALL											
405027098330301	81-02-25	350	160	100	--	--	--	--	--	60	--
	81-05-14	390	110	120	--	--	--	--	--	2.4	--
	81-09-02	280	100	57	.2	--	--	--	--	3.6	--
405027098330302	80-11-13	230	78	30	--	--	--	--	--	22	--
	81-02-25	270	77	28	--	--	--	--	--	26	--
	81-05-14	230	78	34	--	--	--	--	--	2.5	--
405027098330303	81-09-02	230	79	26	.1	--	--	--	--	3.6	--
	80-11-13	220	64	21	--	--	--	--	--	12	--
	81-02-21	220	65	21	--	--	--	--	--	11	--
	81-05-14	220	66	22	--	--	--	--	--	2.5	--
404925098355901 404850098293701	81-09-02	230	66	18	.1	--	--	--	--	3.5	--
	81-09-01	250	11	7.8	.4	59	--	337	--	--	<.10
	80-11-14	220	76	11	--	--	--	--	--	21	--
	81-02-25	220	77	10	--	--	--	--	--	21	--
404712098421301	81-05-14	230	79	10	--	--	--	--	--	2.4	--
	81-09-03	240	85	18	.2	--	--	--	--	23	--
	80-11-14	240	200	31	--	--	--	--	--	6.1	--
	81-02-27	250	230	32	--	--	--	--	--	5.3	--
	81-05-15	260	220	30	--	--	--	--	--	7.5	--
405120098362901	81-09-03	260	220	30	.2	--	--	--	--	7.0	--
	80-11-14	270	130	22	--	--	--	--	--	24	--
	81-02-25	270	130	23	--	--	--	--	--	23	--
	81-05-13	280	94	25	--	--	--	--	--	--	--
	81-09-02	270	100	19	.1	--	--	--	--	3.6	--
404817098391301	80-11-14	240	110	19	--	--	--	--	--	25	--
	81-02-26	240	99	17	--	--	--	--	--	50	--
	81-05-13	260	240	19	--	--	--	--	--	1.8	--
	81-09-02	270	95	16	.3	--	--	--	--	3.6	--
	80-11-14	290	150	16	--	--	--	--	--	20	--
404817098391302	81-02-26	290	180	15	--	--	--	--	--	21	--
	81-05-13	310	150	15	--	--	--	--	--	1.8	--
	81-09-02	280	140	13	.2	--	--	--	--	3.5	--
	80-11-14	310	150	15	--	--	--	--	--	17	--
	81-02-26	300	150	14	--	--	--	--	--	17	--
404817098391303	81-05-13	320	130	14	--	--	--	--	--	5.2	--
	81-09-02	290	120	21	.2	--	--	--	--	15	--
	80-11-17	240	120	76	--	--	--	--	--	5.4	--
	81-02-27	230	160	110	--	--	--	--	--	8.6	--
	81-05-14	240	140	120	--	--	--	--	--	--	--
404850098395601	81-09-03	240	130	140	.1	--	716	--	--	8.8	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION	NUMBER	DATE OF SAMPLE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
HALL												
405027098330301	81-02-25	.060	.92	.98	61	--	--	--	--	--	--	--
	81-05-14	.080	1.5	1.60	4.0	--	--	--	--	--	--	--
	81-09-02	<.090	--	1.20	4.8	--	--	--	--	--	--	--
405027098330302	80-11-13	.090	1.8	1.90	24	--	--	--	--	--	--	--
	81-02-25	.030	.60	.63	27	--	--	--	--	--	--	--
	81-05-14	.070	1.9	2.00	4.5	--	--	--	--	--	--	--
405027098330303	81-09-02	<.090	--	1.20	4.8	--	--	--	--	--	--	--
	80-11-13	.080	1.0	1.10	13	--	--	--	--	--	--	--
	81-02-21	.030	.96	.99	12	--	--	--	--	--	--	--
404925098355901	81-05-14	.060	1.6	1.70	4.2	--	--	--	--	--	--	--
	81-09-02	<.090	--	.66	4.2	--	--	--	--	--	--	--
	81-09-01	--	--	--	--	--	--	60	--	--	--	--
404850098293701	80-11-14	.050	.94	.99	22	--	--	--	--	--	--	--
	81-02-25	.010	.69	.70	22	--	--	--	--	--	--	--
	81-05-14	.040	1.6	1.60	4.0	--	--	--	--	--	--	--
404712098421301	81-09-03	<.090	--	1.60	25	--	--	--	--	--	--	--
	80-11-14	.020	.62	.64	6.7	--	--	--	--	--	--	--
	81-02-27	.010	1.5	1.50	6.8	--	--	--	--	--	--	--
405120098362901	81-05-15	.060	1.5	1.60	9.1	--	--	--	--	--	--	--
	81-09-03	<.090	--	1.40	8.4	--	--	--	--	--	--	--
	80-11-14	.040	1.2	1.20	25	--	--	--	--	--	--	--
404817098391301	81-02-25	.020	.74	.76	24	--	--	--	--	--	--	--
	81-05-13	.020	1.6	1.60	--	--	--	--	--	--	--	--
	81-09-02	<.090	--	1.10	4.7	--	--	--	--	--	--	--
404817098391302	80-11-14	.060	1.2	1.30	26	--	--	--	--	--	--	--
	81-02-26	.060	.85	.91	51	--	--	--	--	--	--	--
	81-05-13	.130	1.7	1.80	3.6	--	--	--	--	--	--	--
404817098391303	81-09-02	<.090	--	.88	4.5	--	--	--	--	--	--	--
	80-11-14	.060	.62	.68	21	--	--	--	--	--	--	--
	81-02-26	.050	2.4	2.40	23	--	--	--	--	--	--	--
404817098391303	81-05-13	.160	2.2	2.40	4.2	--	--	--	--	--	--	--
	81-09-02	<.090	--	1.50	5.0	--	--	--	--	--	--	--
	80-11-14	.070	1.3	1.40	18	--	--	--	--	--	--	--
404850098395601	81-02-26	.040	.96	1.00	18	--	--	--	--	--	--	--
	81-05-13	.130	.58	.71	5.9	--	--	--	--	--	--	--
	81-09-02	<.090	--	.76	16	--	--	--	--	--	--	--
404850098395601	80-11-17	.070	1.2	1.30	6.7	--	--	--	--	--	--	--
	81-02-27	.030	.88	.91	9.5	--	--	--	--	--	--	--
	81-05-14	.090	1.6	1.70	--	--	--	--	--	--	--	--
404850098395601	81-09-03	.120	1.2	1.30	10	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

[illegible]

