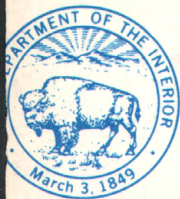
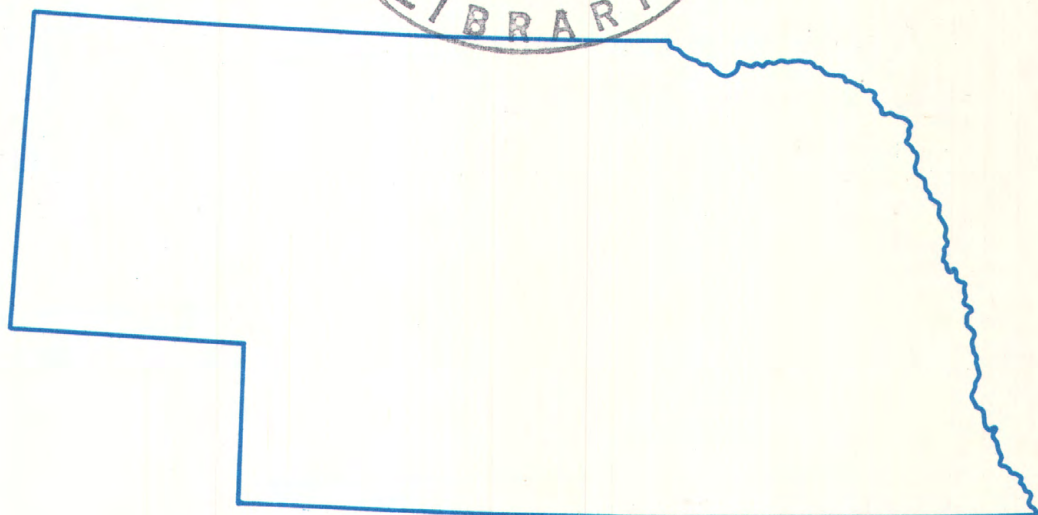
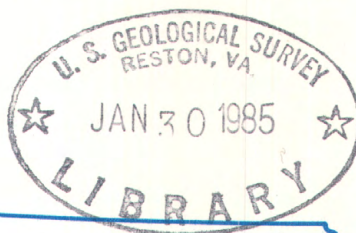


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Water Resources Data Nebraska Water Year 1983



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-83-1
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 1983

1982

OCTOBER

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1983

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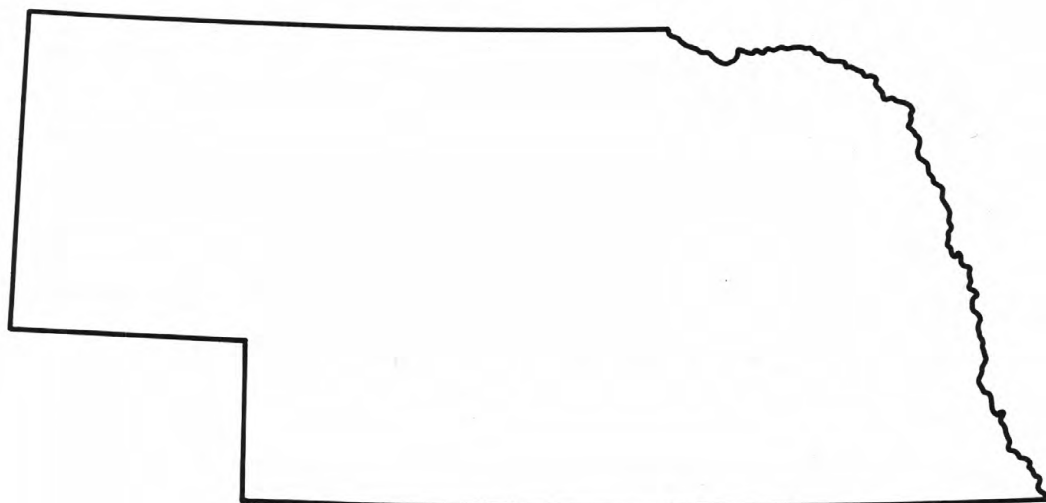
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Water Resources Data Nebraska

Water Year 1983

by G.B. Engel, R.A. Engberg, and M.S. Johnson



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NE-83-1
Prepared in Cooperation with the Nebraska Department of Water
Resources, the Conservation and Survey Division of the University
of Nebraska, the Nebraska Department of Environmental Control,
and with other State and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

WILLIAM P. CLARK, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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

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

1984

PREFACE

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

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

E. K. Steele, J. A. Boohar, L. C. Blackburn, C. G. Hoy, J. A. Anderson, D. E. Schild, L. G. Loerch, J. C. Beard, and J. E. McKinney of the District Office.

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

R. C. Beard, K. H. Calver, R. A. Drudik, and L. M. Sidak of the Ord field office.

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

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15. Supplementary Notes Prepared in cooperation with the State of Nebraska and other agencies.			14.
16. Abstract (Limit: 200 words) Water resources data for the 1983 water year for Nebraska consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality in wells. This report contains discharge records for 159 streamflow gaging stations, 30 partial-record or miscellaneous streamflow stations, and 5 crest-stage, partial-record streamflow stations; stage and content records for 10 lakes and reservoirs; water-quality records for 46 streamflow stations, 34 ungaged streamsites, and 104 wells; and water-level records for 58 observation wells. Additional discharge and water-quality 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 *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 *Nebraska 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 159 streamflow-gaging stations, for 30 partial-record or miscellaneous streamflow stations, and for 5 crest-stage, partial-record streamflow stations; (2) stage and content records for 10 lakes and reservoirs; (3) water-quality records for 46 streamflow-gaging stations, for 34 ungaged streamsites, and for 104 wells; (4) water-level records for 58 observation wells; and (5) discharge measurements and water-quality information at many sites for low-flow investigations. 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-83-1." 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, Dennis Grams, Director; Big Blue River Compact Administration; Central Platte Natural Resources District; Little Blue Natural Resources District; and City of Lincoln.

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

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

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

OVERVIEW OF 1983 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 National Weather Service Divisions in Nebraska are shown in table 1. Precipitation and departures from normal are shown for the first 9 months of the water year and then for the remaining 3 months in order to emphasize the precipitation distribution during the year. Also shown are the precipitation quantities and departures from normal for the entire 1983 water year.

All divisions had greater-than-normal precipitation during the first 9 months of the water year, particularly the Northeast and North Central divisions. All divisions had less-than-normal precipitation during the last 3 months of the water year. All divisions, except the Southeast, had greater-than-normal precipitation for the year. Percentage of normal precipitation is shown on figure 1 for the eight divisions.

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

National Weather Service Division	October - June		July - September		1983 water year October-September	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Panhandle	15.15	3.66	3.83	-1.45	18.98	2.21
North Central	23.28	9.72	6.70	-.55	29.98	9.17
Northeast	27.58	11.03	5.88	-2.81	33.46	8.22
Central	22.34	7.57	4.89	-3.19	27.23	4.38
East Central	25.47	7.56	5.69	-4.25	31.16	3.31
Southwest	16.60	4.34	3.77	-2.92	20.37	1.42
South Central	19.98	5.02	6.41	-2.14	26.39	2.88
Southeast	22.60	3.78	7.32	-3.86	29.92	-.08

Streamflow

The greater-than-normal precipitation for the first three-quarters of the water year did not directly produce increased runoff until thunderstorms occurred in May and June. Precipitation occurring during the fall months is less intense so does not produce excessive runoff, and precipitation occurring during the winter months is in the form of snow. Monthly mean discharges during the 1983 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 completion of the last known storage structure or from the latest change in streamflow regulation upstream from the gage.

Individual station graphs in figure 1 emphasize various points of interest. The graph for station 06841000, Medicine Creek above Harry Strunk Lake, indicates less-than-normal runoff for most of the year; and the extremely dry conditions for the last 3 months of the water year caused streamflow to be only about one-half of normal at the end of the water year, although total precipitation for the year was about normal. The graphs for stations 06454500, Niobrara River above Box Butte Reservoir, and 06462000, Niobrara River near Norden, indicate the large quantity of runoff produced by thunderstorms in May. Greater-than-normal streamflow continued at these stations for the remainder of the water year.

The graph for station 06785000, Middle Loup River at St. Paul, demonstrates the uniform-flow characteristic of streams originating in the Sand Hills Region of Nebraska where ground-water inflow is the principal source of streamflow. Greater-than-normal rainfall during October 1982 caused streamflow to be above normal at the beginning of the water year. These higher flows continued through the winter months and greater-than-normal rainfall throughout the spring months caused streamflow to be above normal. Thunderstorms in June produced unusually high runoff for this station. The very dry conditions during July through September caused streamflow to be decreased considerably, so that at the end of the water year the streamflow was less than normal.

The graphs for stations 06800500, Elkhorn River at Waterloo, and 06815000, Big Nemaha River at Falls City, show the increased flow produced by snowmelt in February and March. Both stations followed the usual pattern of two distinct high flow periods; one produced by snowmelt and one produced by rainfall in June. The Elkhorn River basin had flows that were greater than normal for the entire year. At the Waterloo gaging station, the earlier-than-normal snowmelt and ice breakup during February produced runoff that was about four times the normal. Runoff remained high through the summer months and was about 2.5 times the normal for the water year. Runoff recorded at Big Nemaha River at Falls City was greater than normal, after the snowmelt period, through June. The lack of precipitation during July through September caused streamflow at this station to be only 10 percent of normal at the end of the water year, although total runoff for the year was about 30 percent greater than normal.

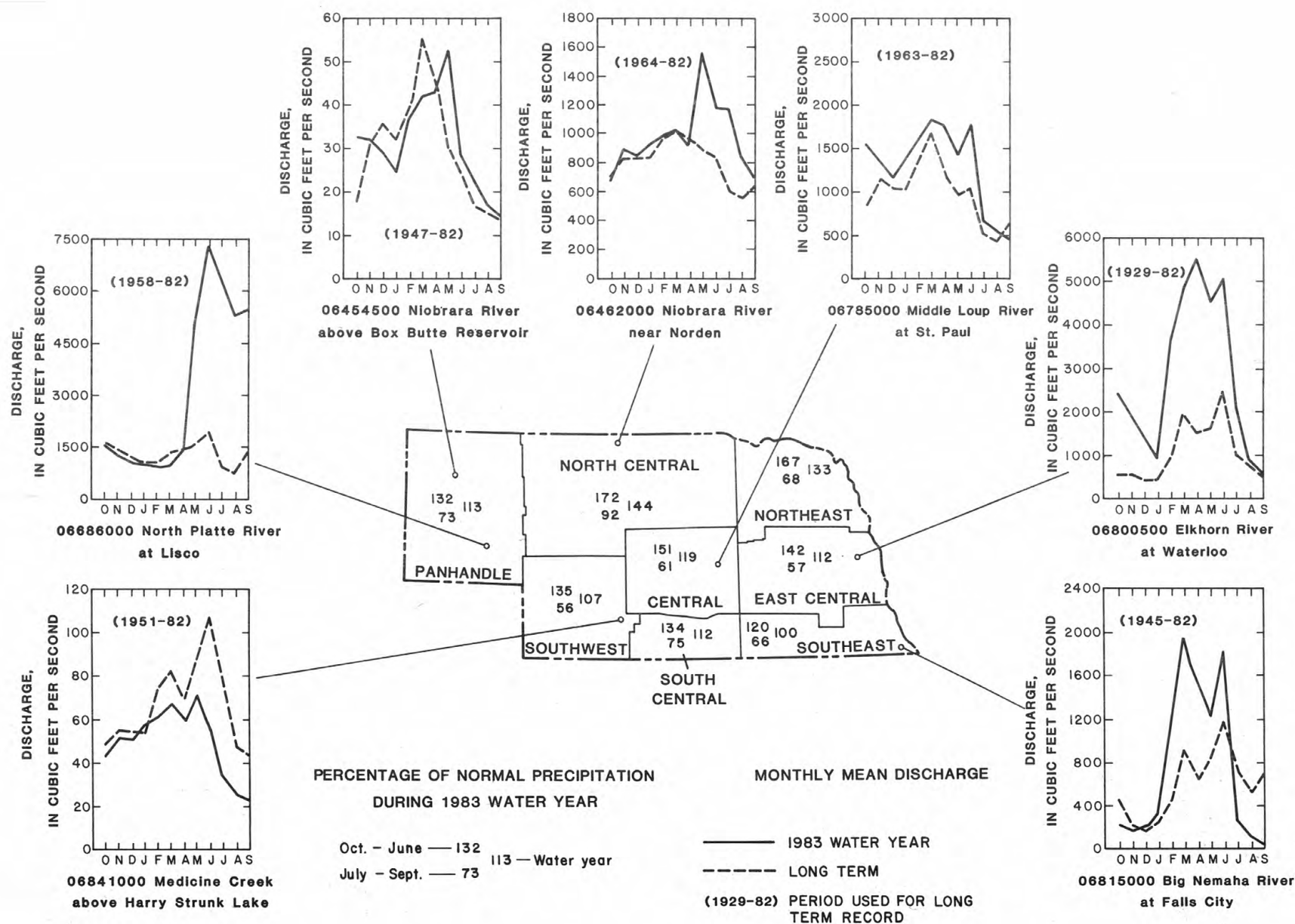


Figure 1.--Comparison of 1983 water-year precipitation and streamflow to long-term means.

The runoff at station 06686000, North Platte River at Lisco, is determined more by releases from upstream reservoirs in Wyoming and diversions for irrigation than by precipitation patterns. Mountain snowmelt and reservoir releases increased substantially in May. Monthly mean discharges at this station were three times the normal in May and June and almost seven times the normal in July and August. Comparison of 1983 peak discharges with peak discharges for the period of record for stations on the North Platte, South Platte, and Platte Rivers is shown in table 2. New maximums for period of record or since storage began in Lake McConaughy occurred at all Platte River stations from Brady to Grand Island.

Table 2.--Comparison of peak discharges for the 1983 water year with those for period of record for stations on the North Platte, South Platte, and Platte Rivers
[Ft³/s = cubic feet per second]

Station identification	Period of record (water years)	Peak discharge for period of record		Peak discharge for 1983 water year		Recurrence interval of 1983 peak (years)
		Ft ³ /s	Date	Ft ³ /s	Date	
06679500 North Platte River at Mitchell	1901-11, 1916-18, 1920-83 Since 1930	27,500 12,200	6-03-09 6-02-71	8,500	6-27-83	20
06682000 North Platte River near Minatare	1916-19, 1922-83 Since 1930	19,500 14,900	7-02-17 6-02-71	8,750	6-27-83	18
06684500 North Platte River at Bridgeport	1897-1900, 1902- 06, 1915-83 Since 1930	24,900 16,400	6-26-1899 6-03-71	8,690	6-28-83	12
06686000 North Platte River at Lisco	1916-17, 1932-83 Since 1932	20,100 13,200	6-27-17 6-03-71	8,700	6-29-83	20
06687500 North Platte River at Lewellen	1941-83	13,500	6-04-71	8,480	6-30-83	17
06690500 North Platte River near Keystone	1917, 1942-83 Since 1942	20,300 8,850	6-30-17 6-10-71	9,470	8-10-83	50
06691000 North Platte River near Sutherland	1917, 1933, 1935, 1937-83 Since 1941	20,300 9,090	6-29-17 6-08-71	6,540	8-23-83	30
06693000 North Platte River at North Platte	1895-1983 Since 1941	29,600 9,580	6-11-09 6-10-71	7,800	8-23-83	30
06764880 South Platte River at Roscoe	1983	-----	-----	14,700	7-02-83	--
06765500 South Platte River at North Platte	1897, 1914-15, 1917, 1921-83	37,100	6-03-35	14,900	6-19-83	12
06766000 Platte River at Brady	1938-83	18,600	5-14-73	¹ 23,400	6-29-83	40
06766500 Platte River near Cozad	1938, 1940-83	18,400	5-29-73	¹ 21,500	6-29-83	35
06768000 Platte River near Overton	1915-17, 1919-23, 1926-83	37,600	6-05-35	² 22,900	6-28-83	40
06770000 Platte River near Odessa	1937-83	22,700	6-24-47	¹ 22,900	6-29-83	40
06770200 Platte River near Kearney	1982-83	3,550	2-21-82	¹ 23,700	6-29-83	--
06770500 Platte River near Grand Island	1934-83	30,000	6-06-35	² 23,900	6-30-83	40
06774000 Platte River near Duncan	1896-1909, 1911, 1913-15, 1928-83 Since 1941	44,100 25,400	6-23-05 3-28-60	24,600	6-18-83	20
06796000 Platte River at North Bend	1949-83	112,000	3-29-60	59,500	6-18-83	10
06805500 Platte River at Louisville	1953-83	124,000	3-30-60	69,000	6-29-83	5

¹New maximum for period of record.

²New maximum since 1941 (Lake McConaughy storage began).