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STATION	NUMBER	DATE OF SAMPLE	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 SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
HALL											
405027098330301	81-02-25	--	--	--	--	--	--	--	--	--	30
	81-05-14	--	--	--	--	--	--	--	--	--	9.4
	81-09-02	--	--	--	--	--	--	--	--	--	2.0
405027098330302	80-11-13	--	--	--	--	--	--	--	--	--	4.8
	81-02-25	--	--	--	--	--	--	--	--	--	12
	81-05-14	--	--	--	--	--	--	--	--	--	5.2
	81-09-02	--	--	--	--	--	--	--	--	--	1.5
405027098330303	80-11-13	--	--	--	--	--	--	--	--	--	6.2
	81-02-21	--	--	--	--	--	--	--	--	--	11
	81-05-14	--	--	--	--	--	--	--	--	--	5.4
	81-09-02	--	--	--	--	--	--	--	--	--	1.1
404925098355901	81-09-01	--	--	--	--	--	--	--	--	--	--
404850098293701	80-11-14	--	--	--	--	--	--	--	--	--	37
	81-02-25	--	--	--	--	--	--	--	--	--	9.7
	81-05-14	--	--	--	--	--	--	--	--	--	8.3
	81-09-03	--	--	--	--	--	--	--	--	--	1.2
404712098421301	80-11-14	--	--	--	--	--	--	--	--	--	23
	81-02-27	--	--	--	--	--	--	--	--	--	18
	81-05-15	--	--	--	--	--	--	--	--	--	2.9
	81-09-03	--	--	--	--	--	--	--	--	--	1.7
405120098362901	80-11-14	--	--	--	--	--	--	--	--	--	8.8
	81-02-25	--	--	--	--	--	--	--	--	--	19
	81-05-13	--	--	--	--	--	--	--	--	--	3.9
	81-09-02	--	--	--	--	--	--	--	--	--	1.7
404817098391301	80-11-14	--	--	--	--	--	--	--	--	--	19
	81-02-26	--	--	--	--	--	--	--	--	--	4.9
	81-05-13	--	--	--	--	--	--	--	--	--	8.5
	81-09-02	--	--	--	--	--	--	--	--	--	5.3
404817098391302	80-11-14	--	--	--	--	--	--	--	--	--	8.1
	81-02-26	--	--	--	--	--	--	--	--	--	7.2
	81-05-13	--	--	--	--	--	--	--	--	--	18
	81-09-02	--	--	--	--	--	--	--	--	--	1.4
404817098391303	80-11-14	--	--	--	--	--	--	--	--	--	15
	81-02-26	--	--	--	--	--	--	--	--	--	14
	81-05-13	--	--	--	--	--	--	--	--	--	3.2
	81-09-02	--	--	--	--	--	--	--	--	--	1.4
404850098395601	80-11-17	--	--	--	--	--	--	--	--	--	21
	81-02-27	--	--	--	--	--	--	--	--	--	4.8
	81-05-14	--	--	--	--	--	--	--	--	--	9.6
	81-09-03	--	--	--	--	--	--	--	--	--	2.2

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	LOCAL IDENT- IFIER	LAT- ITUDE	LONG- ITUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHQS) (00095)
HALL									
405530098255702	11N 10W15BC 2	40 55 30	098 25 57	02	112SDGV	81-09-02	0845	100	409
405408098262801	11N 10W210CD 1	40 54 08	098 26 28	01	112SDGV	80-11-12	1455	60	404
					112SDGV	81-02-24	1455	60	400
					112SDGV	81-05-13	1450	60	410
					112SDGV	81-09-03	1220	60	387
405329098362901	11N 10W29DRD 1	40 53 29	098 36 29	01	112SDGV	80-11-10	1340	26	400
					112SDGV	81-02-24	1410	26	428
					112SDGV	81-05-12	1345	26	448
405329098362902	11N 10W29DRD 2	40 53 29	098 36 29	02	112SDGV	81-09-01	1355	26	452
					112SDGV	80-11-10	1355	41	404
					112SDGV	81-02-24	1420	41	408
					112SDGV	81-05-12	1400	41	415
405329098362903	11N 10W29DRD 3	40 53 29	098 36 29	03	112SDGV	81-09-01	1410	41	435
					112SDGV	80-11-10	1310	57	386
					112SDGV	81-02-24	1430	57	392
					112SDGV	81-05-12	1315	57	393
405250098285001	11N 10W32BCC 1	40 52 50	098 28 50	01	112SDGV	81-09-01	1420	57	398
					112SDGV	80-11-10	1530	60	990
					112SDGV	81-02-25	0845	60	983
					112SDGV	81-05-13	0900	60	1030
405254098314202	11N 11W35BC 2	40 52 54	098 31 42	02	112SDGV	81-09-02	1020	60	1030
405225098314601	11N 11W35CCC 1	40 52 25	098 31 46	01	112SDGV	81-09-02	0945	61	701
					112SDGV	80-11-10	0915	64	675
					112SDGV	81-02-25	0920	64	705
					112SDGV	81-05-13	1115	64	732
					112SDGV	81-09-02	1520	64	673
405452098363401	11N 12W24AA 1	40 54 52	098 36 34	01	112SDGV	81-09-02	1000	150	530
405255098394301	11N 12W34BC 1	40 52 55	098 39 43	01	112SDGV	81-09-01	1645	140	604
405820098325001	12N 11W34BR 1	40 58 20	098 32 50	01	112SDGV	81-08-31	1615	50	1290
410005098365102	12N 12W24AB 2	41 00 05	098 36 51	02	112SDGV	81-08-31	1400	125	561
405821098390801	12N 12W34AB 1	40 58 21	098 39 08	01	112SDGV	81-08-31	1700	204	551
HARLAN									
400332099274301	1N 19W15BRBC1	40 03 32	099 27 43	01	112SDGV	81-07-22	0820	156	595
400037099244901	1N 19W36ACCC1	40 00 37	099 24 49	01	112SDGV	81-07-22	0850	75	985
401306099185901	3N 18W23ARAC1	40 13 06	099 18 59	01	112SDGV	81-07-23	1320	279	570
401813099272601	4N 19W22BRDD1	40 18 13	099 27 26	01	112SDGV	81-07-23	1405	392	520
HOWARD									
410711098330701	13N 11W11BA 1	41 07 11	098 33 07	01	1210GLL	80-11-06	1145	144	600
					1210GLL	81-06-04	1230	144	620
					1210GLL	81-07-30	1200	144	599
410443098425501	13N 12W20DC 1	41 04 43	098 42 55	01	1210GLL	80-11-05	1130	268	563
					1210GLL	81-06-03	1100	268	497

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	PH (UNITS) (000400)	TEMPER- ATURE (DEG C) (00010)	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)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
HALL											
405530098255702	81-09-02	7.5	15.5	--	180	17	56	8.9	15	.5	8.6
405408098262801	80-11-12	7.5	13.0	3.9	160	5.0	53	7.9	17	.6	9.1
	81-02-24	7.0	12.0	4.6	160	8.0	51	7.5	19	.7	7.8
	81-05-13	7.2	12.0	6.6	150	.00	49	7.6	21	.7	8.7
	81-09-03	7.8	12.5	5.6	140	2.0	46	6.7	20	.8	8.0
405329098362901	80-11-10	7.2	13.0	.8	160	5.0	49	8.0	17	.6	12
	81-02-24	6.9	12.5	.9	170	25	56	8.5	16	.5	11
	81-05-12	6.8	12.0	1.5	180	2.0	58	9.1	16	.5	11
	81-09-01	7.2	13.0	8.4	170	.00	52	8.9	24	.8	12
405329098362902	80-11-10	7.4	12.5	.5	160	25	53	7.9	14	.5	10
	81-02-24	6.7	12.5	.5	170	38	54	8.1	15	.5	9.1
	81-05-12	6.8	12.5	.7	170	16	53	8.2	14	.5	9.7
	81-09-01	7.4	12.5	6.3	180	8.0	57	8.7	17	.6	11
405329098362903	80-11-10	7.6	12.5	.1	170	35	54	7.3	10	.3	9.2
	81-02-24	6.9	12.5	.1	170	42	56	7.8	12	.4	8.6
	81-05-12	7.1	13.0	.6	160	24	53	7.7	11	.4	9.1
	81-09-01	7.6	12.5	.1	170	29	55	7.6	10	.3	9.0
405250098285001	80-11-10	7.1	12.5	.8	380	58	120	19	55	1.2	21
	81-02-25	6.9	12.0	1.4	400	83	130	19	60	1.3	18
	81-05-13	7.1	12.0	1.2	410	140	130	20	55	1.2	23
	81-09-02	7.4	12.5	.2	420	100	138	19	52	1.1	26
405254098314202	81-09-02	7.3	13.5	--	320	100	102	16	19	.5	12
405225098314601	80-11-14	7.1	10.5	4.6	270	45	83	14	29	.8	12
	81-02-25	6.9	11.0	4.6	290	62	92	15	33	.8	12
	81-05-13	7.2	11.5	3.5	290	.00	89	16	35	.9	13
	81-09-02	7.0	13.5	4.7	270	35	83	14	26	.7	13
405452098363401	81-09-02	7.4	13.0	--	260	.00	79	15	11	.3	6.5
405255098394301	81-09-01	7.4	12.5	--	300	47	94	15	12	.3	8.1
405820098325001	81-08-31	7.3	17.5	--	650	250	212	29	39	.7	13
410005098365102	81-08-31	7.4	13.5	--	250	4.0	82	12	19	.5	10
405821098390801	81-08-31	7.3	15.5	--	260	.00	86	10	9.6	.3	4.9
HARLAN											
400332099274301	81-07-22	7.4	17.0	--	260	.00	74	19	26	.7	9.1
400037099244901	81-07-22	7.3	15.0	--	450	140	142	22	39	.8	12
401306099185901	81-07-23	7.4	15.5	--	260	19	79	15	12	.3	10
401813099272601	81-07-23	7.3	15.5	--	240	14	73	15	9.2	.3	10
HOWARD											
410711098330701	80-11-06	7.1	13.5	--	290	.00	88	16	17	.4	7.6
	81-06-04	7.3	14.5	--	290	.00	88	16	16	.4	7.1
	81-07-30	7.3	15.5	--	280	.00	86	16	15	.4	7.4
410443098425501	80-11-05	7.1	13.5	--	260	43	89	10	11	.3	7.2
	81-06-03	7.6	15.0	--	230	3.0	77	9.8	9.9	.3	5.6

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION	NUMBFR	DATE OF SAMPLE	ALKA- LITY LAB (MG/L AS CAC03) (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, 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)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
HALL												
405530098255702		81-09-02	160	33	8.0	.3	36	--	277	--	--	3.4
405408098262801		80-11-12	160	41	4.1	--	--	--	--	--	2.2	--
		81-02-24	150	41	3.7	--	--	--	--	--	2.0	--
		81-05-13	170	37	3.5	--	--	--	--	--	3.4	--
		81-09-03	140	39	4.5	.2	--	--	--	--	2.9	--
405329098362901		80-11-10	150	36	5.2	--	--	--	--	--	1.1	--
		81-02-24	150	49	6.7	--	--	--	--	--	2.3	--
		81-05-12	180	50	6.4	--	--	--	--	--	1.7	--
		81-09-01	170	26	5.1	--	--	--	--	--	2.6	--
405329098362902		80-11-10	140	52	6.7	--	--	--	--	--	1.2	--
		81-02-24	130	58	6.6	--	--	--	--	--	2.1	--
		81-05-12	150	54	6.5	--	--	--	--	--	1.5	--
		81-09-01	170	46	10	--	--	--	--	--	1.4	--
405329098362903		80-11-10	130	54	7.1	--	--	--	--	--	.00	--
		81-02-24	130	59	7.2	--	--	--	--	--	.75	--
		81-05-12	140	56	7.1	--	--	--	--	--	.00	--
		81-09-01	140	59	7.3	--	--	--	--	--	.09	--
405250098285001		80-11-10	320	150	24	--	--	--	--	--	3.0	--
		81-02-25	320	180	22	--	--	--	--	--	.77	--
		81-05-13	270	200	23	--	--	--	--	--	6.0	--
		81-09-02	320	210	22	.1	--	--	--	--	3.2	--
405254098314202		81-09-02	220	110	10	.3	24	--	458	--	--	7.3
405225098314601		80-11-14	220	51	11	--	--	--	--	--	18	--
		81-02-25	230	60	12	--	--	--	--	--	21	--
		81-05-13	310	56	10	--	--	--	--	--	17	--
		81-09-02	230	53	11	.1	--	--	--	--	14	--
405452098363401		81-09-02	260	29	3.6	.2	54	--	355	--	--	<.10
405255098394301		81-09-01	250	58	8.8	.2	59	--	414	--	--	2.0
405820098325001		81-08-31	400	330	28	.2	38	--	931	--	--	.11
410005098365102		81-08-31	250	27	10	.3	50	--	362	--	--	.12
405821098390801		81-08-31	270	<5.0	9.0	.2	51	--	289	--	--	2.4
HARLAN												
400332099274301		81-07-22	280	15	12	.4	59	--	392	--	--	2.0
400037099244901		81-07-22	310	160	52	.3	59	--	675	--	--	.18
401306099185901		81-07-23	240	21	9.9	.2	59	--	373	--	--	5.0
401813099272601		81-07-23	230	19	4.1	.2	61	--	348	--	--	4.1
HOWARD												
410711098330701		80-11-06	290	25	12	.3	60	--	402	.55	--	.44
		81-06-04	290	24	10	.2	59	--	398	--	--	.76
		81-07-30	290	15	13	.5	60	--	389	--	--	.48
410443098425501		80-11-05	220	39	11	.3	49	--	353	.48	--	1.0
		81-06-03	230	19	4.4	.2	59	--	329	--	--	1.3