Although peak discharges at stations on the North Platte and South Platte Rivers were not maximums for the period of record, total runoff volume for the 1983 water year was the maximum since records began. Comparison of the runoff during the 1983 water year with the previous maximum water-year runoff and the mean water-year runoff is shown in table 3 for selected stations on the North Platte, South Platte, and Platte Rivers. Runoff for the 1983 water year ranged from 2.4 to 4 times the mean annual runoff at the North Platte River stations, about 6.6 times the mean at South Platte River at North Platte, about 4 times the mean at Platte River stations Overton and Grand Island, and about 2.5 times the mean at Louisville near the mouth of the Platte River.

Also shown in table 3 is the comparison of the 1983 water-year runoff at station 06800500, Elkhorn River at Waterloo, close to the mouth of the Elkhorn River, with the maximum and mean water-year runoff for the period of record. The 1983 water-year runoff was the maximum for 63 years of record, exceeding that of 1951, and was about 2.5 times the mean water-year runoff.

High flows occurred on many streams in June. Of particular significance was a peak flow that occurred at station 06847000, Beaver Creek near Beaver City in the Republican River Basin in southwest Nebraska. A discharge of 9,510 cubic feet per second occurred at this station on June 14, which was about 2.5 times the previous maximum during 47 years of record.

Thunderstorms on July 16-17 produced a peak discharge of 9,600 cubic feet per second at station 06462000, Niobrara River near Norden, on July 17. This discharge exceeded the previous maximum during 30 years of record of 7,380 cubic feet per second that had occurred on July 1, 1962.

Table 3.--Comparison of runoff during the 1983 water year with maximum and mean water-year runoff for selected stations on the North Platte, South Platte, Platte, and Elkhorn Rivers

Station identification	Runoff during 1983 water year (million acre-feet)	Previous maximum water-year runoff		Mean water- year runoff (million acre-feet)	Period of record used for mean (water years)
		Million acre-feet	Water year		
06679500 North Platte R. at Mitchell	2,014	1,597	1973	500.6	1958-82
06686000 North Platte R. at Lisco	2,277	2,183	1973	955.6	1958-82
06693000 North Platte R. at North Platte	1,638	1,625	1933	489.8	1941-82
		¹ 1,244	1973		
06765500 South Platte R. at North Platte	1,679	1,056	1942	253.6	1932-82
06768000 Platte River near Overton	4,224	2,780	1973	1,008	1944-82
06770500 Platte River near Grand Island	3,898	2,690	1973	972.3	1944-82
06805500 Platte River at Louisville	9,927	6,648	1973	4,136	1954-82
06800500 Elkhorn River at Waterloo	2,044	1,957	1951	807.1	1900-03, 1912-15, 1929-82

¹Maximum since 1941 (Lake McConaughy storage began).

Chemical Quality of Streamflow

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

Specific conductance can be used to approximate the dissolved-solids concentration in water because it is related to the concentrations and types of ions in water. To determine whether significant differences in specific conductance occurred between the 1983 water year and the period of record, a statistical technique called the t-test was used.

The t-test technique requires proving or disproving a hypothesis that the mean specific conductance for the 1983 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 to be not equal. In terms of specific conductance, a rejection of the hypothesis indicates there is a difference in water quality at a particular site between the 1983 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.

Results of the t-tests for the five stations are given in table 4. For two of the stations, 06805500 Platte River at Louisville and 06815000 Big Nemaha River at Falls City, comparisons of means for the 1983 water year to those for the period of record indicate that the means are not statistically different.

Mean specific-conductance values for the 1983 water year for the other three stations were significantly greater than the respective means for their periods of record. The 1983 water year was a period of greater-than-normal precipitation. As a result, the mean water discharges for the 1983 water year for nearly all Nebraska streams, including these three, exceed their average period-of-record discharges. A larger percentage of streamflow for each station was derived from overland runoff or reservoir releases. This water generally is less mineralized than that derived from ground-water seepage and mean specific-conductance values should be significantly less than period-of-record means. The reason for the apparent anomaly, that is, why the 1983 means are greater than the period-of-record means, is not known. Probably it is related to specific environmental factors in the drainage basins of each of the three streams.

Table 4.--Results of t-tests comparing specific conductance means for the 1983 water year with means for the period of record for streamflow leaving Nebraska

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

Station identification	Specific conductance						t-test			
	1983 water year			Period of record			Period used	t _{tab}	t _c	Hypothesis
	Number of values	Mean	Standard deviation	Number of values	Mean	Standard deviation				
06465500 Niobrara River at Verdel-----	12	297	44	115	284	26	1967-82	+ 2.18	2.55	R
06805500 Platte River at Louisville-----	11	724	111	95	690	226	1972-82	+ 2.07	.83	A
06815000 Big Nemaha River at Falls City-----	13	656	146	118	629	164	1973-82	+ 2.14	.63	A
06853000 Republican River near Guide Rock-----	11	670	86	289	574	103	1962-82	+ 2.20	3.90	R
06884025 Little Blue River at Hollenberg-----	13	534	101	136	464	177	1972-83	+ 2.08	2.20	R

Ground-Water Levels

Water-level changes that occurred during the 1983 water year were determined from a 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 65 wells equipped with continuous recorders. The observation wells used as examples in the following discussion are typical of those in the network penetrating water-bearing units that have similar characteristics. (See figure 2.)

The hydrograph of the well in Garden County shows the response of water levels to climate in an area where there is little development of ground- or surface-water resources. At the beginning of the water year the water level was below the long-term average after declining during the 1982 water year. Greater-than-normal precipitation during the first 9 months of the water year caused water levels to rise during the 1983 water year. At the end of the 1983 water year, the water levels were slightly higher than the previous year's level, but lower than the long-term average.

The greater-than-normal precipitation through June had a significant effect on water levels in irrigated areas of the State. Water levels were higher at the start of the water year than they were in October 1981 and were also higher than the previous year's levels at the start of the 1983 irrigation season in most areas of the State. The withdrawals for irrigation together with the less-than-normal precipitation during the irrigation season combined to produce significant drawdowns during the remainder of the water year. In some observation wells, the water level also was higher at the end of the irrigation season compared to the 1982 level, but in other wells the drawdown more than offset the higher levels in the spring. Hydrographs of two wells in Chase and Adams Counties illustrate these two conditions.

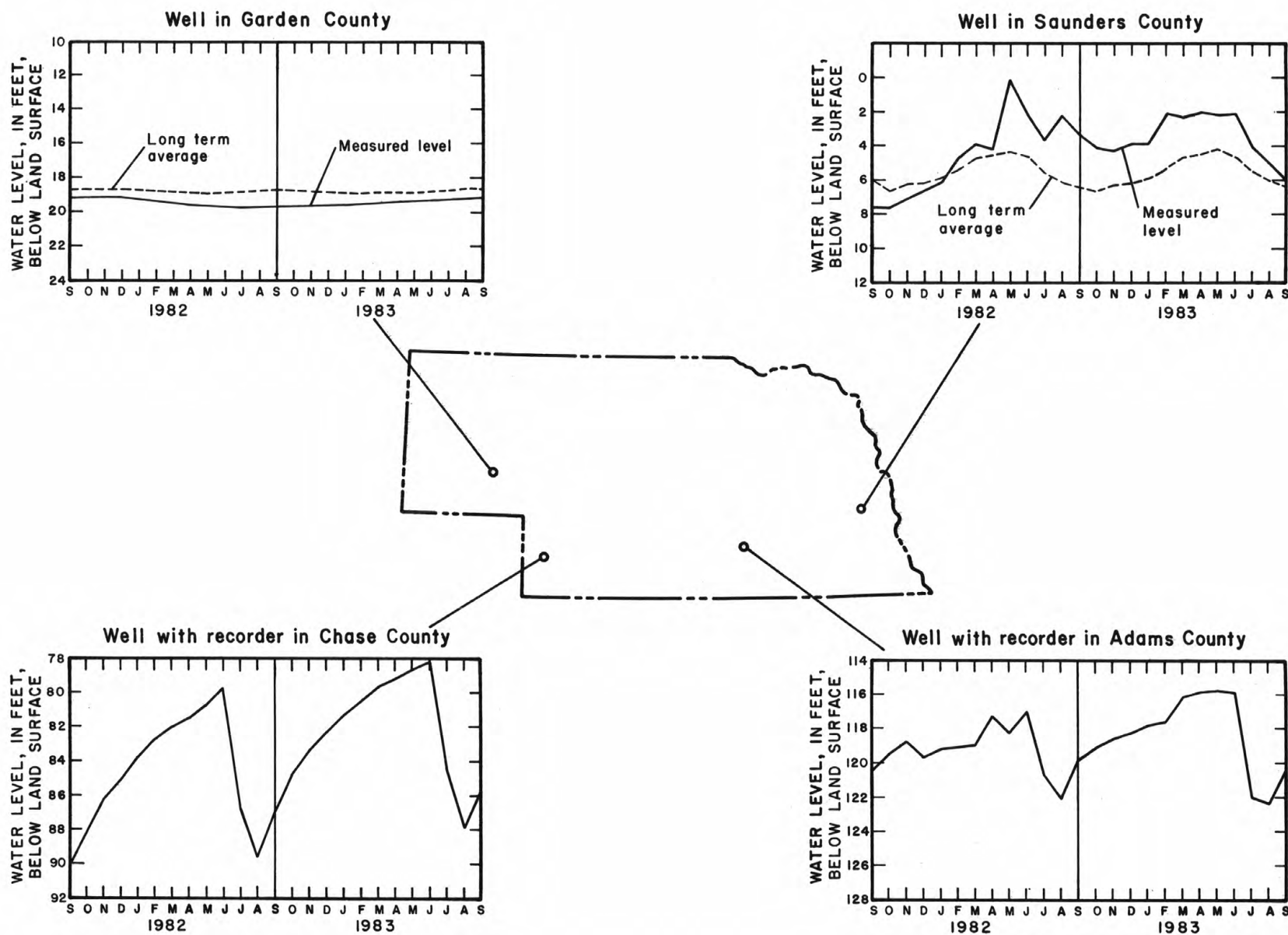


Figure 2.--Hydrographs of representative observation wells, 1982 and 1983.

The hydrograph of a recorder-equipped observation well in an irrigated area of Chase County illustrates the first condition. The drawdown during the irrigation season was about the same as 1982, but because the water levels were higher at the beginning of the season they were also higher than the 1982 water-year level at the end of the season. Other wells in the same area, however, indicated declines from the previous year.

The second condition is shown by the hydrograph of a recorder-equipped well in Adams County. Before the 1983 irrigation season the water level was higher than at the same time in 1982. This was the second year that water levels at this well were successively higher, reversing a downward trend that began about 1950. Large withdrawals for irrigation, however, caused the water level to decline below last year's lowest level at the end of the irrigation season. However, the decline from the previous year was slight and other wells in the area indicated slight rises compared to 1982.

The 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 recharge. Water levels were higher than average at the start of the 1983 water year. Greater-than-normal precipitation through June caused water levels to remain several feet higher than average. Decreased rainfall and decreased stream stage caused water levels to decline rapidly during the remaining 3 months of the water year so that they were only slightly higher than average at the end of the water year.

EXPLANATION OF THE RECORDS

The records in this report are for the 1983 water year that began October 1, 1982, and ended September 30, 1983. 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.

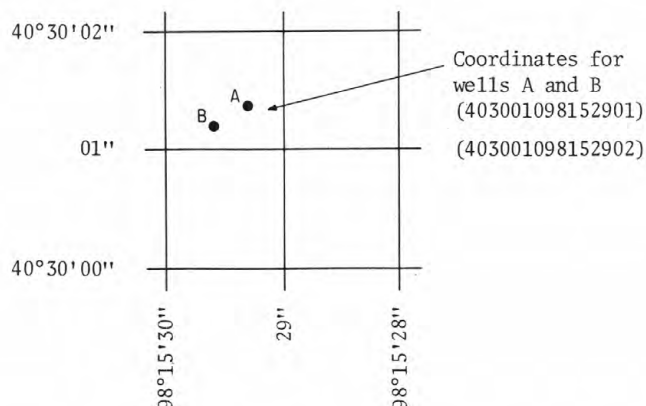
Downstream Order System

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 second 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 on figure 3.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the 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 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

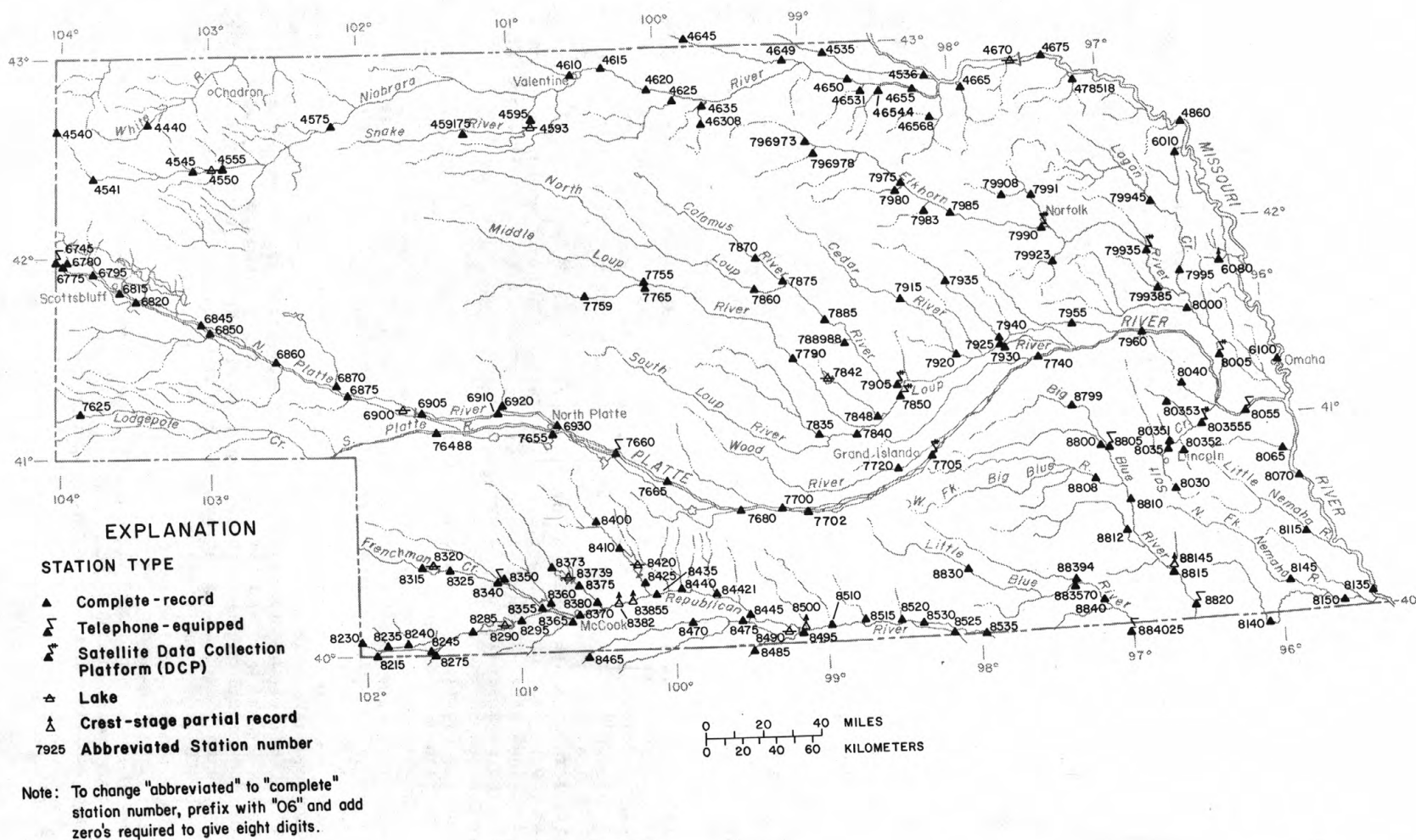


Figure 3.--Location of active surface-water gaging stations.

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

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

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as 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" and in the inclusion of a skeleton stage-capacity table where daily contents are given.

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 4.

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. 18-19 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.