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STATION	NUMBER	DATE OF SAMPLE	NITRO- GEN, AMMONIA	NITRO- GEN, ORGANIC	NITRO- GEN, AM- MONIA + ORGANIC	NITRO- GEN, TOTAL	ARSENIC DIS- SOLVED	BARIUM, DIS- SOLVED	BORON, DIS- SOLVED	CADMIUM DIS- SOLVED	CHRO- MIUM, DIS- SOLVED	COPPER, DIS- SOLVED
			TOTAL (MG/L AS N) (00610)	TOTAL (MG/L AS N) (00605)	TOTAL (MG/L AS N) (00625)	TOTAL (MG/L AS N) (00600)	(UG/L AS AS) (01000)	(UG/L AS BA) (01005)	(UG/L AS B) (01020)	(UG/L AS CD) (01025)	(UG/L AS CR) (01030)	(UG/L AS CU) (01040)
HALL												
405530098255702		81-09-02	--	--	--	--	--	--	120	--	--	--
405408098262801		80-11-12	.070	.38	.45	2.7	--	--	--	--	--	--
		81-02-24	.030	.83	.86	2.9	--	--	--	--	--	--
		81-05-13	.120	.52	.64	4.0	--	--	--	--	--	--
		81-09-03	<.090	--	.90	3.8	--	--	--	--	--	--
405329098362901		80-11-10	.040	.63	.67	1.8	--	--	--	--	--	--
		81-02-24	.030	1.1	1.10	3.4	--	--	--	--	--	--
		81-05-12	.140	.37	.51	2.2	--	--	--	--	--	--
		81-09-01	.210	.54	.75	3.4	--	--	--	--	--	--
405329098362902		80-11-10	.040	.44	.48	1.7	--	--	--	--	--	--
		81-02-24	.030	.65	.68	2.8	--	--	--	--	--	--
		81-05-12	.130	.73	.86	2.4	--	--	--	--	--	--
		81-09-01	<.090	--	.41	1.8	--	--	--	--	--	--
405329098362903		80-11-10	.070	.23	.30	1.30	--	--	--	--	--	--
		81-02-24	.030	.48	.51	1.3	--	--	--	--	--	--
		81-05-12	.140	.23	.37	.37	--	--	--	--	--	--
		81-09-01	.100	.15	.25	.34	--	--	--	--	--	--
405250098285001		80-11-10	.090	.86	.95	4.0	--	--	--	--	--	--
		81-02-25	.040	.79	.83	1.6	--	--	--	--	--	--
		81-05-13	.090	1.3	1.40	7.4	--	--	--	--	--	--
405254098314202		81-09-02	<.090	--	1.00	4.2	--	--	--	--	--	--
405225098314601		81-09-02	--	--	--	--	--	--	30	--	--	--
		80-11-14	.060	1.0	1.10	19	--	--	--	--	--	--
		81-02-25	.030	.85	.88	22	--	--	--	--	--	--
		81-05-13	.070	1.4	1.50	19	--	--	--	--	--	--
		81-09-02	<.090	--	1.20	15	--	--	--	--	--	--
405452098363401		81-09-02	--	--	--	--	--	--	50	--	--	--
405255098394301		81-09-01	--	--	--	--	--	--	--	--	--	--
405820098325001		81-08-31	--	--	--	--	--	--	70	--	--	--
410005098365102		81-08-31	--	--	--	--	--	--	50	--	--	--
405821098390801		81-08-31	--	--	--	--	--	--	50	--	--	--
HARLAN												
400332099274301		81-07-22	--	--	--	--	--	--	80	--	--	--
400037099244901		81-07-22	--	--	--	--	--	--	90	--	--	--
401306099185901		81-07-23	--	--	--	--	--	--	50	--	--	--
401813099272601		81-07-23	--	--	--	--	--	--	50	--	--	--
HOWARD												
410711098330701		80-11-06	--	--	--	--	--	--	--	--	--	--
		81-06-04	--	--	--	--	--	--	--	--	--	--
		81-07-30	--	--	--	--	--	--	--	--	--	--
410443098425501		80-11-05	--	--	--	--	--	--	--	--	--	--
		81-06-03	--	--	--	--	--	--	--	--	--	--

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STATION	NUMBER	DATE OF SAMPLE	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCT/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCT/L AS YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- RADON SOLVED, (UG/L METHOD (PCI/L) (09511)	UPANIUM 226, NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L) (80020)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
HALL											
405530098255702	81-09-02	--	--	--	--	--	--	--	--	--	--
405408098262801	80-11-12	--	--	--	--	--	--	--	--	--	3.6
	81-02-24	--	--	--	--	--	--	--	--	--	4.3
	81-05-13	--	--	--	--	--	--	--	--	--	6.9
	81-09-03	--	--	--	--	--	--	--	--	--	.9
405329098362901	80-11-10	--	--	--	--	--	--	--	--	--	4.0
	81-02-24	--	--	--	--	--	--	--	--	--	10
	81-05-12	--	--	--	--	--	--	--	--	--	3.8
	81-09-01	--	--	--	--	--	--	--	--	--	1.6
405329098362902	80-11-10	--	--	--	--	--	--	--	--	--	1.5
	81-02-24	--	--	--	--	--	--	--	--	--	8.6
	81-05-12	--	--	--	--	--	--	--	--	--	2.1
	81-09-01	--	--	--	--	--	--	--	--	--	1.3
405329098362903	80-11-10	--	--	--	--	--	--	--	--	--	4.1
	81-02-24	--	--	--	--	--	--	--	--	--	7.3
	81-05-12	--	--	--	--	--	--	--	--	--	2.1
	81-09-01	--	--	--	--	--	--	--	--	--	1.2
405250098285001	80-11-10	--	--	--	--	--	--	--	--	--	21
	81-02-25	--	--	--	--	--	--	--	--	--	12
	81-05-13	--	--	--	--	--	--	--	--	--	7.4
	81-09-02	--	--	--	--	--	--	--	--	--	2.0
405250098314202	81-09-02	--	--	--	--	--	--	--	--	--	--
405225098314601	80-11-14	--	--	--	--	--	--	--	--	--	41
	81-02-25	--	--	--	--	--	--	--	--	--	18
	81-05-13	--	--	--	--	--	--	--	--	--	5.7
	81-09-02	--	--	--	--	--	--	--	--	--	1.8
405452098363401	81-09-02	--	--	--	--	--	--	--	--	--	--
405255098394301	81-09-01	--	--	--	--	--	--	--	--	--	--
405820098325001	81-08-31	--	--	--	--	--	--	--	--	--	--
410005098365102	81-08-31	--	--	--	--	--	--	--	--	--	--
405821098390801	81-08-31	--	--	--	--	--	--	--	--	--	--
HARLAN											
400332099274301	81-07-22	--	--	--	--	--	--	--	--	--	--
400037099244901	81-07-22	--	--	--	--	--	--	--	--	--	--
401306099185901	81-07-23	--	--	--	--	--	--	--	--	--	--
401813099272601	81-07-23	--	--	--	--	--	--	--	--	--	--
HOWARD											
410711098330701	80-11-06	--	--	--	--	--	--	--	--	--	--
	81-06-04	--	--	--	--	--	--	--	--	--	--
	81-07-30	--	--	--	--	--	--	--	--	--	--
410443098425501	80-11-05	--	--	--	--	--	--	--	--	--	--
	81-06-03	--	--	--	--	--	--	--	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	LOCAL IDENT- IFIER	LAT- I- TUDF	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)
HOWARD									
410443098425501	13N 12W20DC 1	41 04 43	098 42 55	01	1210GLL	81-07-29	1300	268	531
411303098373901	14N 11W 6BAC 1	41 13 03	098 37 39	01	1210GLL	81-06-05	0900	150	510
					1210GLL	81-07-31	0845	150	540
411259098374001	14N 11W 6BC 1	41 12 59	098 37 40	01	1210GLL	81-06-05	0915	255	514
					1210GLL	81-07-31	0900	255	535
411705098341701	15N 11W10CBA 1	41 17 05	098 34 17	01	1210GLL	80-11-06	0845	150	598
					1210GLL	81-06-04	0800	150	612
					1210GLL	81-07-30	0945	150	585
JEFFERSON									
400422097195901	1N 1E RAA 1	40 04 22	097 19 59	01	112SDGV	81-06-25	1345	--	566
400223097011901	1N 4E19BD 1	40 02 23	097 01 19	01	211DKOT	81-06-25	1545	--	346
400751097122001	2N 2F21AB 1	40 07 51	097 12 20	01	112SDGV	81-06-25	1445	--	448
KEARNFY									
403055098570001	6N 14W 6CB 1	40 30 55	098 57 00	01	112SDGV	81-06-23	1645	171	779
403419099003001	7N 15W15CCBR1	40 34 19	099 00 30	01	112SDGV	81-07-23	0825	156	450
403655098521401	8N 14W35CD 1	40 36 55	098 52 14	01	112SDGV	81-07-23	0745	119	170
403745099013601	8N 15W28CCBR1	40 37 45	099 01 36	01	112SDGV	81-07-23	0900	70	260
KNOX									
424633097545201	32N 5W 4CBCD1	42 46 33	097 54 52	01	211DKOT	81-08-26	--	--	1560
LANCASTER									
404349096433801	9N 6E22DRCD1	40 43 49	096 43 38	01	211DKOT	81-08-18	1615	128	690
MADISON									
414518097313401	21N 2W34AA 1	41 45 18	097 31 34	01	112SDGV	81-07-07	0930	108	721
414901097395801	21N 3W 4DCCA1	41 49 01	097 39 58	01	112SDGV	81-07-07	1000	160	589
415125097285702	22N 1W30BR 2	41 51 25	097 28 57	02	112SDGV	81-07-07	0900	166	577
420010097314501	23N 2W 3ABAA1	42 00 10	097 31 45	01	112SDGV	81-07-06	1710	73	303
420205097322601	24N 2W22CC 1	42 02 05	097 32 26	01	111ALVM	81-07-06	1630	40	663
420046097442201	24N 4W35AD 1	42 00 46	097 44 22	01	112SDGV	81-07-07	1115	105	407
MERRICK									
410316098085601	13N 7W32BCD 1	41 03 16	098 08 56	01	112SDGV	80-11-12	1050	15	920
					112SDGV	81-02-24	1135	15	995
					112SDGV	81-05-12	1110	15	1020
					112SDGV	81-09-01	1145	15	1010
410316098085602	13N 7W32BCD 2	41 03 16	098 08 56	02	112SDGV	80-11-12	1115	22	922
					112SDGV	81-02-24	1125	22	920
					112SDGV	81-05-12	1130	22	916
					112SDGV	81-09-01	1200	22	1000
410316098085603	13N 7W32BCD 3	41 03 16	098 08 56	03	112SDGV	80-11-12	1125	42	782
					112SDGV	81-02-24	1145	42	788
					112SDGV	81-05-12	1150	42	915
					112SDGV	81-05-12	1215	42	805
NUCKOLLS									
400843097522601	2N 5W15BRDR1	40 08 43	097 52 26	01	112SDGV	81-06-25	1030	180	609
401458098035801	3N 7W 1CC 1	40 14 58	098 03 58	01	211NRRP	81-06-25	1150	163	576
401735098155201	4N 8W19DC 1	40 17 35	098 15 52	01	1210GLL	81-06-24	1430	205	579
PHELPS									
402524099201601	5N 18W 2CCD 1	40 25 24	099 20 16	01	1210GLL	81-07-23	1735	185	990
402449099360601	5N 20W 9CRDD1	40 24 49	099 36 06	01	112SDGV	81-07-23	1515	124	550