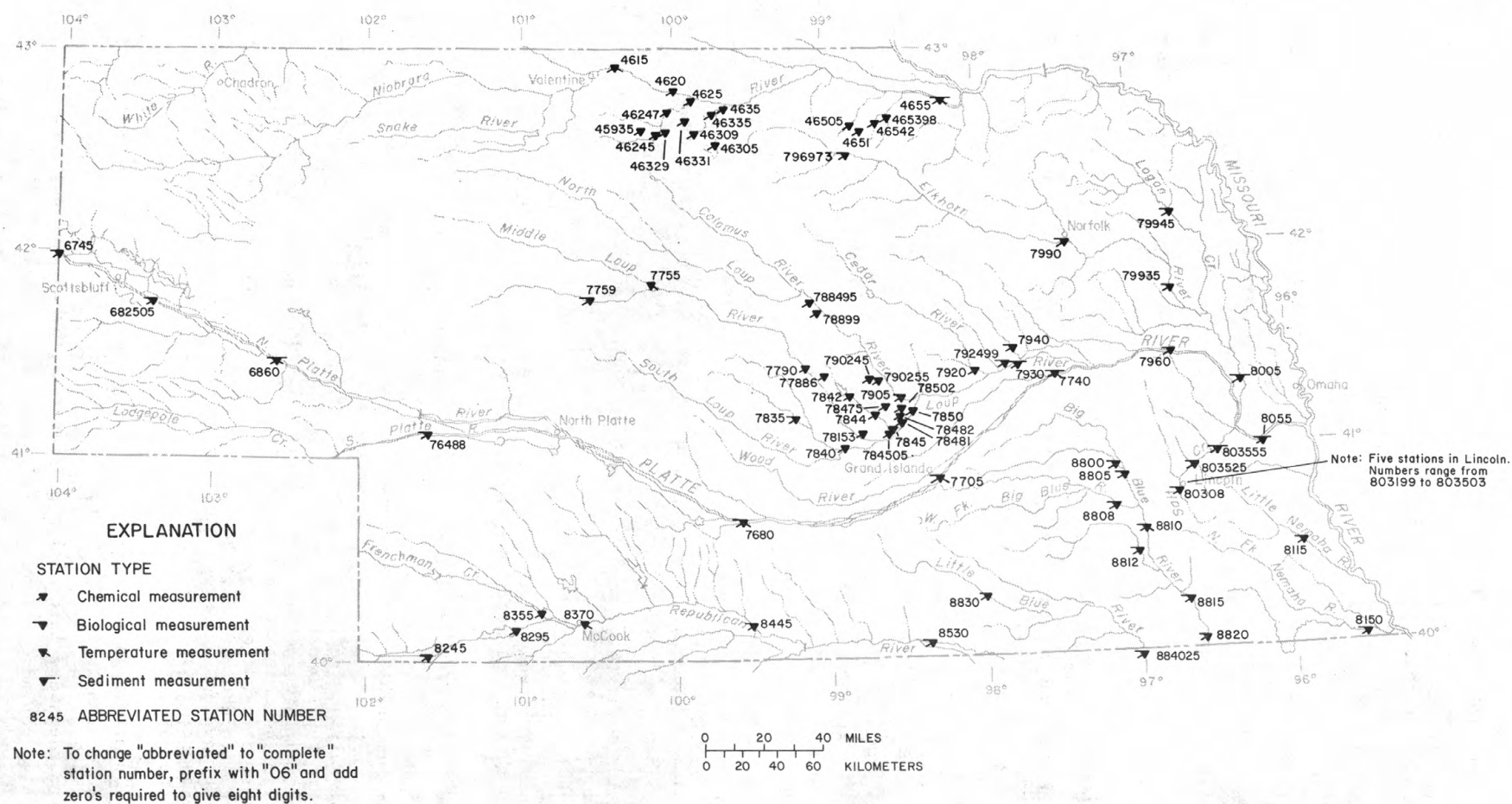


Figure 4.--Location of active surface-water-quality stations.

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

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

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

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 5.

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 insure 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.

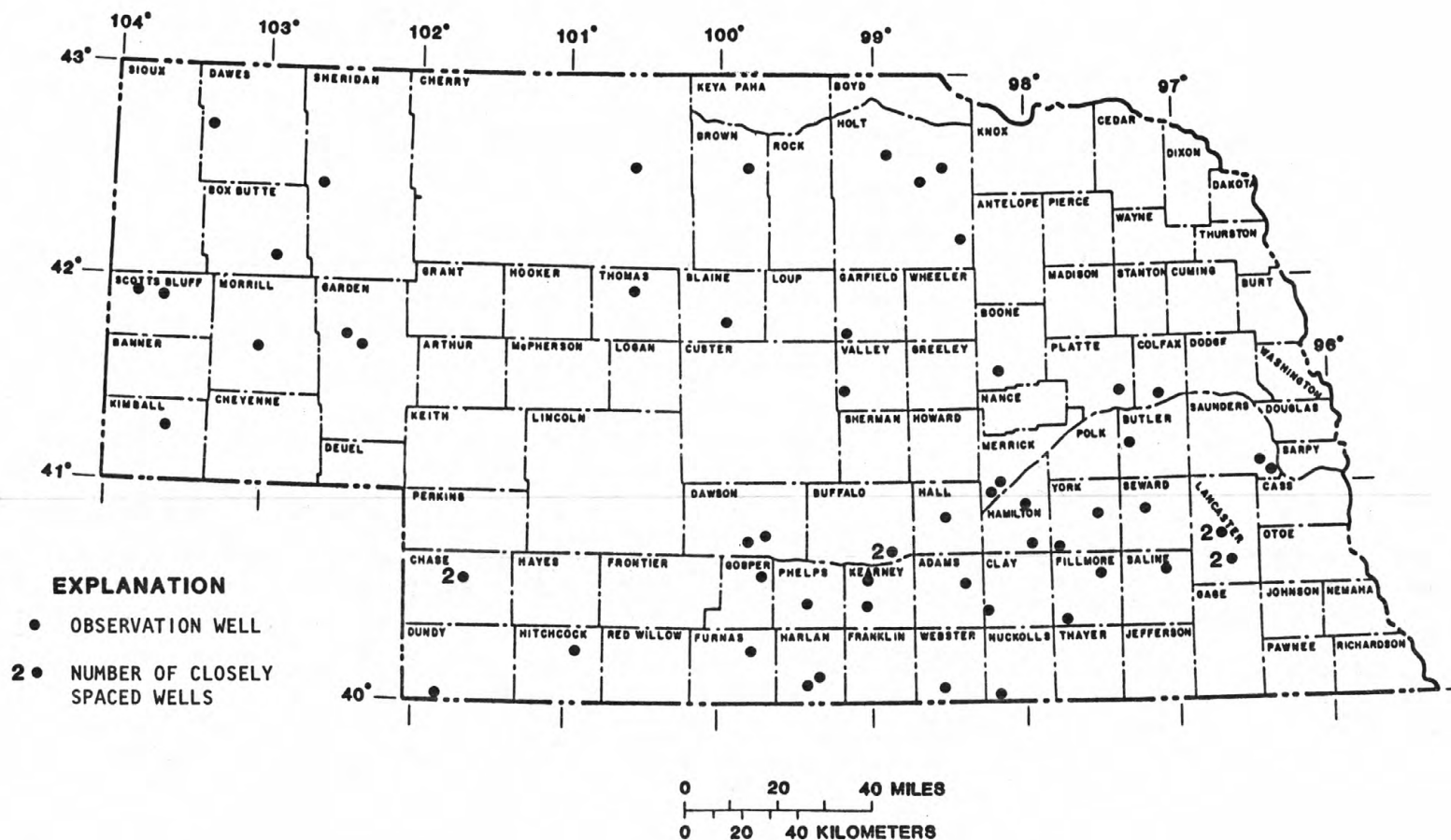


Figure 5.--Location of observation wells in the national network.

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.

Access to WATSTORE Data

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

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

General inquiries about WATSTORE may be directed to:

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-seven 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, 604 South Pickett St., Alexandria, VA 22304 (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 measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 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-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 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-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 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. Greeson, T. A. Ehle, 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.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 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 \pm 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 \pm 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 \pm 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, ft^3/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- μm 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 (CaCO_3).

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 ($\mu\text{g}/\text{kg}$) 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 ($\mu\text{g}/\text{L}$, $\mu\text{g}/\text{L}$) 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 (m²), 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.

Recurrence interval is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years.

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

WHITE RIVER BASIN

06444000 WHITE RIVER AT CRAWFORD, NE

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

DRAINAGE AREA.--313 mi².

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

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

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

REMARKS.--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.--48 years, 20.1 ft³/s, 14,560 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 107 ft³/s Aug. 18, gage height, 2.50 ft, no other peak above of 100 ft³/s; minimum daily, 10 ft³/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	18	25	28	21	25	32	29	20	15	11
2	16	21	18	25	28	21	23	31	27	20	15	11
3	15	20	18	25	27	21	24	28	29	19	17	11
4	16	20	18	26	26	21	25	26	30	20	16	11
5	16	20	18	26	25	25	25	25	30	21	31	12
6	16	21	19	27	25	26	24	26	29	17	16	11
7	17	20	18	28	24	22	24	26	27	17	14	11
8	16	20	18	28	22	22	26	26	28	17	12	11
9	22	20	16	28	20	22	26	25	39	16	12	10
10	22	21	17	26	19	21	26	25	29	17	32	11
11	19	21	17	26	20	22	26	27	28	17	18	11
12	16	19	18	26	20	22	27	31	28	18	11	11
13	16	20	20	27	20	21	28	30	29	17	15	11
14	17	20	24	27	20	21	26	26	27	17	11	11
15	17	20	24	27	20	20	27	26	25	17	11	12
16	17	20	24	27	20	20	26	26	25	18	14	12
17	17	20	25	26	20	20	26	47	25	18	11	11
18	18	20	25	27	20	21	26	47	25	19	13	11
19	20	20	24	27	19	21	26	42	26	18	13	11
20	20	20	25	27	20	21	26	42	45	18	15	12
21	20	19	25	28	20	21	27	40	27	18	14	13
22	21	19	25	27	20	21	27	38	22	21	14	13
23	20	17	25	28	20	21	28	35	21	25	14	13
24	20	20	24	28	20	21	27	34	20	21	13	13
25	20	19	22	28	20	23	27	32	20	20	13	13
26	21	19	20	28	20	23	29	32	20	19	12	13
27	21	18	20	29	20	23	28	31	21	18	12	13
28	21	18	22	30	20	24	28	31	22	18	12	13
29	21	18	24	29	---	24	28	30	21	18	11	14
30	21	18	23	28	---	25	29	30	20	17	11	14
31	21	---	24	28	---	26	---	30	---	17	11	---
TOTAL	576	589	658	842	603	683	790	977	794	573	449	355
MEAN	18.6	19.6	21.2	27.2	21.5	22.0	26.3	31.5	26.5	18.5	14.5	11.8
MAX	22	21	25	30	28	26	29	47	45	25	32	14
MIN	15	17	16	25	19	20	23	25	20	16	11	10
AC-FT	1140	1170	1310	1670	1200	1350	1570	1940	1570	1140	891	704
CAL YR 1982	TOTAL	7513	MEAN 20.6	MAX 99	MIN 11	AC-FT	14900					
WTR YR 1983	TOTAL	7889	MEAN 21.6	MAX 47	MIN 10	AC-FT	15650					

PONCA CREEK BASIN

27

06453500 PONCA CREEK AT ANOKA, NE

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

DRAINAGE AREA.--505 mi².

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

REVISED RECORDS.--WSP 2117: Drainage area.

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

REMARKS.--Records good except those for Nov. 2 to Feb. 25, which are poor.

AVERAGE DISCHARGE.--34 years, 44.5 ft³/s, 32,240 acre-ft/yr; median of yearly mean discharge, 31 ft³/s, 22,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 6	0300	792	5.51	June 28	1830	732	5.35
May 2	0500	1440	6.94	Aug. 2	1300	*1600	7.23

Minimum daily discharge, 4.8 ft³/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	12	26	11	21	46	376	296	53	287	78	11
2	9.6	12	30	10	19	42	302	1210	52	276	1150	11
3	7.0	11	27	11	18	44	309	884	51	257	256	9.1
4	6.4	11	23	12	17	41	241	630	50	243	81	9.1
5	6.0	12	21	12	16	119	178	490	47	230	50	8.8
6	6.7	15	18	14	15	527	168	289	45	171	42	8.3
7	8.1	10	16	17	15	178	173	196	45	124	35	7.8
8	11	14	14	20	17	101	159	153	42	95	31	7.2
9	30	14	13	22	17	66	155	130	41	76	28	6.7
10	90	15	12	21	17	58	148	111	41	64	26	6.4
11	65	35	11	21	18	57	139	120	42	54	24	6.0
12	43	100	10	20	20	62	153	199	73	47	22	5.5
13	32	40	11	21	25	68	201	215	398	43	23	5.7
14	27	30	13	22	35	62	142	203	253	39	22	6.0
15	21	24	14	20	80	57	152	253	189	36	22	6.7
16	18	23	14	18	250	53	228	206	119	36	22	5.5
17	16	22	12	17	260	54	305	158	151	54	20	5.5
18	14	22	13	17	220	54	318	174	111	48	19	4.8
19	16	22	14	19	220	53	396	187	86	41	18	5.2
20	18	20	14	21	170	50	347	164	76	34	17	5.5
21	20	12	15	23	130	47	257	139	106	32	16	5.7
22	22	15	16	21	110	45	198	124	143	33	15	6.0
23	21	19	16	20	85	50	152	108	95	48	15	6.4
24	19	22	15	22	75	53	118	101	91	39	14	6.2
25	18	30	12	21	60	61	100	91	86	36	13	6.0
26	17	30	10	20	50	67	86	82	74	34	13	6.0
27	16	29	9.5	20	52	43	74	74	99	34	13	6.7
28	15	29	9.0	22	50	63	73	69	628	34	12	5.7
29	13	26	10	24	---	95	73	62	498	76	12	5.7
30	12	26	10	24	---	212	76	57	401	137	12	6.2
31	12	---	11	23	---	393	---	54	---	67	11	---
TOTAL	638.4	702	459.5	586	2082	2921	5797	7229	4186	2825	2132	202.4
MEAN	20.6	23.4	14.8	18.9	74.4	94.2	193	233	140	91.1	68.8	6.75
MAX	90	100	30	24	260	527	396	1210	628	287	1150	11
MIN	6.0	10	9.0	10	15	41	73	54	41	32	11	4.8
AC-FT	1270	1390	911	1160	4130	5790	11500	14340	8300	5600	4230	401
CAL YR 1982	TOTAL	14581.28	MEAN	39.9	MAX	1140	MIN	.00	AC-FT	28920		
WTR YR 1983	TOTAL	29760.30	MEAN	81.5	MAX	1210	MIN	4.8	AC-FT	59030		

PONCA CREEK BASIN

06453600 PONCA CREEK AT VERDEL, NE

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

DRAINAGE AREA.--812 mi².

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

REVISED RECORDS.--WSP 2117: Drainage area.

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

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

AVERAGE DISCHARGE.--26 years, 70.9 ft³/s, 51.370 acre-ft/yr; median of yearly mean discharges, 54 ft³/s, 39,100 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft s)	Gage height (ft)
Mar. 6	1400	1710	6.67	June 28	2000	1520	6.47
May 2	1130	*2320	7.50	Aug. 3	0300	1580	6.59
June 13	2000	867	5.01				

Minimum daily discharge, 6.8 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	21	50	17	38	163	649	214	93	551	141	23
2	12	22	45	18	35	141	493	1720	92	427	254	22
3	10	21	40	20	33	138	424	1270	86	393	936	21
4	11	20	35	23	31	141	396	967	85	358	304	21
5	10	20	35	23	30	176	341	768	80	333	169	23
6	12	25	35	24	29	928	318	597	73	308	122	23
7	13	25	33	30	30	625	320	439	67	249	101	21
8	14	24	30	35	33	300	313	346	65	198	82	20
9	43	28	27	40	35	203	285	287	61	162	71	18
10	82	34	25	45	35	174	271	251	59	136	63	18
11	56	42	22	43	38	163	254	226	56	117	58	19
12	78	81	20	40	40	160	271	245	59	104	53	18
13	58	246	22	43	45	154	401	358	306	91	53	17
14	46	168	25	46	50	150	346	313	625	79	53	18
15	38	140	25	43	70	147	311	301	348	68	49	23
16	33	110	22	40	150	138	385	338	266	71	46	21
17	29	90	23	40	400	136	534	299	245	102	44	19
18	26	90	24	40	450	140	544	317	533	124	41	16
19	28	95	25	43	400	137	550	363	312	112	36	16
20	34	100	25	43	330	130	588	333	219	80	34	17
21	31	90	27	45	260	119	503	283	175	67	33	18
22	29	70	28	43	250	114	427	239	162	59	32	18
23	30	80	28	42	240	114	353	208	198	87	31	18
24	31	90	27	45	230	122	292	188	151	112	32	18
25	30	90	20	43	200	132	259	171	131	88	28	17
26	27	80	15	40	166	160	230	159	151	68	31	17
27	26	50	10	41	167	159	200	148	351	70	28	16
28	25	48	10	44	178	140	189	132	880	67	28	13
29	24	48	11	46	---	177	185	116	1090	102	26	16
30	23	47	12	44	---	330	176	106	722	110	26	16
31	22	---	14	40	---	621	---	99	---	164	23	---
TOTAL	937.8	2095	790	1169	3993	6632	10808	11801	7741	5057	3028	561
MEAN	30.3	69.8	25.5	37.7	143	214	360	381	258	163	97.7	18.7
MAX	82	246	50	46	450	928	649	1720	1090	551	936	23
MIN	6.8	20	10	17	29	114	176	99	56	59	23	13
AC-FT	1860	4160	1570	2320	7920	13150	21440	23410	15350	10030	6010	1110
CAL YR 1982	TOTAL	27708.50	MEAN	75.9	MAX	1480	MIN	.30	AC-FT	54960		
WTR YR 1983	TOTAL	54612.80	MEAN	150	MAX	1720	MIN	6.8	AC-FT	108300		

NIORRARA RIVER BASIN

29

06454000 NIOBRARA RIVER AT WYOMING-NEBRASKA STATE LINE

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

DRAINAGE AREA.--450 mi², approximately.

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

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

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

AVERAGE DISCHARGE.--28 years, 3.89 ft³/s, 2,820 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	1230	*95	3.33	Aug. 3	1915	56	3.09
Mar. 7	0430	a	*3.44				

a Backwater from snow in channel.