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	PH (UNITS) (00400)	TEMPERATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)
HOWARD											
410443098425501	81-07-29	7.6	17.5	--	260	41	88	10	11	.3	7.3
411303098373901	81-06-05	7.3	14.5	--	280	.00	91	12	9.5	.2	6.2
	81-07-31	7.3	14.5	--	270	.00	87	12	8.9	.2	6.6
411259098374001	81-06-05	7.2	15.0	--	270	.00	90	12	9.6	.3	6.2
	81-07-31	7.3	18.0	--	270	.00	88	12	8.9	.2	6.6
411705098341701	80-11-06	6.9	12.5	--	290	2.0	94	14	14	.4	7.2
	81-06-04	7.2	13.0	--	300	15	95	14	14	.4	7.1
	81-07-30	7.3	15.5	--	290	7.0	92	14	12	.3	7.6
JEFFERSON											
400422097195901	81-06-25	7.3	13.5	--	260	5.0	91	9.1	29	.8	2.3
400223097011901	81-06-25	6.8	15.5	--	130	27	38	7.3	28	1.1	2.3
400751097122001	81-06-25	7.2	16.5	--	210	36	69	8.2	19	.6	3.1
KEARNEY											
403055098570001	81-06-23	7.3	13.5	--	300	83	100	13	36	.9	13
403419099003001	81-07-23	7.3	13.0	--	200	.00	66	8.6	14	.4	9.0
403655098521401	81-07-23	6.9	14.0	--	70	10	24	2.4	3.4	.2	3.1
403745099013601	81-07-23	7.0	13.0	--	100	20	34	4.5	5.3	.2	4.9
KNOX											
424633097545201	81-08-26	7.2	19.0	--	750	620	230	42	58	1.0	17
LANCASTER											
404349096433801	81-08-18	7.3	13.0	--	280	55	86	17	55	1.5	5.9
MADISON											
414518097313401	81-07-07	7.1	13.5	--	330	32	100	20	23	.6	7.8
414901097395801	81-07-07	7.2	13.5	--	290	10	93	14	11	.3	4.2
415125097285702	81-07-07	7.2	13.5	--	280	4.0	89	15	10	.3	6.0
420010097314501	81-07-06	7.3	14.0	--	130	.00	40	6.3	9.1	.4	4.1
420205097322601	81-07-06	7.3	14.5	--	300	5.0	89	20	22	.5	11
420046097442201	81-07-07	7.2	14.0	--	190	.00	59	9.9	8.3	.3	7.5
MERRICK											
410316098085601	80-11-12	7.0	13.5	1.8	370	99	110	23	52	1.2	13
	81-02-24	6.8	12.0	.6	370	110	110	22	76	1.7	12
	81-05-12	7.1	12.0	.6	370	85	110	22	76	1.7	11
	81-09-01	7.2	15.0	5.2	420	110	132	21	46	1.0	18
410316098085602	80-11-12	7.2	13.0	.5	350	69	110	18	59	1.4	15
	81-02-24	6.8	12.0	.3	350	79	110	18	65	1.5	14
	81-05-12	7.1	12.0	.2	350	89	110	18	61	1.4	14
	81-09-01	7.3	13.0	.2	340	99	106	18	39	1.0	12
410316098085603	80-11-12	7.1	12.5	.5	320	77	99	17	41	1.0	12
	81-02-24	6.8	12.0	--	320	84	100	18	46	1.1	12
	81-05-12	6.9	12.5	--	320	74	100	18	40	1.0	12
	81-05-12	7.3	12.5	--	360	78	112	19	58	1.4	14
NUCKOLLS											
400843097522601	81-06-25	7.3	16.5	--	290	48	94	13	24	.6	3.8
401458098035801	81-06-25	7.3	14.5	--	290	48	94	13	19	.5	3.5
401735098155201	81-06-24	7.6	--	--	260	22	82	14	16	.4	4.6
PHELPS											
402524099201601	81-07-23	7.1	14.5	--	390	100	128	17	22	.5	12
402449099360601	81-07-23	7.3	14.5	--	270	17	82	15	9.5	.3	10

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	ALKA-LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS-SOLVED (MG/L AS S04) (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, RESIDUE AT 180 DEG. C DIS-SOLVED (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (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)
HOWARD											
410443098425501	81-07-29	220	33	12	.5	49	--	367	--	--	5.5
411303098373901	81-06-05	280	16	1.6	.2	65	--	372	--	--	.50
	81-07-31	280	1.0	1.6	.5	66	--	353	--	--	.24
411259098374001	81-06-05	280	16	1.7	.2	64	--	369	--	--	.26
	81-07-31	280	2.0	1.7	.5	66	--	355	--	--	.20
411705098341701	80-11-06	290	30	6.4	.3	59	--	408	.55	--	2.0
	81-06-04	280	27	5.5	.2	61	--	401	--	--	2.0
	81-07-30	280	13	5.8	.5	61	--	382	--	--	1.7
JEFFERSON											
400422097195901	81-06-25	260	15	16	.1	41	--	389	--	--	6.6
400223097011901	81-06-25	98	40	11	.2	30	--	253	--	--	8.5
400751097122001	81-06-25	170	40	9.4	.2	34	--	317	--	--	7.1
KEAPNEY											
403055098570001	81-06-23	220	120	26	.3	27	--	475	--	--	1.6
403419099003001	81-07-23	200	22	2.7	.4	36	--	283	--	--	.98
403655098521401	81-07-23	60	5.0	1.2	.1	40	--	129	--	--	3.1
403745099013601	81-07-23	83	10	3.2	.1	42	--	176	--	--	5.0
KNOX											
424633097545201	81-08-26	130	680	44	2.3	9.4	--	1160	--	--	.12
LANCASTER											
404349096433801	81-08-18	230	93	28	.2	29	--	456	--	--	.32
MADISON											
414518097313401	81-07-07	300	89	3.7	.4	36	--	462	--	--	.04
414901097395801	81-07-07	280	20	5.3	.2	48	--	375	--	--	2.4
415125097285702	81-07-07	280	20	2.8	.2	43	--	360	--	--	1.2
420010097314501	81-07-06	130	19	1.2	.2	40	--	200	--	--	.00
420205097322601	81-07-06	300	65	4.1	.3	38	--	431	--	--	.16
420046097442201	81-07-07	190	11	1.6	.3	44	--	260	--	--	.97
MERRICK											
410316098085601	80-11-12	270	200	12	--	--	--	--	--	7.1	--
	81-02-24	260	210	14	--	--	--	--	--	13	--
	81-05-12	280	220	14	--	--	--	--	--	.48	--
	81-09-01	310	120	29	--	--	--	--	--	3.0	--
410316098085602	80-11-12	280	180	11	--	--	--	--	--	7.1	--
	81-02-24	270	180	11	--	--	--	--	--	16	--
	81-05-12	260	190	11	--	--	--	--	--	5.4	--
	81-09-01	240	170	18	--	--	--	--	--	2.6	--
410316098085603	80-11-12	240	140	11	--	--	--	--	--	3.0	--
	81-02-24	240	170	11	--	--	--	--	--	3.3	--
	81-05-12	250	170	10	--	--	--	--	--	2.6	--
	81-05-12	280	200	7.6	--	--	--	--	--	9.2	--
NUCKOLLS											
400843097522601	81-06-25	240	26	42	.2	52	--	415	--	--	3.6
401458098035801	81-06-25	240	30	32	.3	47	--	390	--	--	1.5
401735098155201	81-06-24	240	21	23	.4	48	--	357	--	--	.77
PHELPS											
402524099201601	81-07-23	290	70	44	.2	52	--	573	--	--	12
402449099360601	81-07-23	250	22	5.9	.2	64	--	374	--	--	3.9