Minimum daily discharge, 1.4 ft³/s Sept. 3-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.4	2.4	2.2	2.2	3.2	3.8	3.5	3.2	3.2	2.0	1.6
2	2.2	2.4	2.4	2.2	2.2	3.2	3.4	3.5	3.1	2.8	1.9	1.5
3	2.0	2.4	2.4	2.2	2.4	3.1	3.5	3.4	2.8	2.8	1.4	1.4
4	2.0	2.4	2.4	2.2	2.4	3.2	3.6	3.2	2.8	2.7	2.0	1.4
5	1.9	2.4	2.4	2.2	2.2	3.4	3.6	3.2	2.5	2.5	1.4	1.4
6	1.9	2.4	2.4	2.2	2.1	4.0	3.7	3.2	2.4	2.4	9.3	1.4
7	1.8	2.4	2.4	2.2	2.1	6.0	3.7	3.5	2.5	2.4	6.4	1.4
8	2.4	2.2	2.4	2.2	2.1	3.1	3.6	3.4	2.5	2.2	3.1	1.4
9	33	2.2	2.4	2.2	2.1	2.9	3.7	3.2	2.5	2.2	2.2	1.5
10	14	2.2	2.4	2.2	2.2	2.7	4.1	3.2	2.5	2.1	2.1	1.6
11	5.1	2.4	2.2	2.2	2.4	4.9	3.5	3.5	2.7	2.0	2.0	1.6
12	3.1	2.2	2.2	2.2	2.5	5.0	3.4	3.9	3.2	2.0	1.9	1.5
13	2.7	2.2	2.2	2.2	2.6	4.3	3.4	3.9	3.1	2.1	1.9	1.6
14	2.8	2.2	2.2	2.2	2.6	3.9	3.1	3.7	2.8	1.9	1.9	1.6
15	2.7	2.2	2.2	2.2	2.6	3.4	3.2	3.7	2.6	2.0	1.8	1.7
16	3.4	2.2	2.1	2.2	2.6	3.2	3.3	4.1	2.9	2.0	1.6	1.7
17	3.1	2.2	2.2	2.2	2.7	3.2	3.3	5.6	3.1	1.9	1.6	1.6
18	2.9	2.2	2.2	2.2	2.8	3.1	3.3	4.7	3.0	2.1	1.6	1.5
19	3.2	2.2	2.2	2.2	3.2	3.1	3.2	4.3	3.1	2.0	1.7	1.6
20	3.1	2.2	2.2	2.2	3.4	3.1	3.0	4.7	5.8	2.0	3.6	1.8
21	3.2	2.2	2.1	2.2	3.5	2.9	2.9	4.7	4.9	2.0	1.9	1.8
22	2.9	2.2	2.2	2.2	3.5	2.9	2.9	4.7	4.0	2.1	1.7	1.7
23	2.7	2.4	2.2	2.2	3.2	3.1	2.8	4.7	3.6	3.6	1.7	1.8
24	2.7	2.2	2.2	2.2	3.2	4.3	2.7	4.5	2.9	2.5	1.7	1.8
25	2.5	2.2	2.1	2.2	3.2	6.3	2.8	4.5	2.7	2.2	1.7	1.8
26	2.5	2.4	2.2	2.4	3.2	4.3	2.9	4.3	2.8	2.1	1.8	1.8
27	2.5	2.4	2.0	2.4	3.2	3.8	2.9	4.1	3.4	2.1	1.7	1.8
28	2.5	2.4	2.3	2.2	3.2	4.1	2.8	3.7	3.5	2.1	1.7	1.8
29	2.5	2.4	2.2	2.2	---	4.2	3.1	3.7	3.4	2.1	1.7	1.8
30	2.5	2.4	2.2	2.2	---	4.5	3.2	3.4	3.2	2.1	1.7	1.8
31	2.4	---	2.2	2.2	---	4.3	---	3.1	---	2.1	1.6	---
TOTAL	124.8	68.8	69.8	68.6	75.6	116.7	98.4	120.8	93.5	70.3	113.5	48.7
MEAN	4.03	2.29	2.25	2.21	2.70	3.76	3.28	3.90	3.12	2.27	3.66	1.62
MAX	33	2.4	2.4	2.4	3.5	6.3	4.1	5.6	5.8	3.6	20	1.8
MIN	1.8	2.2	2.0	2.2	2.1	2.7	2.7	3.1	2.4	1.9	1.6	1.4
AC-FT	248	136	138	136	150	231	195	240	185	139	225	97

CAL YR 1982	TOTAL	861.40	MEAN 2.36	MAX 33	MIN .74	AC-FT 1710
WTR YR 1983	TOTAL	1069.50	MEAN 2.93	MAX 33	MIN 1.4	AC-FT 2120

NIOBRARA RIVER BASIN

06454100 NIOBRARA RIVER AT AGATE, NE

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

DRAINAGE AREA.--840 mi², approximately.

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

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

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

AVERAGE DISCHARGE.--26 years, 14.0 ft³/s, 10,140 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28 ft³/s May 18, gage height, 3.16 ft, no peak above base of 35 ft³/s; minimum daily, 3.6 ft³/s Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	15	16	9.8	18	21	22	17	16	9.5	7.5	6.5
2	14	15	15	13	17	21	21	17	13	9.1	7.3	6.0
3	12	14	13	13	12	21	21	16	13	8.8	7.9	5.3
4	12	14	15	13	15	21	21	15	12	8.5	8.6	5.6
5	12	14	18	13	16	21	21	14	14	8.4	8.6	5.9
6	12	15	17	14	15	21	21	14	14	8.1	9.2	6.3
7	12	14	15	14	14	21	21	14	13	7.8	8.5	6.4
8	11	14	14	15	15	19	22	14	9.7	6.9	8.1	6.1
9	14	14	14	16	16	21	22	13	9.7	6.6	7.6	6.3
10	16	14	14	15	17	20	21	13	9.8	6.8	7.2	6.2
11	16	15	14	14	17	22	21	14	9.8	6.4	6.8	6.3
12	14	13	12	16	18	23	21	16	10	6.3	6.8	6.3
13	15	14	14	15	18	21	21	16	11	8.8	6.8	6.3
14	15	13	15	16	17	20	20	15	11	7.6	6.8	6.5
15	16	14	16	16	18	18	20	15	10	7.4	6.8	6.5
16	16	16	14	16	18	20	21	15	9.9	7.2	6.6	6.5
17	19	17	16	17	18	21	20	22	9.9	6.9	6.6	6.3
18	16	16	17	16	19	20	21	27	9.3	7.3	6.6	6.3
19	16	17	16	16	20	21	20	24	9.9	6.6	6.2	6.4
20	17	17	15	16	20	20	19	26	13	6.3	8.2	6.8
21	16	16	17	16	19	20	19	24	13	6.6	7.6	7.2
22	16	16	18	16	20	20	18	23	11	7.7	7.4	8.7
23	17	14	18	16	20	20	16	21	9.6	10	7.2	13
24	16	13	12	16	21	21	15	20	8.9	9.9	6.1	10
25	16	14	3.6	16	21	21	15	19	8.6	9.3	5.5	11
26	16	15	4.3	16	21	21	15	18	8.9	9.3	5.4	9.8
27	16	13	6.0	16	21	22	15	17	10	9.1	5.6	10
28	15	15	7.9	17	21	22	14	16	11	8.4	5.6	10
29	15	16	11	17	---	22	15	16	11	8.0	5.5	10
30	15	17	8.1	18	---	22	15	16	9.9	7.7	5.6	11
31	15	---	8.3	18	---	23	---	16	---	7.7	5.7	---
TOTAL	463	444	414.2	475.8	502	647	574	543	329.9	245.0	215.9	225.5
MEAN	14.9	14.8	13.4	15.3	17.9	20.9	19.1	17.5	11.0	7.90	6.96	7.52
MAX	19	17	18	18	21	23	22	27	16	10	9.2	13
MIN	11	13	3.6	9.8	12	18	14	13	8.6	6.3	5.4	5.3
AC-FT	918	881	822	944	996	1280	1140	1080	654	486	428	447

CAL YR 1982 TOTAL 4962.1 MEAN 13.6 MAX 26 MIN 3.6 AC-FT 9840
WTR YR 1983 TOTAL 5079.3 MEAN 13.9 MAX 27 MIN 3.6 AC-FT 10070

NIOBRARA RIVER BASIN

31

06454500 NIOBRARA RIVER ABOVE BOX BUTTE RESERVOIR, NE

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

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

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

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

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1953. Datum of gage is 4,012.47 ft 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 above station.

AVERAGE DISCHARGE.--37 years, 29.8 ft³/s, 21,590 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 117 ft³/s July 22, gage height, 4.40 ft, no other peak above base of 100 ft³/s; maximum gage height, 4.67 ft Mar. 27, backwater from snow; minimum daily discharge, 12 ft³/s Sept. 9-14, 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	34	34	14	34	41	63	57	37	24	18	15
2	26	32	36	14	34	41	48	55	32	26	18	15
3	26	32	32	14	30	41	45	53	26	26	23	14
4	26	32	33	15	32	41	45	51	30	25	20	14
5	26	31	33	16	32	42	45	48	29	24	21	15
6	26	32	34	18	30	43	45	46	30	22	22	14
7	26	32	33	19	30	43	44	44	30	21	19	14
8	27	32	33	20	29	44	45	43	30	20	19	13
9	33	32	33	19	29	43	45	42	24	20	19	12
10	36	32	33	20	30	44	43	41	30	19	17	12
11	31	34	32	22	31	43	42	45	30	18	18	12
12	32	33	32	25	32	42	42	49	26	18	17	12
13	31	32	32	26	36	41	43	50	32	18	17	12
14	32	30	31	25	37	41	42	46	29	16	17	12
15	31	30	30	24	37	40	45	45	21	15	16	13
16	31	30	30	26	38	39	46	45	22	15	15	13
17	31	31	33	25	41	39	45	76	22	24	15	12
18	31	33	32	26	40	39	43	78	21	20	15	12
19	34	36	30	26	44	40	42	78	30	18	15	14
20	34	34	31	27	44	40	41	79	29	18	16	15
21	34	34	30	28	44	40	40	71	31	17	15	15
22	37	34	32	28	48	40	40	69	37	64	15	15
23	39	30	31	28	43	41	40	62	34	32	15	15
24	40	28	32	31	42	41	40	56	30	26	13	16
25	40	31	22	31	42	42	39	54	25	25	14	16
26	39	30	20	28	42	40	39	51	24	23	14	16
27	39	30	18	31	42	35	37	48	26	21	16	16
28	39	32	16	32	42	34	39	44	30	20	15	17
29	38	33	16	33	---	39	41	33	30	20	14	17
30	37	34	15	33	---	51	48	31	29	19	15	17
31	37	---	14	34	---	76	---	32	---	18	18	---
TOTAL	1015	960	893	758	1035	1306	1302	1622	856	692	521	425
MEAN	32.7	32.0	28.8	24.5	37.0	42.1	43.4	52.3	28.5	22.3	16.8	14.2
MAX	40	36	36	34	48	76	63	79	37	64	23	17
MIN	26	28	14	14	29	34	37	31	21	15	13	12
AC-FT	2010	1900	1770	1500	2050	2590	2580	3220	1700	1370	1030	843
CAL YR 1982	TOTAL	10514	MEAN 28.8	MAX 92	MIN 12	AC-FT	20850					
WTR YR 1983	TOTAL	11385	MEAN 31.2	MAX 79	MIN 12	AC-FT	22580					

NIOBRARA RIVER BASIN

06455000 BOX BUTTE RESERVOIR NEAR HEMINGFORD, NE

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

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

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft Mar. 26, 1948, elevation, 4,007.70 ft; minimum observed since operation of reservoir began, 764 acre-ft Aug. 23 to Sept. 14, 1976, elevation, 3,969.82 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 22,480 acre-ft June 30, elevation, 4,001.11 ft; minimum observed, 6,970 acre-ft Sept. 10, elevation, 3,985.73 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet) <u>a</u> /	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	3,982.52	5,030	-
Oct. 31	3,986.50	7,520	+2,490
Nov. 30	3,988.99	9,410	+1,890
Dec. 31	3,990.72	10,910	+1,500
CAL YR 1982			+3,950
Jan. 31	3,992.18	12,270	+1,360
Feb. 28	3,993.96	14,030	+1,760
Mar. 31	3,996.05	16,260	+2,230
Apr. 30	3,997.97	18,480	+2,220
May 31	4,000.06	21,090	+2,610
June 30	4,001.11	22,480	+1,390
July 31	3,995.83	16,020	-6,460
Aug. 31	3,987.06	7,900	-8,120
Sept. 30	3,986.96	7,830	-70
WTR YR 1983	-	-	+2,800

a Elevations read on or near last day of month.

NIORARA RIVER BASIN

33

06455500 NIOBRARA RIVER BELOW BOX BUTTE RESERVOIR, NE

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

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

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

GAGE.--Water-stage recorder. Concrete control since Apr. 11, 1953. Datum of gage is 3,950.08 ft 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 July 2, 1968, gage height, 5.04 ft; minimum daily, 0.10 ft³/s for many days in 1947, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 207 ft³/s Aug. 15, gage height, 4.42 ft; minimum daily, 0.71 ft³/s Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	.80	.80	.89	.92	.89	.92	1.2	1.2	.98	186	139
2	.89	.80	.83	.89	.92	.92	.92	1.1	1.2	.98	172	129
3	.83	.77	.80	.86	.92	.92	.95	1.0	1.2	.95	153	110
4	.83	.77	.77	.86	.92	.92	.95	1.0	1.3	1.4	143	102
5	.83	.80	.77	.86	.92	.95	.95	1.0	1.4	4.4	127	88
6	.86	.80	.80	.86	.92	.95	.95	1.0	1.2	4.6	118	82
7	.80	.80	.80	.83	.92	1.0	.95	.98	1.2	4.8	123	79
8	.80	.80	.80	.83	.92	1.0	.95	.98	1.2	5.1	151	78
9	.98	.80	.80	.83	.92	1.0	.95	.98	1.2	5.2	172	78
10	.92	.80	.80	.86	.92	1.0	.92	.98	1.2	58	169	27
11	.86	.89	.80	.80	.92	1.0	.92	1.1	1.2	85	166	.89
12	.83	.86	.80	.80	.92	1.0	.92	1.1	1.2	128	169	.86
13	.80	.86	.80	.80	.92	1.0	.95	1.0	1.2	158	172	.86
14	.80	.86	.77	.77	.92	1.0	.95	1.0	1.2	164	177	.86
15	.77	.86	.80	.80	1.0	1.0	.95	1.0	1.2	175	192	.86
16	.77	.86	.80	.80	1.0	1.0	1.0	1.1	1.2	175	201	.86
17	.77	.86	.86	.80	1.0	1.0	1.1	1.2	1.2	164	198	.86
18	.80	.86	.86	.80	1.0	1.0	1.1	1.2	1.2	138	175	.86
19	.86	.86	.89	.83	.86	1.0	1.1	1.2	1.2	116	151	.86
20	.83	.86	.89	.83	.86	1.0	1.1	1.1	1.3	121	131	.86
21	.83	.86	.92	.86	.89	1.0	1.1	1.1	1.7	139	129	.89
22	.83	.86	.92	.86	.89	1.0	1.1	1.1	1.3	122	123	.89
23	.86	.83	.95	.89	.86	1.0	1.1	1.1	1.2	71	116	.89
24	.86	.83	.92	.92	.86	1.0	1.1	1.1	1.2	59	112	.89
25	.86	.83	.95	.92	.89	1.0	1.1	1.1	1.2	59	108	.89
26	.83	.83	.92	.92	.89	.98	1.0	1.1	1.2	71	108	.89
27	.80	.83	.92	.92	.89	.98	1.1	1.1	1.1	114	108	.89
28	.77	.80	.92	.92	.89	.98	1.1	1.1	1.1	158	132	.89
29	.74	.80	.92	.92	---	.98	1.1	1.1	1.0	172	166	.89
30	.74	.80	.89	.92	---	1.0	1.2	1.2	1.0	177	153	.89
31	.71	---	.89	.92	---	.98	---	1.2	---	183	141	---
TOTAL	25.58	24.84	26.36	26.57	25.66	30.45	30.50	33.52	36.4	2835.41	4642	929.53
MEAN	.83	.83	.85	.86	.92	.98	1.02	1.08	1.21	91.5	150	31.0
MAX	.98	.89	.95	.92	1.0	1.0	1.2	1.2	1.7	183	201	139
MIN	.71	.77	.77	.77	.86	.89	.92	.98	1.0	.95	108	.86
AC-FT	51	49	52	53	51	60	60	66	72	5620	9210	1840
CAL YR 1982	TOTAL	6910.47	MEAN	18.9	MAX	184	MIN	.58	AC-FT	13710		
WTR YR 1983	TOTAL	8666.82	MEAN	23.7	MAX	201	MIN	.71	AC-FT	17190		