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARTUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS R) (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)
HOWARD											
410443098425501	81-07-29	--	--	--	--	--	--	--	--	--	--
411303098373901	81-06-05	--	--	--	--	--	--	--	--	--	--
	81-07-31	--	--	--	--	--	--	--	--	--	--
411259098374001	81-06-05	--	--	--	--	--	--	--	--	--	--
	81-07-31	--	--	--	--	--	--	--	--	--	--
411705098341701	80-11-06	--	--	--	--	--	--	--	--	--	--
	81-06-04	--	--	--	--	--	--	--	--	--	--
	81-07-30	--	--	--	--	--	--	--	--	--	--
JEFFERSON											
400422097195901	81-06-25	--	--	--	--	--	--	40	--	--	--
400223097011901	81-06-25	--	--	--	--	--	--	40	--	--	--
400751097122001	81-06-25	--	--	--	--	--	--	30	--	--	--
KEARNFY											
403055098570001	81-06-23	--	--	--	--	--	--	40	--	--	--
403419099003001	81-07-23	--	--	--	--	--	--	30	--	--	--
403655098521401	81-07-23	--	--	--	--	--	--	10	--	--	--
403745099013601	81-07-23	--	--	--	--	--	--	10	--	--	--
KNOX											
424633097545201	81-08-26	--	--	--	--	2	20	180	<1	0	6
LANCASTER											
404349096433801	81-08-18	--	--	--	--	1	100	110	<1	0	2
MADISON											
414518097313401	81-07-07	--	--	--	--	--	--	160	--	--	--
414901097395801	81-07-07	--	--	--	--	--	--	90	--	--	--
415125097285702	81-07-07	--	--	--	--	--	--	110	--	--	--
420010097314501	81-07-06	--	--	--	--	--	--	70	--	--	--
420205097322601	81-07-06	--	--	--	--	--	--	110	--	--	--
420046097442201	81-07-07	--	--	--	--	--	--	110	--	--	--
MERRICK											
410316098085601	80-11-12	.070	1.2	1.30	8.4	--	--	--	--	--	--
	81-02-24	.020	.95	.97	14	--	--	--	--	--	--
	81-05-12	.100	1.6	1.70	2.2	--	--	--	--	--	--
	81-09-01	.090	.82	.91	3.9	--	--	--	--	--	--
410316098085602	80-11-12	.060	1.6	1.70	8.8	--	--	--	--	--	--
	81-02-24	.030	.63	.66	17	--	--	--	--	--	--
	81-05-12	.070	1.0	1.10	6.5	--	--	--	--	--	--
	81-09-01	.110	.48	.59	3.2	--	--	--	--	--	--
410316098085603	80-11-12	.060	.72	.78	3.8	--	--	--	--	--	--
	81-02-24	.030	.84	.87	4.2	--	--	--	--	--	--
	81-05-12	.130	.58	.71	3.3	--	--	--	--	--	--
	81-05-12	.100	1.1	1.20	10	--	--	--	--	--	--
MICKOLLS											
400843097522601	81-06-25	--	--	--	--	--	--	50	--	--	--
401458098035801	81-06-25	--	--	--	--	--	--	50	--	--	--
401735098155201	81-06-24	--	--	--	--	--	--	50	--	--	--
PHELPS											
402524099201601	81-07-23	--	--	--	--	--	--	30	--	--	--
402449099360601	81-07-23	--	--	--	--	--	--	50	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	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)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)
HOWARD											
410443098425501	81-07-29	--	--	--	--	--	--	--	--	--	--
411303098373901	81-06-05	--	--	--	--	--	--	--	--	--	--
	81-07-31	--	--	--	--	--	--	--	--	--	--
411259098374001	81-06-05	--	--	--	--	--	--	--	--	--	--
	81-07-31	--	--	--	--	--	--	--	--	--	--
411705098341701	80-11-06	--	--	--	--	--	--	--	--	--	--
	81-06-04	--	--	--	--	--	--	--	--	--	--
	81-07-30	--	--	--	--	--	--	--	--	--	--
JEFFERSON											
400422097195901	81-06-25	<10	--	<1	--	--	--	--	--	--	--
400223097011901	81-06-25	10	--	3	--	--	--	--	--	--	--
400751097122001	81-06-25	<10	--	5	--	--	--	--	--	--	--
KEARNEY											
403055098570001	81-06-23	390	--	80	--	--	--	--	--	--	--
403419099003001	81-07-23	15	--	1	--	--	--	--	--	--	--
403655098521401	81-07-23	<10	--	<1	--	--	--	--	--	--	--
403745099013601	81-07-23	<10	--	1	--	--	--	--	--	--	--
KNOX											
424633097545201	81-08-26	1700	0	150	.0	0	0	12	--	--	<28
LANCASTER											
404349096433801	81-08-18	1300	3	910	.0	0	0	9	--	--	<9.2
MADISON											
414518097313401	81-07-07	1100	--	140	--	--	--	--	--	--	--
414901097395801	81-07-07	10	--	2	--	--	--	--	--	--	--
415125097285702	81-07-07	<10	--	3	--	--	--	--	--	--	--
420010097314501	81-07-06	970	--	400	--	--	--	--	--	--	--
420205097322601	81-07-06	310	--	160	--	--	--	--	--	--	--
420046097442201	81-07-07	<10	--	<1	--	--	--	--	--	--	--
MERRICK											
410316098085601	80-11-12	--	--	--	--	--	--	--	--	--	--
	81-02-24	--	--	--	--	--	--	--	--	--	--
	81-05-12	--	--	--	--	--	--	--	--	--	--
	81-09-01	--	--	--	--	--	--	--	--	--	--
410316098085602	80-11-12	--	--	--	--	--	--	--	--	--	--
	81-02-24	--	--	--	--	--	--	--	--	--	--
	81-05-12	--	--	--	--	--	--	--	--	--	--
	81-09-01	--	--	--	--	--	--	--	--	--	--
410316098085603	80-11-12	--	--	--	--	--	--	--	--	--	--
	81-02-24	--	--	--	--	--	--	--	--	--	--
	81-05-12	--	--	--	--	--	--	--	--	--	--
	81-05-12	--	--	--	--	--	--	--	--	--	--
NUCKOLLS											
400843097522601	81-06-25	<10	--	2	--	--	--	--	--	--	--
401458098035801	81-06-25	10	--	3	--	--	--	--	--	--	--
401735098155201	81-06-24	30	--	5	--	--	--	--	--	--	--
PHELPS											
402524099201601	81-07-23	<10	--	2	--	--	--	--	--	--	--
402449099360601	81-07-23	<10	--	<1	--	--	--	--	--	--	--

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[illegible]

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	LOCAL IDENT- IFIER	LAT- ITUDE	LONG- ITUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)
PHELPS									
403618099271701	7N 19W 2CRBB1	40 36 18	099 27 17	01	112SDGV	81-07-23	1105	109	1160
403748099164801	8N 17W30DOB1	40 37 48	099 16 48	01	112SDGV	81-07-23	1010	86	800
PLATTE									
413230097221001	18N 1W12DD 1	41 32 30	097 22 10	01	112SDGV	81-07-06	1215	120	721
414005097312401	20N 2W34AAD 1	41 40 05	097 31 24	01	--	81-07-06	1345	--	1330
SALINE									
402727096551201	6N 4E25DRBA1	40 27 27	096 55 12	01	211DKOT	81-08-18	1430	--	640
SHERMAN									
411452098472102	15N 13W27AR 2	41 14 52	098 47 21	02	121OGLL	80-11-05	1515	200	492
					121OGLL	81-07-31	0945	200	522
411447098474601	15N 13W27BDA 1	41 14 47	098 47 46	01	121OGLL	81-06-05	1015	--	501
411706098581001	15N 14W 7CA 1	41 17 06	098 58 10	01	121OGLL	80-11-05	1300	150	542
					121OGLL	81-06-03	1315	150	573
					121OGLL	81-07-29	1545	150	528
STANTON									
415735097190201	23N 1E21ARAR1	41 57 35	097 19 02	01	--	81-07-08	0845	--	608
415928097024501	23N 3E 2DC 4	41 59 28	097 02 45	01	111ALVM	81-07-07	1615	30	448
THAYER									
400037097371201	1N 3W35AC 1	40 00 37	097 37 12	01	112SDGV	81-06-25	1300	190	291
401436097232401	3N 1W11AD 1	40 14 36	097 23 24	01	112SDGV	81-06-25	0900	--	303
401238097354601	3N 3W24DA 1	40 12 38	097 35 46	01	112SDGV	81-06-25	0815	--	422
401857097484801	4N 4W18BD 1	40 18 57	097 48 48	01	112SDGV	81-06-24	1530	--	332
THURSTON									
420604096412201	25N 6E26DAD 1	42 06 04	096 41 22	01	--	81-07-08	1245	--	650
WASHINGTON									
413315096211601	18N 9E 1DC 1	41 33 15	096 21 16	01	110SDGV	81-07-09	1515	70	909
WEBSTER									
400520098202101	1N 9W 4ABBR1	40 05 20	098 20 21	01	112SDGV	81-07-22	0240	96	505
401906098354803	4N 11W18AA 3	40 19 06	098 35 48	03	112SDGV	81-06-24	1000	168	622