NIOBRARA RIVER BASIN

06457500 NIOBRARA RIVER NEAR GORDON, NE

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

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

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

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

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

REMARKS.--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 May 21, 1962, gage height, 5.25 ft; minimum daily, 16 ft³/s Dec. 20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 906 ft³/s June 22, gage height, 2.46 ft; minimum daily discharge, 50 ft³/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	126	130	92	114	135	122	351	149	161	109	72
2	91	117	126	106	110	135	117	281	139	163	97	71
3	88	117	122	116	100	135	122	180	135	133	117	62
4	82	113	130	125	98	144	126	169	139	120	113	67
5	82	109	125	125	94	154	130	175	135	122	91	65
6	98	102	125	125	94	139	135	224	135	117	103	68
7	102	106	120	125	92	117	135	224	131	117	105	65
8	91	109	120	125	90	102	135	204	134	117	77	62
9	113	109	116	125	75	106	117	198	127	106	68	57
10	144	113	114	130	88	135	109	192	122	104	71	57
11	135	122	110	130	85	122	109	240	128	100	81	62
12	106	116	110	125	95	122	106	210	124	117	89	98
13	91	122	112	125	102	139	106	180	127	113	115	70
14	95	110	112	120	106	139	88	169	112	109	101	59
15	98	109	112	120	109	135	102	175	104	105	85	87
16	102	113	125	120	102	126	113	186	108	138	85	65
17	109	102	139	120	113	126	117	204	262	164	93	57
18	109	98	126	120	135	139	126	264	122	204	151	52
19	126	102	126	120	135	144	113	186	159	154	116	50
20	113	113	109	118	135	139	113	159	180	122	83	78
21	122	117	109	118	135	139	109	175	225	102	74	78
22	126	117	88	118	139	117	113	180	426	170	73	85
23	130	110	85	118	135	113	113	164	155	374	96	88
24	122	110	95	116	130	113	113	154	144	307	96	88
25	122	110	90	116	126	113	109	154	144	198	85	87
26	109	110	90	116	135	130	117	164	186	148	75	88
27	95	114	84	113	135	117	149	159	186	128	75	92
28	102	117	84	117	135	123	204	154	167	97	75	89
29	106	122	84	122	---	113	217	154	173	102	75	98
30	106	126	84	117	---	106	324	149	198	149	64	111
31	126	---	86	117	---	113	---	149	---	144	69	---
TOTAL	3332	3381	3388	3700	3142	3930	3909	5927	4776	4505	2807	2228
MEAN	107	113	109	119	112	127	130	191	159	145	90.5	74.3
MAX	144	126	139	130	139	154	324	351	426	374	151	111
MIN	82	98	84	92	75	102	88	149	104	97	64	50
AC-FT	6610	6710	6720	7340	6230	7800	7750	11760	9470	8940	5570	4420
CAL YR 1982	TOTAL	42672	MEAN 117	MAX 1660	MIN 70	AC-FT 84640						
WTR YR 1983	TOTAL	45025	MEAN 123	MAX 426	MIN 50	AC-FT 89310						

NIOBRARA RIVER BASIN

35

06459175 SNAKE RIVER AT DOUGHBOY, NE

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

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

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

GAGE.--Water stage recorder. Datum of gage is 3098.94 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft³/s May 1, gage height, 1.74 ft; minimum daily discharge, 127 ft³/s July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	164	163	172	176	173	224	303	160	180	157	147
2	157	165	157	169	166	177	195	314	160	159	148	145
3	154	164	157	169	160	176	178	298	161	148	146	146
4	154	158	163	166	169	175	172	296	160	137	143	154
5	151	164	163	169	163	198	179	256	158	134	145	153
6	151	163	160	176	163	205	183	218	157	133	143	150
7	154	161	163	176	165	199	184	196	156	130	137	147
8	154	158	160	176	168	193	186	175	159	129	137	150
9	179	153	163	179	169	183	197	167	159	128	135	150
10	196	153	160	169	171	191	189	183	164	128	136	148
11	182	168	163	179	171	187	181	210	207	135	133	148
12	185	156	160	179	171	186	179	227	187	137	135	148
13	185	150	166	179	180	179	172	259	179	132	171	148
14	179	148	160	176	183	176	167	250	165	128	154	153
15	172	154	160	172	189	171	171	224	155	127	147	184
16	169	153	160	169	188	169	180	197	159	138	144	161
17	169	152	172	160	184	172	203	216	199	140	141	164
18	166	159	169	157	184	171	212	235	192	156	148	160
19	169	169	163	160	184	173	199	280	218	145	142	160
20	162	175	163	157	173	173	178	270	233	135	139	163
21	167	176	160	166	173	170	167	229	216	132	140	158
22	175	166	172	169	178	177	160	205	192	134	137	158
23	185	160	169	172	181	175	153	189	166	142	158	162
24	186	154	172	172	174	175	151	179	150	154	163	161
25	184	157	154	166	173	183	151	177	139	149	149	163
26	180	154	157	157	176	191	153	173	166	153	145	165
27	176	151	157	166	176	180	151	169	184	169	145	165
28	167	154	179	169	175	177	156	165	205	156	143	162
29	161	157	170	176	---	193	159	163	219	152	144	160
30	160	160	165	179	---	225	177	162	205	209	144	163
31	162	---	175	182	---	254	---	162	---	184	145	---
TOTAL	5242	4776	5075	5283	4883	5727	5307	6747	5330	4513	4494	4696
MEAN	169	159	164	170	174	185	177	218	178	146	145	157
MAX	196	176	179	182	189	254	224	314	233	209	171	184
MIN	151	148	154	157	160	169	151	162	139	127	133	145
AC-FT	10400	9470	10070	10480	9690	11360	10530	13380	10570	8950	8910	9310
CAL YR 1982	TOTAL	58562	MEAN	160	MAX	338	MIN	116	AC-FT	116200		
WTR YR 1983	TOTAL	62073	MEAN	170	MAX	314	MIN	127	AC-FT	123100		

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 southwest of Burge and 23 mi southwest of Valentine.

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

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

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

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 77,430 acre-ft May 5-9, elevation, 2,947.0 ft; minimum observed, 55,310 ft³/s Sept. 6-15, 21-23, elevation, 2,938.7 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2,937.3	52,110	-
Oct. 31	2,943.2	66,660	+14,550
Nov. 30	2,944.0	68,830	+2,170
Dec. 31	2,944.0	68,830	0
CAL YR 1982	-	-	-280
Jan. 31	2,944.0	68,830	0
Feb. 28	2,944.0	68,830	0
Mar. 31	2,944.0	68,830	0
Apr. 30	2,946.2	75,080	+6,250
May 31	2,946.3	75,370	+290
June 30	2,946.5	75,960	+590
July 31	2,944.1	69,110	-6,850
Aug. 31	2,939.7	57,690	-11,420
Sept. 30	2,939.0	56,000	-1,690
WTR YR 1983	-	-	+3,890

06459500 SNAKE RIVER NEAR BURGE, NE

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

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

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

REVISED RECORDS.--WSP 1279: 1950(M), 1951(P). WDR NE-67,72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,805.36 ft 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 upstream.

AVERAGE DISCHARGE.--20 years (1963-83), 151 ft³/s, 109,400 acre-ft/yr, since storage and diversion began.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 434 ft³/s May 19, gage height, 2.62 ft; minimum daily discharge, 25 ft³/s Oct. 29 to Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	25	264	241	250	230	244	251	200	290	160	42
2	26	26	253	241	252	226	251	300	191	286	160	42
3	26	40	246	241	251	226	257	317	187	277	160	43
4	26	68	247	241	241	238	257	330	182	261	158	43
5	26	115	247	241	232	251	257	368	179	247	157	43
6	26	160	247	241	232	251	257	375	176	241	155	43
7	26	163	224	254	232	251	257	362	173	224	155	43
8	27	194	205	264	232	250	257	344	168	205	90	43
9	28	218	205	264	232	251	257	325	168	187	43	43
10	26	223	205	264	232	251	257	310	168	171	42	43
11	26	247	209	257	232	251	257	311	168	109	42	43
12	26	261	210	270	232	251	178	340	173	51	42	52
13	27	262	208	267	232	251	99	336	184	51	43	71
14	27	264	221	267	232	251	99	336	184	50	43	71
15	27	264	232	267	232	239	99	339	182	52	42	99
16	27	264	232	264	229	232	99	336	179	50	42	130
17	27	261	232	264	244	239	99	336	182	117	42	151
18	27	247	232	264	254	244	99	357	190	161	42	152
19	26	235	232	264	254	244	101	388	196	160	42	152
20	26	235	232	264	254	244	102	409	249	165	42	155
21	26	235	232	264	254	244	102	406	260	164	42	160
22	26	216	232	264	254	241	102	377	254	163	42	160
23	26	235	244	264	254	241	103	354	250	163	44	160
24	26	242	257	250	254	241	113	244	247	161	43	160
25	26	247	257	238	254	242	121	239	235	160	43	160
26	26	247	247	235	254	244	127	310	226	158	43	182
27	26	257	238	235	254	244	140	281	254	156	43	193
28	26	267	238	244	241	249	154	256	282	155	42	201
29	25	267	241	250	---	254	169	231	290	158	42	229
30	25	263	241	250	---	249	188	214	291	159	42	229
31	25	---	241	250	---	244	---	203	---	158	42	---
TOTAL	812	6248	7251	7884	6800	7564	5102	9885	6268	5110	2170	3338
MEAN	26.2	208	234	254	243	244	170	319	209	165	70.0	111
MAX	28	267	264	270	254	254	257	409	291	290	160	229
MIN	25	25	205	235	229	226	99	203	168	50	42	42
AC-FT	1610	12390	14380	15640	13490	15000	10120	19610	12430	10140	4300	6620
CAL YR 1982	TOTAL	58184	MEAN 159	MAX 418	MIN 10	AC-FT 115400						
WTR YR 1983	TOTAL	68432	MEAN 187	MAX 409	MIN 25	AC-FT 135700						

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 downstream from powerplant in city park at north edge of Valentine and 4 mi upstream from mouth.

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

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

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

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

REMARKS.--Records good. Flow regulated by powerplant 500 ft above station.

AVERAGE DISCHARGE.--35 years (1948-83), 34.0 ft³/s, 24,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft³/s Mar. 22, 1960, gage height, 8.0 ft; minimum daily, 2.6 ft³/s Feb. 22, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 800 ft³/s July 18, gage height, 6.24 ft; minimum daily, 7.5 ft³/s Dec. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	30	32	26	34	33	69	67	39	54	78	17
2	23	32	33	29	38	48	71	109	40	40	77	18
3	19	34	33	27	20	34	42	182	34	43	81	21
4	27	31	36	29	24	34	70	312	33	43	72	19
5	26	32	34	27	39	46	57	215	29	33	51	23
6	25	32	31	34	30	54	51	139	29	27	52	25
7	20	32	31	31	19	35	54	126	36	29	35	22
8	27	32	29	40	45	53	62	109	31	24	41	14
9	38	28	21	35	28	32	47	53	54	25	35	16
10	40	32	24	33	33	47	45	56	78	22	32	18
11	40	38	26	33	31	38	38	86	17	16	28	22
12	52	45	25	42	38	49	60	100	29	22	28	13
13	38	25	31	35	32	31	45	91	87	25	34	16
14	38	37	35	35	36	39	33	92	80	9.9	27	24
15	55	38	33	40	46	38	48	115	57	12	20	21
16	33	37	29	29	46	37	55	126	56	54	31	20
17	43	37	28	28	50	35	49	114	59	205	28	18
18	44	39	32	18	44	37	50	105	50	381	25	20
19	34	39	35	18	61	38	57	96	50	209	24	26
20	32	38	38	42	59	42	49	79	50	114	25	16
21	34	40	36	28	47	35	51	71	47	115	24	23
22	36	32	33	37	51	33	50	79	36	121	22	25
23	31	30	33	35	42	36	36	74	46	110	23	22
24	38	26	36	23	61	38	42	68	29	94	26	27
25	31	41	24	33	40	51	32	68	34	89	26	24
26	31	36	7.5	30	40	38	32	59	27	73	24	19
27	31	31	31	23	48	54	32	36	32	77	24	26
28	33	31	32	36	40	37	41	51	60	77	17	19
29	31	30	25	36	---	61	35	40	40	72	26	23
30	35	36	31	32	---	42	54	43	34	75	9.3	25
31	31	---	35	33	---	55	---	30	---	77	27	---
TOTAL	1040	1021	939.5	977	1122	1280	1457	2991	1323	2367.9	1072.3	622
MEAN	33.5	34.0	30.3	31.5	40.1	41.3	48.6	96.5	44.1	76.4	34.6	20.7
MAX	55	45	38	42	61	61	71	312	87	381	81	27
MIN	19	25	7.5	18	19	31	32	30	17	9.9	9.3	13
AC-FT	2060	2030	1860	1940	2230	2540	2890	5930	2620	4700	2130	1230

CAL YR 1982 TOTAL 13631.8 MEAN 37.3 MAX 196 MIN 6.6 AC-FT 27040
WTR YR 1983 TOTAL 16212.7 MEAN 44.4 MAX 381 MIN 7.5 AC-FT 32160

NIOBRARA RIVER BASIN

39

06461500 NIOBRARA RIVER NEAR SPARKS, NE

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

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

WATER-DISCHARGE RECORDS

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

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

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

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

AVERAGE DISCHARGE.--38 years, 773 ft³/s, 560,000 acre-ft/yr, unadjusted.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,520 ft³/s July 17, gage height, 4.25 ft, minimum daily, 403 ft³/s July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	546	604	886	815	843	837	943	1340	839	1050	1010	498
2	564	629	876	825	740	811	924	1540	828	945	981	489
3	546	629	864	830	650	808	875	1440	795	874	897	502
4	551	633	848	795	660	788	919	1480	777	828	817	541
5	535	649	845	868	700	984	909	1380	758	750	783	532
6	561	701	845	858	724	983	874	1370	736	687	817	514
7	547	723	830	867	803	1010	897	1330	703	647	739	498
8	553	736	720	908	914	925	874	1290	682	608	750	480
9	686	801	640	883	892	878	885	1190	714	580	744	482
10	733	818	660	885	806	858	874	1220	715	562	677	482
11	639	891	600	822	793	884	874	1440	770	517	647	482
12	630	951	743	844	798	827	921	1600	818	467	621	474
13	587	861	844	790	795	858	839	1430	1050	418	697	498
14	566	829	789	798	822	852	761	1330	842	403	718	540
15	579	840	826	813	854	862	687	1280	786	411	697	627
16	575	833	789	807	872	837	718	1290	726	761	650	560
17	566	832	775	720	881	883	739	1340	789	1720	627	580
18	562	855	819	640	882	857	740	1600	925	1340	601	600
19	592	859	829	660	926	862	740	1630	897	1060	593	620
20	629	881	801	660	958	843	729	1560	1040	862	640	677
21	588	895	816	720	920	822	729	1460	910	817	629	652
22	580	862	731	740	905	801	761	1400	836	806	604	655
23	573	820	769	760	887	810	729	1290	1210	806	607	677
24	591	862	781	779	930	796	708	1130	837	862	620	691
25	601	860	622	778	938	826	708	931	741	969	609	697
26	607	859	628	834	866	869	729	967	678	886	568	695
27	601	850	658	857	897	856	750	944	931	946	564	741
28	609	870	410	761	864	842	828	901	1210	870	516	734
29	606	875	517	808	---	829	839	865	1120	851	518	771
30	600	874	705	824	---	874	993	855	1030	1030	501	811
31	599	---	815	853	---	907	---	839	---	1170	509	---
TOTAL	18302	24182	23281	24802	23520	26679	24496	39662	25693	25503	20951	17800
MEAN	590	806	751	800	840	861	817	1279	856	823	676	593
MAX	733	951	886	908	958	1010	993	1630	1210	1720	1010	811
MIN	535	604	410	640	650	788	687	839	678	403	501	474
AC-FT	36300	47960	46180	49190	46650	52920	48590	78670	50960	50590	41560	35310
CAL YR 1982	TOTAL	276131	MEAN	757	MAX	2490	MIN	400	AC-FT	547700		
WTR YR 1983	TOTAL	294871	MEAN	808	MAX	1720	MIN	403	AC-FT	584900		

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1982 to current year.

WATER TEMPERATURES: October 1982 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 337 micromhos May 10, 1983; minimum daily, 192 micromhos June 25, 1983.

WATER TEMPERATURES: Maximum daily, 29.0°C June 19, 1983; minimum daily, 1.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 337 micromhos May 10; minimum daily, 192 micromhos June 25.

WATER TEMPERATURES: Maximum daily, 29.0°C June 19, 1983; minimum daily, 1.0 °C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD) UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- CORALT 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									
18...	1520	620	241	8.5	12.5	15	94	0	31
NOV									
18...	1040	851	224	7.9	2.5	30	86	0	28
DEC									
13...	1540	832	245	8.0	.5	<1	100	0	33
JAN									
10...	1600	974	239	7.8	.5	<1	89	0	29
FEB									
08...	1400	903	230	7.9	1.5	<1	92	0	30
MAR									
07...	1430	1080	239	7.6	1.5	5	98	0	32
APR									
04...	1405	974	249	8.1	4.5	10	99	0	32
MAY									
02...	1630	1460	237	8.0	10.5	10	96	0	31
JUN									
28...	1400	1300	263	7.9	17.0	25	100	0	33
JUL									
28...	1120	846	269	8.2	26.0	25	110	0	34
AUG									
23...	1330	595	255	8.6	23.5	10	100	0	32
SEP									
20...	1455	630	235	--	9.5	<1	93	0	30

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY 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 SI02) (00955)
OCT 18...	4.1	9.6	.4	6.7	117	8.0	1.6	.40	54
NOV 18...	4.0	8.6	.4	5.6	105	9.0	1.4	.30	47
DEC 13...	4.4	9.4	.4	6.1	114	<5.0	1.8	.30	51
JAN 10...	4.0	8.6	.4	5.5	107	8.0	1.4	.30	52
FEB 08...	4.1	8.6	.4	5.6	109	8.0	1.4	.30	52
MAR 07...	4.4	9.0	.4	5.6	108	8.2	1.6	.40	50
APR 04...	4.6	11	.5	6.7	122	8.5	1.8	.40	46
MAY 02...	4.5	11	.5	6.7	113	9.9	1.7	.40	42
JUN 28...	5.2	13	.6	7.8	129	10	2.0	.40	44
JUL 28...	5.0	13	.6	8.3	128	10	2.2	.40	50
AUG 23...	4.8	12	.5	7.8	124	8.1	1.8	.40	52
SEP 20...	4.4	9.6	.5	5.6	108	7.6	1.5	.40	51

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 18...	186	.25	311	.40	.890	.080	30.0	11	2
NOV 18...	167	.23	384	.48	.120	.060	20.0	27	4
DEC 13...	186	.25	418	.59	.200	.120	30.0	20	5
JAN 10...	173	.24	455	.57	.200	.090	30.0	22	6
FEB 08...	175	.24	428	.60	.210	.110	40.0	27	7
MAR 07...	176	.24	513	.44	.900	.140	30.0	32	19
APR 04...	184	.25	484	.35	.120	.070	20.0	23	4
MAY 02...	175	.24	690	.40	.210	.080	20.0	31	5
JUN 28...	193	.26	677	.41	.250	.130	30.0	20	3
JUL 28...	200	.27	456	.42	.310	.140	30.0	14	3
AUG 23...	193	.26	311	<.10	.100	.020	30.0	15	3
SEP 20...	175	.24	298	.52	.100	.060	30.0	14	3

NIOBRARA RIVER BASIN

06461500 NIOBRARA RIVER NEAR SPARKS, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	236	217	244	228	224	275	---	218	285	255	253
2	237	238	216	238	227	225	258	246	215	283	273	253
3	236	238	217	241	238	225	247	262	213	---	288	247
4	237	242	217	233	237	227	258	288	216	286	277	---
5	244	244	225	227	231	221	256	279	---	282	265	237
6	243	234	217	225	254	---	248	277	213	282	276	246
7	243	---	217	224	233	236	255	270	216	282	276	246
8	243	227	227	234	224	237	248	275	207	283	267	249
9	238	224	233	225	218	239	248	268	207	277	274	247
10	251	226	233	229	226	235	256	337	209	272	284	255
11	235	223	244	228	223	238	250	272	203	307	286	246
12	239	227	238	226	223	242	252	272	---	276	289	249
13	243	221	224	231	224	259	256	304	194	287	278	244
14	245	224	217	234	225	241	262	282	205	287	278	237
15	247	223	224	238	225	237	253	288	217	287	277	229
16	246	219	222	240	228	238	258	292	217	244	277	233
17	261	222	217	237	228	233	273	---	214	324	277	236
18	247	222	215	244	225	234	262	285	206	276	283	235
19	243	225	233	239	230	231	260	285	215	276	277	223
20	244	225	215	235	235	---	262	295	194	286	276	227
21	245	227	214	235	230	237	263	292	201	285	276	224
22	245	231	217	229	224	233	258	290	205	293	269	225
23	247	225	215	243	222	235	258	287	194	286	262	224
24	256	233	208	234	229	245	263	287	216	285	267	218
25	245	233	224	237	229	---	258	308	192	279	268	223
26	247	225	234	238	225	240	258	295	193	287	267	224
27	245	222	238	233	234	244	254	285	---	287	273	218
28	247	218	222	236	224	235	248	282	263	288	263	216
29	252	218	232	230	---	234	251	297	222	282	265	219
30	252	219	223	230	---	234	---	294	212	273	265	217
31	245	---	223	237	---	238	---	284	---	276	266	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.0	9.5	6.0	2.0	3.5	6.0	6.0	---	13.0	22.0	22.0	23.0
2	12.0	---	5.0	2.0	2.5	8.0	5.5	9.0	16.0	22.0	23.0	22.5
3	15.5	5.0	4.0	3.0	4.0	8.5	5.0	11.0	17.5	---	24.0	21.5
4	14.0	5.0	4.5	2.5	2.0	9.0	4.5	12.0	17.5	18.0	23.0	---
5	13.0	5.0	5.0	2.0	2.0	8.0	6.0	15.0	---	18.5	21.0	19.0
6	10.0	5.0	4.0	3.0	3.0	---	6.0	16.0	17.0	20.0	23.5	17.0
7	10.0	---	3.0	3.0	3.0	4.0	6.5	13.0	17.5	21.0	25.0	17.0
8	10.5	5.5	1.0	2.0	3.5	3.0	7.0	17.0	19.0	23.0	24.0	20.0
9	8.0	5.0	2.5	2.5	3.0	3.0	8.0	14.5	19.0	23.0	24.5	20.0
10	7.0	5.0	1.0	2.0	3.0	5.0	---	16.0	21.0	24.5	20.5	17.0
11	7.5	5.0	1.5	2.5	4.5	6.5	9.0	10.0	19.5	20.0	19.0	18.0
12	8.5	5.0	---	3.5	4.5	---	6.0	10.0	---	20.0	19.5	15.0
13	9.5	3.5	2.0	5.0	8.0	---	5.0	12.5	17.0	22.0	22.0	14.5
14	10.5	3.0	1.5	4.0	6.5	8.0	5.0	11.5	19.0	22.0	21.0	15.0
15	12.5	2.5	1.5	3.0	8.0	7.0	7.0	15.5	20.0	20.0	22.0	14.5
16	12.0	4.0	2.0	2.5	6.0	5.0	12.0	13.0	20.5	17.0	25.0	14.0
17	16.0	5.0	2.0	1.0	6.5	5.0	14.0	---	18.0	22.0	22.5	17.0
18	12.0	5.0	3.5	1.0	7.0	4.5	13.0	9.0	19.0	21.0	23.5	16.5
19	6.0	6.5	2.0	2.0	---	3.5	11.0	12.5	29.0	24.0	21.0	14.5
20	6.0	6.5	2.0	1.5	4.5	---	13.5	13.0	21.5	23.0	21.0	7.5
21	5.5	5.0	4.5	2.0	8.0	4.0	12.0	16.0	25.0	23.0	24.0	7.5
22	8.0	3.0	4.5	3.0	7.5	6.0	12.0	18.5	24.0	22.0	20.0	8.5
23	9.5	3.0	4.5	4.0	5.5	6.0	12.5	16.0	24.5	18.0	20.0	10.0
24	11.0	3.5	2.0	4.0	4.5	6.0	16.0	18.5	26.5	24.0	20.0	13.0
25	10.0	1.0	2.0	4.0	5.0	---	14.5	16.5	25.0	19.0	23.0	14.5
26	11.0	4.0	3.5	1.0	5.5	3.5	14.0	20.0	22.0	21.5	24.0	15.0
27	12.0	3.0	1.0	3.0	---	6.0	13.0	20.0	---	22.0	21.0	16.5
28	9.0	5.0	1.0	4.0	6.5	6.0	11.0	21.0	17.0	22.5	24.0	16.5
29	7.0	4.0	2.5	4.5	---	6.0	9.0	19.0	16.0	22.0	23.0	12.5
30	7.0	4.5	2.0	4.0	---	8.0	---	19.5	19.0	20.0	22.0	15.0
31	10.0	---	2.5	3.0	---	10.0	---	15.5	---	24.5	21.5	---
MEAN	10.0	4.5	3.0	3.0	5.0	6.0	9.5	15.0	20.0	21.5	22.0	15.5
WTR YR 1983	MEAN	11.5		MAX	29.0	MIN	1.0					

06462000 NIOBRARA 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 downstream from county road bridge, 1.5 mi downstream from Fairfield Creek, and 6 miles south of Norden.

DRAINAGE AREA.--8,390 mi², approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,108.93 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 5, 1979, at datum 1.0 ft 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.--31 years, 860 ft³/s, 623,800 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,600 ft³/s July 17, 1983, gage height, 8.79 ft present datum, from highwater mark; maximum gage height, 11.24 ft present datum, Mar. 11, 1966, ice jam and backwater from bridge in channel; minimum daily discharge, 130 ft³/s Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,600 ft³/s June 17, gage height, 8.79 ft from highwater mark; minimum daily discharge, 537 ft³/s July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	646	651	886	880	892	968	1180	1550	994	1590	1200	600
2	625	711	892	900	868	976	1110	2100	994	1460	1160	570
3	615	755	874	920	722	965	1010	1900	960	1340	1090	590
4	600	733	898	900	778	958	1090	1850	943	1270	1030	694
5	610	761	922	940	922	1120	1080	1630	946	1190	964	646
6	641	808	934	940	880	1210	1030	1640	916	1100	994	625
7	620	838	922	958	980	1200	1040	1620	910	1030	952	605
8	635	844	874	940	1100	1100	1000	1580	880	964	904	570
9	772	886	689	952	1010	1080	1000	1480	892	898	832	551
10	856	952	722	904	960	1040	1010	1480	976	850	802	570
11	744	1010	667	886	951	1070	982	1760	1010	814	802	551
12	722	1030	694	934	923	1000	1030	1950	1030	711	808	551
13	700	964	856	904	934	1020	1040	1800	1400	635	867	551
14	651	958	892	886	952	955	838	1670	1120	605	869	625
15	630	982	922	946	976	957	790	1550	1060	537	860	749
16	641	940	874	922	1010	947	838	1530	1010	1190	833	722
17	620	904	916	826	1000	1020	844	1570	1070	3010	809	749
18	620	916	976	755	1030	988	862	1820	1110	1700	792	767
19	689	928	910	820	1070	992	856	1830	1260	1420	774	784
20	727	916	928	832	1080	986	838	1780	1480	1260	799	845
21	716	934	892	874	1050	965	796	1680	1240	1120	804	829
22	700	940	880	832	1060	936	802	1610	1150	1060	804	827
23	662	868	874	862	1040	973	808	1570	1370	1030	829	850
24	657	796	904	862	1070	970	778	1400	1240	1110	832	850
25	662	934	651	826	1030	991	778	1220	1080	1160	805	844
26	678	940	694	880	1010	1090	722	1200	1080	1090	733	844
27	684	898	711	850	999	1040	761	1240	1470	1180	722	862
28	705	898	610	832	989	993	850	1140	1910	1130	673	874
29	711	922	560	850	---	993	910	1080	1890	1070	635	880
30	689	940	780	892	---	1030	1030	1040	1680	1170	625	922
31	657	---	860	904	---	1150	---	994	---	1300	590	---
TOTAL	20885	26557	25664	27409	27286	31683	27703	48264	35071	35994	26193	21497
MEAN	674	885	828	884	975	1022	923	1557	1169	1161	845	717
MAX	856	1030	976	958	1100	1210	1180	2100	1910	3010	1200	922
MIN	600	651	560	755	722	936	722	994	880	537	590	551
AC-FT	41430	52680	50900	54370	54120	62840	54950	95730	69560	71390	51950	42640
CAL YR 1982	TOTAL	314952	MEAN 863	MAX 2060	MIN 482	AC-FT 624700						
WTR YR 1983	TOTAL	354206	MEAN 970	MAX 3010	MIN 537	AC-FT 702600						

NIOBRARA RIVER BASIN

06462000 NIOBRARA RIVER NEAR NORDEN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-66, 1974 to September 1983 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1974 to September 1982.

WATER TEMPERATURES: August 1974 to September 1982.

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANFOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- CORAL 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									
21...	1030	683	253	7.8	5.0	15	97	0	32
NOV									
16...	1035	924	233	7.8	1.5	15	89	0	29
DEC									
15...	1115	861	242	7.6	.5	<1	96	0	32
JAN									
12...	1025	847	230	7.6	.5	5	86	0	28
FEB									
10...	0950	989	240	7.6	.5	15	95	0	31
MAR									
09...	1055	1090	247	7.8	3.0	5	100	0	33
APR									
06...	1020	1010	243	7.8	6.0	5	96	0	31
MAY									
04...	0925	1930	274	7.7	12.5	25	100	0	34
JUN									
02...	1000	983	282	7.9	15.5	10	110	0	35
JUL									
29...	1030	1060	280	8.3	26.0	20	110	0	36
AUG									
25...	1010	805	278	8.4	26.5	10	110	0	34
SEP									
22...	0920	816	245	7.7	8.0	5	100	0	32

06462000 NIOBRARA RIVER NEAR NORDEN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 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 SI02) (00955)
OCT									
21...	4.1	9.0	.4	6.3	123	6.0	2.9	.30	50
NOV									
16...	4.0	8.4	.4	5.5	107	9.0	1.5	.30	47
DEC									
15...	3.9	8.5	.4	5.6	111	<5.0	1.6	.30	49
JAN									
12...	3.8	8.3	.4	5.6	105	8.0	1.5	.30	50
FEB									
10...	4.2	8.6	.4	5.6	110	8.0	3.4	.40	52
MAR									
09...	4.3	8.9	.4	5.6	115	8.4	1.6	.40	49
APR									
06...	4.4	11	.5	6.0	118	8.8	1.7	.40	48
MAY									
04...	4.8	13	.6	7.4	128	11	2.1	.40	44
JUN									
02...	5.5	14	.6	7.9	134	11	2.0	.40	47
JUL									
29...	4.9	12	.5	8.4	135	10	2.2	.40	51
AUG									
25...	5.0	12	.5	7.9	133	8.9	2.0	.40	55
SEP									
22...	4.8	9.6	.4	5.8	113	7.4	1.5	.30	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, 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...	184	.25	340	1.3	.160	.180	20.0	17	9
NOV									
16...	169	.23	421	.51	.250	.070	30.0	35	11
DEC									
15...	178	.24	414	.61	.190	.100	20.0	27	5
JAN									
12...	169	.23	385	.57	.100	.080	20.0	23	4
FEB									
10...	179	.24	479	.62	.160	.100	20.0	21	5
MAR									
09...	180	.25	530	.50	.250	.090	20.0	32	7
APR									
06...	182	.25	497	.40	.090	.060	20.0	24	4
MAY									
04...	194	.26	1010	.36	.150	.070	30.0	58	7
JUN									
02...	203	.26	539	.21	.080	.050	30.0	18	5
JUL									
29...	206	.28	589	.39	.320	.150	40.0	26	49
AUG									
25...	205	.28	446	<.10	.190	.010	30.0	9.0	5
SEP									
22...	181	.25	399	.52	.140	.070	30.0	15	11

NIOBRARA RIVER BASIN

06462500 PLUM CREEK AT MEADVILLE, NE

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

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

WATER-DISCHARGE RECORDS

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

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

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

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

AVERAGE DISCHARGE.--34 years (1948-75, 1976-83), 110 ft³/s, 79,700 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 3	2300	560	2.43	June 30	0530	*1520	4.38
May 8	0400	522	2.28	July 17	1400	503	2.24
May 13	1730	695	2.67	Aug. 23	0700	360	1.73
May 21	1230	438	1.94				

Minimum daily discharge, 96 ft³/s Jan. 3, Feb. 4, June 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	104	118	115	102	132	304	187	157	1270	221	117
2	109	101	118	110	100	130	296	291	143	956	216	112
3	105	103	118	96	98	125	260	501	134	744	200	109
4	101	99	116	97	96	126	247	527	126	584	190	119
5	97	100	115	99	98	146	234	438	120	477	179	118
6	98	105	116	101	105	188	220	355	115	391	171	116
7	105	108	121	102	115	183	209	373	109	334	180	107
8	109	107	115	103	110	181	203	491	104	285	189	104
9	123	107	110	106	112	168	191	432	99	248	183	105
10	125	113	108	105	110	162	190	345	100	225	173	104
11	116	123	105	102	107	174	177	320	96	204	160	101
12	108	129	110	103	109	175	172	428	133	188	153	98
13	106	116	115	104	111	166	175	642	200	180	162	99
14	105	116	112	104	113	156	161	621	184	174	164	100
15	104	116	105	105	121	150	137	498	151	166	150	106
16	105	115	100	102	139	144	176	417	135	366	144	106
17	104	113	104	100	142	144	237	335	163	464	140	103
18	103	114	107	104	160	143	269	333	207	381	137	100
19	112	117	110	103	172	145	256	392	187	333	129	99
20	110	123	104	104	189	144	226	420	187	304	125	105
21	107	120	103	103	178	142	205	425	192	278	123	102
22	106	115	107	104	173	141	189	382	182	250	124	104
23	107	110	109	107	172	148	177	321	165	240	279	103
24	108	115	111	102	163	153	166	273	144	224	209	102
25	108	117	108	108	153	160	160	238	124	202	163	99
26	106	118	105	107	145	176	154	211	116	200	147	101
27	106	116	103	105	140	181	151	192	205	199	142	102
28	103	115	101	108	136	154	151	174	438	189	134	99
29	107	115	100	110	---	166	149	160	973	192	125	100
30	106	116	98	108	---	204	152	161	1430	214	121	112
31	106	---	108	110	---	266	---	159	---	237	120	---
TOTAL	3319	3386	3380	3237	3669	4973	5994	11042	6819	10699	5053	3152
MEAN	107	113	109	104	131	160	200	356	227	345	163	105
MAX	125	129	121	115	189	266	304	642	1430	1270	279	119
MIN	97	99	98	96	96	125	137	159	96	166	120	98
AC-FT	6580	6720	6700	6420	7280	9860	11890	21900	13530	21220	10020	6250
CAL YR 1982	TOTAL	44930	MEAN 123	MAX 481	MIN 78	AC-FT 89120						
WTR YR 1983	TOTAL	64723	MEAN 177	MAX 1430	MIN 96	AC-FT 128400						

06462500 PLUM CREEK AT MEADVILLE, NE--Continued

WATER QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS 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- SURP- TION RATIO (00931)
NOV 16...	1015	111	198	8.2	2.0	75	0	25	3.1	6.9	.4
JUN 08...	1110	124	224	8.6	18.0	86	0	27	4.4	9.1	.4
JUL 27...	1000	197	280	8.1	25.0	110	0	34	6.0	12	.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 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 16...	5.6	94	6.0	1.1	.30	57	161	.22	48.4	.96
JUN 08...	6.6	106	5.7	1.6	.40	52	170	.23	57.0	.56
JUL 27...	8.7	138	8.3	2.7	.50	46	201	.27	107	.78

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 upstream from Bone Creek and 7 mi north of Long Pine.