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	PH (UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	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)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
PHELPS											
403618099271701	81-07-23	7.7	13.5	--	470	200	151	22	66	1.4	17
403748099164801	81-07-23	7.3	14.5	--	370	120	120	16	33	.8	9.7
PLATTE											
413230097221001	81-07-06	6.9	20.5	--	340	45	110	17	18	.4	6.3
414005097312401	81-07-06	7.3	14.0	--	560	250	150	46	82	1.5	11
SALINE											
402727096551201	81-08-18	7.8	13.5	--	180	.00	55	11	65	2.2	4.2
SHERMAN											
411452098472102	80-11-05	7.3	13.5	--	240	4.0	78	12	6.7	.2	6.1
	81-07-31	7.3	15.5	--	260	.00	81	13	11	.3	8.7
411447098474601	81-06-05	7.2	15.5	--	260	1.0	83	13	11	.3	7.9
411706098581001	80-11-05	7.0	15.0	--	270	.00	90	11	11	.3	6.6
	81-06-03	7.2	16.0	--	280	7.0	91	12	11	.3	6.6
	81-07-29	7.3	18.0	--	270	2.0	89	12	10	.3	6.9
STANTON											
415735097190201	81-07-08	7.2	16.5	--	270	51	79	18	21	.6	8.1
415928097024501	81-07-07	7.5	18.5	--	210	17	63	12	8.2	.2	6.4
THAYER											
400037097371201	81-06-25	7.3	14.5	--	130	7.0	44	4.2	15	.6	3.0
401436097232401	81-06-25	7.0	16.0	--	110	4.0	36	5.9	22	.9	4.4
401238097354601	81-06-25	7.1	15.0	--	170	12	55	8.5	27	.9	4.8
401857097484801	81-06-24	7.1	15.0	--	130	5.0	43	6.6	13	.5	4.3
THURSTON											
420604096412201	81-07-08	7.1	13.0	--	330	15	94	22	17	.4	3.7
WASHINGTON											
413315096211601	81-07-09	7.1	13.5	--	400	18	110	30	46	1.0	5.4
WEBSTER											
400520098202101	81-07-22	7.2	13.5	--	220	36	71	9.5	16	.5	4.7
401906098354803	81-06-24	7.4	16.5	--	290	68	94	13	13	.3	5.4

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION	NUMBER	DATE OF SAMPLE	ALKA- LITY 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, 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)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
PHELPS												
403618099271701	81-07-23	270	280	52	.3	23	--	778	--	--	--	.90
403748099164801	81-07-23	250	150	19	.2	47	--	555	--	--	--	2.1
PLATTE												
413230097221001	81-07-06	300	73	8.2	.2	48	--	479	--	--	--	4.0
414005097312401	81-07-06	310	430	6.3	.4	35	--	948	--	--	--	.01
SALINE												
402727096551201	81-08-18	240	29	19	.3	38	--	400	--	--	--	7.5
SHERMAN												
411452098472102	80-11-05	240	13	3.0	.3	63	--	330	.45	--	--	.91
	81-07-31	270	2.0	3.2	.5	66	--	352	--	--	--	.96
411447098474601	81-06-05	260	18	3.2	.2	65	--	364	--	--	--	1.4
411706098581001	80-11-05	270	23	6.4	.2	62	--	380	.52	--	--	1.6
	81-06-03	270	19	3.9	.2	63	--	377	--	--	--	1.7
	81-07-29	270	17	4.0	.6	63	--	371	--	--	--	1.3
STANTON												
415735097190201	81-07-08	220	85	7.6	.3	32	--	388	--	--	--	.85
415928097024501	81-07-07	190	32	2.2	.2	34	--	273	--	--	--	.16
THAYER												
400037097371201	81-06-25	120	7.8	11	.1	34	--	208	--	--	--	3.7
401436097232401	81-06-25	110	26	8.2	.2	30	--	210	--	--	--	2.4
401238097354601	81-06-25	160	26	17	.2	35	--	287	--	--	--	3.9
401857097484801	81-06-24	130	13	8.4	.2	39	--	211	--	--	--	1.3
THURSTON												
420604096412201	81-07-08	310	51	1.7	.2	29	--	408	--	--	--	.02
WASHINGTON												
413315096211601	81-07-09	380	120	6.9	.5	14	--	563	--	--	--	.01
WEBSTER												
400520098202101	81-07-22	180	21	16	.2	43	--	324	--	--	--	7.8
401906098354803	81-06-24	220	22	39	.2	44	--	382	--	--	--	4.3

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION	NUMBER	DATE OF SAMPLE	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)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	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)
PHELPS												
403618099271701	81-07-23	--	--	--	--	--	--	--	90	--	--	--
403748099164801	81-07-23	--	--	--	--	--	--	--	50	--	--	--
PLATTE												
413230097221001	81-07-06	--	--	--	--	--	--	--	130	--	--	--
414005097312401	81-07-06	--	--	--	--	--	--	--	640	--	--	--
SALTINE												
402727096551201	81-08-18	--	--	--	--	--	4	290	40	1	0	17
SHERMAN												
411452098472102	80-11-05	--	--	--	--	--	--	--	--	--	--	--
	81-07-31	--	--	--	--	--	--	--	--	--	--	--
411447098474601	81-06-05	--	--	--	--	--	--	--	--	--	--	--
411706098581001	80-11-05	--	--	--	--	--	--	--	--	--	--	--
	81-06-03	--	--	--	--	--	--	--	--	--	--	--
	81-07-29	--	--	--	--	--	--	--	--	--	--	--
STANTON												
415735097190201	81-07-08	--	--	--	--	--	--	--	120	--	--	--
415928097024501	81-07-07	--	--	--	--	--	--	--	60	--	--	--
THAYER												
400037097371201	81-06-25	--	--	--	--	--	--	--	20	--	--	--
401436097232401	81-06-25	--	--	--	--	--	--	--	40	--	--	--
401238097354601	81-06-25	--	--	--	--	--	--	--	30	--	--	--
401857097484801	81-06-24	--	--	--	--	--	--	--	20	--	--	--
THURSTON												
420604096412201	81-07-08	--	--	--	--	--	--	--	110	--	--	--
WASHINGTON												
413315096211601	81-07-09	--	--	--	--	--	--	--	190	--	--	--
WEBSTER												
400520098202101	81-07-22	--	--	--	--	--	--	--	30	--	--	--
401906098354803	81-06-24	--	--	--	--	--	--	--	30	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NSE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) (01516)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT) (80030)
PHELPS										
403618099271701	81-07-23	14	--	120	--	--	--	--	--	--
403748099164801	81-07-23	10	--	2	--	--	--	--	--	--
PLATTE										
413230097221001	81-07-06	<10	--	4	--	--	--	--	--	--
414005097312401	81-07-06	80	--	230	--	--	--	--	--	--
SALINE										
402727096551201	81-08-18	740	4	34	.4	7	0	98	9.5	100
SHERMAN										
411452098472102	80-11-05	--	--	--	--	--	--	--	--	--
	81-07-31	--	--	--	--	--	--	--	--	--
411447098474601	81-06-05	--	--	--	--	--	--	--	--	--
411706098581001	80-11-05	--	--	--	--	--	--	--	--	--
	81-06-03	--	--	--	--	--	--	--	--	--
	81-07-29	--	--	--	--	--	--	--	--	--
STANTON										
415735097190201	81-07-08	430	--	750	--	--	--	--	--	--
415928097024501	81-07-07	<10	--	60	--	--	--	--	--	--
THAYER										
400037097371201	81-06-25	20	--	2	--	--	--	--	--	--
401436097232401	81-06-25	<10	--	<1	--	--	--	--	--	--
401238097354601	81-06-25	<10	--	<1	--	--	--	--	--	--
401857097484801	81-06-24	<10	--	1	--	--	--	--	--	--
THURSTON										
420604096412201	81-07-08	2400	--	730	--	--	--	--	--	--
WASHINGTON										
413315096211601	81-07-09	970	--	240	--	--	--	--	--	--
WEBSTER										
400520098202101	81-07-22	<10	--	<1	--	--	--	--	--	--
401906098354803	81-06-24	<10	--	<1	--	--	--	--	--	--

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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)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm 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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