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

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 507 ft³/s July 16, gage height, 5.27 ft; minimum daily, 81 ft³/s May 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	95	99	95	92	98	160	123	84	153	98	102
2	89	96	99	95	92	98	122	181	87	147	94	93
3	87	95	97	95	91	99	109	154	91	138	92	94
4	87	95	97	96	91	100	101	116	89	130	91	101
5	87	95	97	95	92	143	101	104	90	125	91	100
6	98	97	97	96	95	127	104	100	90	110	95	98
7	90	97	97	97	96	113	104	98	88	100	92	98
8	95	96	96	97	96	104	104	94	88	98	90	98
9	125	97	95	97	96	101	100	94	85	98	89	98
10	104	97	96	98	97	99	96	93	85	95	89	94
11	94	110	95	98	97	100	95	98	84	92	90	93
12	92	113	95	97	97	99	98	159	93	92	91	93
13	92	103	96	98	101	97	99	162	125	90	92	91
14	93	100	96	98	102	96	93	123	101	88	93	91
15	93	99	95	97	100	103	99	102	92	88	92	96
16	92	99	95	95	99	105	118	95	90	500	90	92
17	94	100	96	93	96	108	148	96	107	350	91	93
18	94	102	97	93	96	106	117	110	135	220	90	92
19	98	104	97	92	98	105	110	123	132	160	89	94
20	98	102	96	91	94	103	102	122	122	130	89	94
21	97	100	96	91	93	102	95	110	114	120	90	96
22	96	99	97	92	95	103	93	100	110	110	94	90
23	95	97	97	92	95	103	92	92	106	100	161	91
24	95	97	99	91	94	104	91	89	102	105	114	91
25	96	97	97	92	94	105	91	87	101	100	98	90
26	95	97	95	91	95	107	89	87	107	91	90	90
27	95	97	95	90	97	100	91	88	199	101	94	91
28	94	98	96	92	97	105	96	87	366	101	98	92
29	95	98	94	92	---	115	94	85	370	98	98	91
30	95	99	94	91	---	133	96	84	220	104	96	92
31	95	---	95	92	---	186	---	81	---	102	97	---
TOTAL	2943	2971	2983	2919	2678	3367	3108	3337	3753	4136	2958	2819
MEAN	94.9	99.0	96.2	94.2	95.6	109	104	108	125	133	95.4	94.0
MAX	125	113	99	98	102	186	160	181	370	500	161	102
MIN	87	95	94	90	91	96	89	81	84	88	89	90
AC-FT	5840	5890	5920	5790	5310	6680	6160	6620	7440	8200	5870	5590
CAL YR 1982	TOTAL	34326	MEAN	94.0	MAX	139	MIN	78	AC-FT	68090		
WTR YR 1983	TOTAL	37972	MEAN	104	MAX	500	MIN	81	AC-FT	75320		

06463500 LONG PINE CREEK NEAR RIVERVIEW, NE

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

DRAINAGE AREA.--390 mi², 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 National Geodetic Vertical Datum of 1929, (levels by Bureau of Reclamation) Prior to Dec. 7, 1962, at site 100 ft upstream at present datum. Dec. 7, 1962, to Sept. 20, 1978, at site 3 ft upstream at present datum.

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

AVERAGE DISCHARGE.--34 years (1948-53, 1954-83), 140 ft³/s, 101,400 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 2	1730	485	4.28	July 16	0630	*1830	6.87
June 13	1000	441	4.16	Aug. 23	0930	*470	4.60
June 29	0400	997	5.43				

Minimum daily discharge, 134 ft³/s Dec. 9, 11, 15, June 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	152	144	158	156	152	282	212	164	373	198	173
2	152	150	142	155	152	155	213	399	161	282	187	166
3	143	143	142	144	145	155	175	355	166	230	176	161
4	144	147	139	172	154	158	166	219	169	200	170	177
5	142	144	139	165	148	220	164	183	169	184	173	171
6	164	155	139	170	146	280	172	171	169	166	193	167
7	150	158	137	175	151	230	183	164	166	158	180	165
8	157	150	137	173	152	175	197	162	164	164	180	173
9	239	155	134	177	149	161	186	164	155	166	174	170
10	194	158	137	174	150	157	174	169	158	172	165	168
11	164	193	134	173	147	155	168	187	164	169	172	173
12	152	187	139	172	150	152	173	290	196	169	166	168
13	144	166	139	177	152	150	190	339	364	164	175	167
14	140	155	137	178	164	147	169	230	244	161	181	165
15	142	158	134	173	178	147	194	175	172	158	184	190
16	137	164	142	176	193	147	240	172	147	893	178	194
17	139	164	144	166	190	152	291	184	203	427	178	181
18	136	169	150	162	184	150	219	206	219	302	166	175
19	139	172	150	162	178	152	182	244	230	216	166	172
20	146	169	152	166	169	152	170	247	213	184	164	175
21	139	161	147	162	161	152	164	223	181	178	166	180
22	143	152	150	164	161	155	160	190	155	172	169	177
23	149	150	155	163	161	161	157	181	144	172	380	176
24	149	152	164	162	158	164	156	164	137	184	251	169
25	150	150	152	164	152	175	158	150	134	178	190	166
26	148	147	137	158	152	184	158	150	137	165	180	164
27	148	147	158	160	155	161	158	150	377	198	202	157
28	137	147	175	163	152	161	160	169	738	195	186	159
29	139	147	147	160	---	169	160	147	796	172	182	157
30	142	144	147	159	---	213	162	196	505	210	174	161
31	146	---	164	157	---	296	---	150	---	208	168	---
TOTAL	4666	4706	4507	5140	4460	5338	5501	6342	7097	6970	5774	5117
MEAN	151	157	145	166	159	172	183	205	237	225	186	171
MAX	239	193	175	178	193	296	291	399	796	893	380	194
MIN	136	143	134	144	145	147	156	147	134	158	164	157
AC-FT	9260	9330	8940	10200	8850	10590	10910	12580	14080	13820	11450	10150

CAL YR 1982	TOTAL	56036	MEAN 154	MAX 370	MIN 104	AC-FT 111100
WTR YR 1983	TOTAL	65618	MEAN 180	MAX 893	MIN 134	AC-FT 130200

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CTIC CON- DUCT- ANCE (UMHNS) (00095)	PH (STAND- ARD 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									
21...	1400	151	196	7.7	10.0	15	74	0	24
NOV									
15...	1420	167	197	7.8	6.0	25	79	0	26
DEC									
16...	1020	131	193	7.6	3.0	10	81	0	27
JAN									
10...	1100	178	203	7.6	3.0	<1	74	0	24
FEB									
08...	1050	152	193	7.6	4.0	<1	74	0	24
MAR									
10...	1345	158	214	7.6	7.5	5	77	0	25
APR									
07...	1125	189	208	7.6	8.0	15	78	0	25
MAY									
05...	1120	188	208	7.4	14.5	30	78	0	25
JUN									
03...	1115	164	195	7.9	16.5	<1	75	0	24
JUL									
01...	1120	374	221	8.0	22.5	100	85	0	27
27...	1310	166	215	7.4	28.0	--	78	0	25
AUG									
26...	0830	178	203	7.5	18.5	20	73	0	23
SEP									
23...	1050	168	192	--	8.5	5	71	0	23

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- 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)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
OCT									
21...	3.5	7.8	.4	7.1	88	8.0	1.8	.40	54
NOV									
15...	3.4	7.6	.4	6.1	84	7.0	2.9	.20	54
DEC									
16...	3.4	7.5	.4	5.3	85	<5.0	2.6	.30	55
JAN									
10...	3.5	7.7	.4	5.7	77	6.0	2.9	.30	55
FEB									
08...	3.3	7.1	.4	5.1	86	5.0	2.4	.30	54
MAR									
10...	3.6	8.7	.4	5.7	91	7.2	3.0	.30	54
APR									
07...	3.8	9.8	.5	5.7	93	8.2	4.1	.30	49
MAY									
05...	3.7	9.9	.5	5.7	91	9.1	3.3	.30	49
JUN									
03...	3.6	7.7	.4	5.5	88	5.6	2.4	.30	51
JUL									
01...	4.3	10	.5	7.5	105	12	3.8	.30	38
27...	3.8	8.2	.4	7.2	90	7.9	3.1	.30	49
AUG									
26...	3.7	7.7	.4	8.1	87	8.2	3.1	.30	51
SEP									
23...	3.4	7.4	.4	5.2	81	5.6	2.2	.30	53

NIOBRARA RIVER BASIN

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06463500 LONG PINE CREEK NEAR RIVERVIEW, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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...	159	.22	65.0	.54	.260	.070	30.0	33	3
NOV 15...	158	.21	71.1	3.2	.220	.170	20.0	52	8
DEC 16...	165	.22	58.4	1.7	.240	.180	20.0	21	6
JAN 10...	151	.21	72.7	1.6	.200	.200	20.0	32	2
FEB 08...	153	.21	62.7	1.7	.220	.180	20.0	21	3
MAR 10...	162	.22	69.2	1.6	.290	.180	20.0	53	7
APR 07...	162	.22	82.5	1.4	.290	.200	20.0	50	3
MAY 05...	161	.22	81.5	1.3	.270	.170	20.0	60	4
JUN 03...	153	.21	67.7	1.3	.170	.140	20.0	24	2
JUL 01...	166	.23	168	.62	.500	.390	30.0	100	6
27...	158	.22	71.0	1.1	--	--	--	--	--
AUG 26...	157	.21	75.6	1.3	.480	.330	30.0	78	2
SEP 23...	149	.20	67.5	1.4	.120	.130	20.0	18	2

NIOBRARA RIVER BASIN

06464500 KEYA PAHA RIVER AT WEWELA, SD

LOCATION.--Lat 43°01'42", long 99°46'45", in SE1/4 sec.24, T.95 N., R.76 W., Tripp County, Hydrologic Unit 10150006, on left bank 13 ft downstream from bridge on U.S. Highway 183, 1.0 mi north of Wewela, 4.5 mi upstream from Holt Creek, and 11.5 mi downstream from Lost Creek.

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

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

GAGE.--Water-stage recorder. Datum of gage is 2,049.78 ft National Geodetic Vertical Datum of 1929. Prior to June 21, 1957, nonrecording gage at site 13 ft upstream at same datum.

REMARKS.--Records good except those for winter period, Nov. 25 to Feb. 17, which are poor.

AVERAGE DISCHARGE.--38 years (water years 1939-40, 1948-83), 68.9 ft³/s, 49,920 acre-ft/yr; median of yearly mean discharges, 58 ft³/s, 42,000 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	2100	290	a3.00	May 20	0300	258	2.82
Mar. 6	1645	413	3.16	June 15	0900	446	3.31
Mar. 31	2215	333	2.98	June 21	0015	820	4.50
Apr. 17	0630	313	2.91	June 29	0615	*1240	5.35
May 3	1830	1220	5.33	July 18	1015	824	4.51
May 13	1030	784	4.42				

a Backwater from ice.

Minimum daily discharge, 31 ft³/s June 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	81	90	57	75	99	308	320	64	572	136	48
2	41	81	85	60	70	97	238	930	65	479	132	50
3	40	80	90	60	70	96	193	1120	67	356	123	47
4	38	77	100	65	70	94	166	852	63	282	106	52
5	38	76	90	70	65	110	154	464	55	230	99	62
6	50	76	70	70	65	333	161	326	49	191	89	55
7	45	77	60	70	70	305	161	271	45	161	84	50
8	60	78	50	65	70	226	148	234	35	129	76	49
9	100	78	50	65	75	156	130	195	34	109	73	46
10	105	79	55	65	80	156	117	164	34	92	70	45
11	100	89	50	70	90	151	108	208	31	81	67	44
12	130	120	55	80	95	143	122	554	40	70	65	44
13	140	100	60	100	120	134	94	715	130	71	63	47
14	120	80	60	110	200	122	106	579	346	77	60	46
15	100	75	55	95	250	113	195	360	406	70	60	50
16	90	70	55	90	280	106	249	264	343	159	58	53
17	85	70	60	95	200	105	296	218	280	498	58	50
18	80	73	65	100	135	105	262	214	226	767	58	48
19	90	80	60	106	121	106	210	236	200	620	57	47
20	100	85	60	106	110	105	180	247	601	402	51	48
21	97	87	60	110	105	99	171	224	605	262	51	48
22	96	85	70	110	104	101	144	198	443	180	50	49
23	93	85	80	100	102	106	124	171	353	143	50	50
24	91	70	70	95	99	106	110	152	241	132	50	50
25	88	60	60	90	94	112	99	134	162	123	49	50
26	87	50	60	90	91	130	89	119	140	130	47	49
27	83	55	57	90	92	123	82	104	206	134	46	47
28	81	65	55	95	95	120	84	91	883	106	46	46
29	80	60	55	100	---	146	99	81	970	104	45	45
30	78	85	55	90	---	230	126	72	687	117	46	45
31	79	---	57	80	---	313	---	67	---	144	47	---
TOTAL	2547	2327	1999	2649	3093	4448	4726	9884	7804	6991	2112	1460
MEAN	82.2	77.6	64.5	85.5	110	143	158	319	260	226	68.1	48.7
MAX	140	120	100	110	280	333	308	1120	970	767	136	62
MIN	38	50	50	57	65	94	82	67	31	70	45	44
AC-FT	5050	4620	3970	5250	6130	8820	9370	19600	15480	13870	4190	2900

CAL YR 1982 TOTAL 36601.0 MEAN 100 MAX 1390 MIN 9.0 AC-FT 72600
WTR YR 1983 TOTAL 50040.0 MEAN 137 MAX 1120 MIN 31 AC-FT 99250

NIORARA RIVER BASIN

53

06464900 KEA FAHA RIVER NEAR NAPER, NE

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

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

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

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

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft, 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.--26 years, 131 ft³/s, 94.910 acre-ft/yr; median of yearly mean discharges, 116 ft³/s, 84,000 acre-ft/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 2	1700	1850	7.90	June 20	2030	1610	7.37
May 13	0430	984	7.04	June 28	0730	3380	*8.63
June 14	0300	1380	7.17	July 18	1530	2500	8.18

Minimum daily discharge, 67 ft³/s Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	107	150	84	112	214	591	505	275	1070	305	75
2	96	109	176	76	106	219	488	1400	275	816	258	74
3	85	110	152	78	102	222	380	1280	275	576	222	71
4	79	111	145	84	106	228	303	1140	275	449	193	72
5	78	112	138	96	100	307	261	810	260	395	175	78
6	106	112	130	106	94	459	257	628	242	521	168	78
7	93	115	138	104	106	536	258	562	228	456	159	77
8	97	115	128	100	100	371	259	488	219	377	149	72
9	205	117	120	106	100	270	246	424	197	322	140	68
10	205	119	110	104	110	207	229	395	193	265	130	69
11	193	158	90	110	130	204	212	430	172	218	118	70
12	230	189	100	120	160	199	215	664	219	189	106	67
13	256	144	110	140	200	191	252	936	893	169	122	69
14	245	115	106	160	250	185	238	840	1050	149	119	75
15	213	106	114	150	400	193	213	691	664	130	112	78
16	185	100	120	120	520	191	333	578	501	204	103	86
17	160	102	125	120	600	190	466	516	443	624	106	82
18	147	108	120	130	560	202	474	555	377	2180	102	78
19	164	121	120	130	454	197	467	605	419	1530	94	75
20	183	129	114	130	275	193	400	598	946	649	88	79
21	178	130	120	140	226	188	365	562	1360	508	86	81
22	178	126	125	140	210	178	335	494	775	520	83	81
23	172	127	120	130	205	186	305	412	591	375	87	85
24	159	112	110	130	207	205	285	416	605	293	93	89
25	148	85	96	120	205	213	300	449	535	263	92	86
26	139	80	72	112	188	217	370	562	437	228	88	83
27	128	74	80	120	176	189	340	501	612	224	85	78
28	121	140	74	130	178	168	340	443	1980	210	82	75
29	111	200	82	125	---	189	325	360	2980	311	81	73
30	113	153	86	120	---	335	360	327	1700	243	79	77
31	109	---	90	116	---	552	---	290	---	253	77	---
TOTAL	4671	3626	3561	3631	6180	7598	9867	18861	19698	14717	3902	2301
MEAN	151	121	115	117	221	245	329	608	657	475	126	76.7
MAX	256	200	176	160	600	552	591	1400	2980	2180	305	89
MIN	78	74	72	76	94	168	212	290	172	130	77	67
AC-FT	9260	7190	7060	7200	12260	15070	19570	37410	39070	29190	7740	4560
CAL YR 1982	TOTAL	59359	MEAN 163	MAX 1860	MIN 22	AC-FT 117700						
WTR YR 1983	TOTAL	98613	MEAN 270	MAX 2980	MIN 67	AC-FT 195600						

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 southeast of Spencer.

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

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

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

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

REMARKS.--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 gage openings.

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

AVERAGE DISCHARGE.--53 years (1913-14, 1927-36, 1940-83), 1,403 ft³/s, 1,016,000 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 6,660 ft³/s June 29; minimum daily, 540 ft³/s Dec. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1390	1970	993	1740	1960	2880	2490	1850	4660	2380	952
2	1610	1380	1750	1190	1720	1870	2760	4650	1790	3200	2080	953
3	1170	1400	1800	1480	1530	1800	2610	4520	1630	2900	1890	930
4	1080	1260	1730	1580	1270	1800	2420	3790	1520	2800	1690	1000
5	1050	1260	1690	1610	1120	2330	2340	3670	1630	2540	1510	1310
6	1390	1280	1630	1710	1180	2820	2460	3110	1610	2310	1610	1200
7	1390	1350	1600	1810	1240	2460	2300	2940	1490	2150	1540	1130
8	1330	1440	1180	1960	1330	2180	1920	2830	1460	1910	1510	949
9	2050	1530	764	2090	1420	1450	2110	2750	1460	1760	1370	912
10	1930	1620	1000	2030	1580	2030	2130	2540	1520	1660	1380	967
11	1790	1930	863	2050	1790	1950	2160	2610	1500	1610	1200	1130
12	1580	1880	727	1990	1850	1980	2060	3320	1640	1490	1160	1010
13	1490	1400	968	2010	2060	1900	2680	3590	3120	1340	1400	1060
14	1470	1810	1100	2050	2250	1900	1930	3530	3230	1130	1380	1080
15	1380	1560	1160	2050	2430	1940	2060	3360	2640	1090	1240	1420
16	1320	1590	1450	1870	2590	1980	2160	3000	2330	1800	1180	1370
17	1300	1750	1520	1710	2740	2160	2390	2850	2550	3580	1170	1200
18	1270	1850	1810	1580	2840	1950	2550	3350	2550	5370	1190	1190
19	1530	1850	1830	1420	3180	1950	2400	3440	2410	4240	1070	1220
20	1740	1760	1820	1270	2880	1860	2220	3320	2480	2950	1030	1230
21	1520	1760	1820	1360	2390	1830	2030	3040	3060	2360	1060	1340
22	1500	1630	1880	1550	2540	1850	1980	2870	2680	2060	1060	1320
23	1370	1260	1940	1760	2510	1890	1920	2710	2440	2240	1160	1110
24	1360	1440	1820	1900	1980	1930	1750	2580	2250	2080	1620	1200
25	1370	1440	831	1810	1880	2000	1660	2440	2180	2010	1330	1180
26	1330	1490	540	1660	2050	1850	1540	2200	2040	1830	1170	1210
27	1350	1230	651	1530	1940	2190	1580	2020	2790	2010	1230	1190
28	1440	1590	615	1530	1930	2380	1660	2030	5580	1950	1150	1130
29	1360	1750	620	1720	---	1870	1680	1990	6660	2110	1100	1260
30	1300	1970	736	1920	---	2430	1860	1950	6210	1950	992	1300
31	1310	---	804	1770	---	2770	---	1880	---	2180	1020	---
TOTAL	44640	46850	40619	52963	55960	63260	64200	91370	76300	73270	41872	34453
MEAN	1440	1562	1310	1708	1999	2041	2140	2947	2543	2364	1351	1148
MAX	2050	1970	1970	2090	3180	2820	2880	4650	6660	5370	2380	1420
MIN	1050	1230	540	993	1120	1450	1540	1880	1460	1090	992	912
AC-FT	88540	92930	80570	105100	111000	125500	127300	181200	151300	145300	83050	68340
CAL YR 1982	TOTAL	550981	MEAN	1510	MAX	4390	MIN	540	AC-FT	1093000		
WTR YR 1983	TOTAL	685757	MEAN	1879	MAX	6660	MIN	540	AC-FT	1360000		

NIOBRARA RIVER BASIN

55

06465310 EAGLE CREEK NEAR REDBIRD, NE

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

DRAINAGE AREA.--206 mi².

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

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

REMARKS.--Records good except those for winter period, which are poor. No gage height record Jan. 7 to Feb. 10, Feb. 12-22, and Feb. 24 to Mar. 23, during winter period.

AVERAGE DISCHARGE.--5 years, 46.1 ft³/s, 33,400 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,020 ft³/s July 17, gage height, 7.71 ft; minimum daily, 26 ft³/s Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	50	50	41	46	63	118	178	52	60	43	28
2	47	49	49	38	44	63	96	284	54	55	40	29
3	41	47	47	41	42	64	87	131	54	55	38	28
4	38	45	46	44	44	65	84	102	52	52	37	29
5	39	44	47	47	46	113	87	94	51	50	37	33
6	43	46	46	48	40	125	98	92	51	49	37	33
7	41	48	47	50	44	82	92	88	51	47	35	31
8	56	46	43	50	50	73	86	82	50	45	34	29
9	90	52	40	52	60	67	86	81	51	44	31	29
10	61	60	37	52	70	65	82	78	51	43	32	29
11	52	93	39	54	80	71	82	82	50	41	31	30
12	49	84	48	56	78	73	100	97	63	41	31	32
13	48	52	57	58	79	73	110	85	151	40	42	32
14	48	51	55	60	80	70	89	75	86	39	43	35
15	49	51	49	54	102	71	106	74	64	38	39	50
16	48	48	42	48	112	68	120	75	56	52	37	41
17	50	50	53	46	92	74	108	81	131	603	35	39
18	50	52	50	44	85	74	100	130	108	183	35	38
19	60	65	45	46	88	71	95	118	76	68	31	38
20	63	57	44	48	86	71	94	86	68	52	31	40
21	60	51	45	50	71	68	94	74	63	46	31	38
22	56	47	45	48	71	66	94	70	57	43	31	39
23	55	42	46	48	76	72	87	64	53	51	32	40
24	52	44	45	50	76	73	83	63	53	45	32	42
25	51	47	43	47	64	75	81	60	51	44	33	43
26	51	42	38	42	64	76	81	60	71	42	33	42
27	50	44	35	46	70	71	78	59	96	48	33	41
28	50	47	38	50	68	79	84	57	138	49	32	41
29	48	47	41	54	---	96	80	52	96	48	30	41
30	48	49	38	50	---	132	83	55	73	45	29	43
31	49	---	43	48	---	138	---	54	---	44	26	---
TOTAL	1591	1550	1391	1510	1928	2442	2765	2781	2121	2162	1061	1083
MEAN	51.3	51.7	44.9	48.7	68.9	78.8	92.2	89.7	70.7	69.7	34.2	36.1
MAX	90	93	57	60	112	138	120	284	151	603	43	50
MIN	38	42	35	38	40	63	78	52	50	38	26	28
AC-FT	3160	3070	2760	3000	3820	4840	5480	5520	4210	4290	2100	2150
CAL YR 1982	TOTAL	17888	MEAN 49.0	MAX 402	MIN 18	AC-FT 35480						
WTR YR 1983	TOTAL	22385	MEAN 61.3	MAX 603	MIN 26	AC-FT 44400						

NIOBRARA 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 downstream from county road bridge at Redbird, 0.9 mi upstream from mouth and 4.6 mi south-southeast of Lynch.

DRAINAGE AREA.--157 mi².

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 545 ft³/s May 29, 1982, gage height, 5.31 ft, current datum; maximum gage height, 5.87 ft, current datum, Feb. 21, 1982, backwater from ice, but may have been higher during period of no gage-height record Jan. 10 to Feb. 10, 1982; minimum daily discharge, 3.8 ft³/s July 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 340 ft³/s Mar. 6, gage height, 3.81 ft; maximum gage height, 4.04 ft Feb. 15, backwater from ice, minimum daily discharge, 15 ft³/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	32	39	29	32	54	125	117	33	65	27	19
2	32	32	42	28	30	52	114	250	34	48	25	18
3	30	31	39	31	28	52	91	160	37	39	22	17
4	27	32	36	34	30	51	82	122	36	35	21	19
5	26	33	35	37	32	109	83	95	33	32	20	21
6	30	32	35	38	27	205	105	83	33	29	23	20
7	32	32	35	39	31	104	99	73	33	28	21	21
8	36	31	35	38	36	74	85	59	33	25	19	19
9	78	35	33	40	45	65	76	54	34	25	19	17
10	58	59	30	40	54	62	73	49	35	24	17	19
11	42	84	28	42	64	62	68	48	35	22	17	19
12	37	107	30	44	60	64	80	61	40	23	16	20
13	33	67	54	46	60	61	107	56	59	25	21	22
14	32	54	58	47	64	58	71	52	59	21	23	22
15	31	44	54	42	82	61	95	50	45	18	21	29
16	30	42	44	36	94	61	111	49	37	22	21	28
17	30	39	49	34	120	59	102	48	65	54	20	26
18	30	42	44	32	108	61	93	93	87	114	20	23
19	33	66	37	35	116	59	85	105	73	80	17	22
20	38	69	30	37	104	58	76	87	138	45	15	24
21	41	55	29	39	73	54	74	61	124	35	18	24
22	48	45	28	37	74	51	70	46	93	32	17	25
23	39	41	30	36	83	56	64	40	36	32	17	25
24	38	36	31	38	83	63	59	37	34	33	18	26
25	36	36	30	35	64	62	58	34	32	30	18	25
26	34	32	27	32	58	68	56	34	32	27	24	24
27	33	34	24	41	62	51	52	33	72	29	21	25
28	32	34	26	42	61	62	58	31	197	30	21	24
29	31	34	28	44	---	85	55	29	164	31	18	26
30	32	36	27	38	---	145	58	30	106	29	18	28
31	32	---	31	34	---	160	---	32	---	28	18	---
TOTAL	1108	1346	1098	1165	1775	2289	2425	2118	1869	1110	613	677
MEAN	35.7	44.9	35.4	37.6	63.4	73.8	80.8	68.3	62.3	35.8	19.8	22.6
MAX	78	107	58	47	120	205	125	250	197	114	27	29
MIN	26	31	24	28	27	51	52	29	32	18	15	17
AC-FT	2200	2670	2180	2310	3520	4540	4810	4200	3710	2200	1220	1340
CAL YR 1982	TOTAL	12981.9	MEAN 35.6	MAX 281	MIN 7.9	AC-FT 25750						
WTR YR 1983	TOTAL	17593.0	MEAN 48.2	MAX 250	MIN 15	AC-FT 34900						

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 downstream from Pishelville Bridge, 6 mi south of Verdel, and 7 mi upstream from Verdigre Creek.

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

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,308.12 ft 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 downstream at present datum.

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

AVERAGE DISCHARGE.--26 years, 1,531 ft³/s, 1,109,000 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 7,400 ft³/s June 30; maximum gage height, 6.24 ft Jan. 9, backwater from ice; minimum daily discharge, 659 ft³/s Dec. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1850	1430	2150	1030	1850	2120	3170	2400	2010	5270	2380	1040
2	1840	1590	1890	1200	1840	2050	3100	4930	1920	3740	2310	1020
3	1400	1450	1930	1500	1710	2020	2950	5070	1830	2920	2010	999
4	1200	1410	1860	1640	1460	1950	2700	4290	1680	3120	1880	1020
5	1130	1310	1820	1730	1240	2330	2560	3970	1680	2740	1590	1300
6	1320	1440	1760	1790	1240	3280	2720	3430	1750	2440	1700	1290
7	1610	1420	1700	1910	1300	2890	2630	3290	1650	2330	1600	1260
8	1370	1530	1550	2010	1440	2350	2270	3070	1590	2110	1640	1080
9	2060	1600	921	2190	1530	1940	2270	2990	1570	1910	1470	988
10	2200	1790	953	2190	1670	1980	2380	2770	1620	1810	1460	991
11	1970	1920	1080	2160	1950	2110	2340	2720	1610	1680	1290	1150
12	1780	2360	823	2160	2010	2200	2250	3240	1710	1630	1250	1130
13	1610	1520	1010	2140	2170	2130	2850	3790	2720	1410	1300	1110
14	1580	1940	1240	2200	2400	2060	2370	3760	3750	1320	1600	1140
15	1550	1710	1260	2160	2630	2100	2360	3620	2840	1150	1330	1390
16	1430	1740	1490	2070	2790	2160	2430	3270	2590	1400	1290	1560
17	1410	1800	1590	1870	3000	2290	2580	3010	2690	4000	1250	1320
18	1380	1970	1850	1740	3070	2190	2810	3490	2910	5670	1280	1240
19	1510	2100	1940	1590	3320	2130	2700	3790	2580	4530	1180	1300
20	1880	1890	1930	1400	3400	2030	2540	3600	2830	3550	1100	1340
21	1730	1910	1940	1440	2630	2040	2290	3290	3100	2610	1130	1410
22	1670	1860	1940	1610	2640	2010	2240	3100	3010	2230	1100	1380
23	1540	1400	2040	1790	2780	2050	2170	2910	2660	2330	1210	1280
24	1480	1460	2070	2030	2420	2100	1980	2760	2430	2200	1510	1300
25	1480	1690	1250	1940	2050	2150	1900	2610	2360	2200	1550	1270
26	1450	1620	659	1830	2170	2140	1760	2460	2170	1960	1260	1300
27	1460	1290	679	1690	2170	2160	1740	2160	2650	2050	1290	1300
28	1530	1580	743	1650	2120	2770	1820	2160	4900	2130	1250	1230
29	1490	1800	694	1740	---	2080	1850	2120	6410	2210	1190	1290
30	1420	2050	793	2030	---	2590	2010	2090	7400	2010	1120	1640
31	1420	---	873	1930	---	3140	---	1990	---	2250	1070	---
TOTAL	48750	50580	44428	56360	61000	69540	71740	98150	80620	78910	44590	37068
MEAN	1573	1686	1433	1818	2179	2243	2391	3166	2687	2545	1438	1236
MAX	2200	2360	2150	2200	3400	3280	3170	5070	7400	5670	2380	1640
MIN	1130	1290	659	1030	1240	1940	1740	1990	1570	1150	1070	988
AC-FT	96700	100300	88120	111800	121000	137900	142300	194700	159900	156500	88440	73520
CAL YR 1982	TOTAL	594116	MEAN	1628	MAX	4950	MIN	659	AC-FT	1178000		
WTR YR 1983	TOTAL	741736	MEAN	2032	MAX	7400	MIN	659	AC-FT	1471000		

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1975 to September 1980.

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

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1981.

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

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

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 470 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 Mar. 19, 1979; minimum daily, 60 tons Dec. 7, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 36.5°C Aug. 16, 25; minimum, 0.5°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARD- MERIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (CULS. PER 100 ML) (31673)
OCT											
05...	1515	1000	266	8.2	22.0	--	--	7.4	<10	93	800
NOV											
03...	1010	1480	267	7.9	2.5	728	110	12.7	40	160	2100
DEC											
01...	0945	2500	244	7.6	2.0	712	--	6.5	35	200	4300
JAN											
25...	1450	1600	271	7.6	.5	729	--	12.4	13	K50	240
FEB											
22...	0930	2730	276	7.1	.5	727	140	13.9	21	K51	8400
MAR											
22...	1405	2070	288	7.7	7.5	727	--	11.6	31	K5	260
APR											
19...	1200	2760	363	8.0	7.5	721	--	11.1	64	K42	1000
MAY											
17...	1300	2940	357	8.1	12.5	724	120	9.8	54	520	960
JUN											
21...	1425	3910	372	8.2	31.0	720	--	6.7	69	K3000	6000
JUL											
12...	1320	1850	320	8.5	26.5	727	--	8.0	130	140	330
AUG											
17...	0935	1410	276	8.6	28.5	724	45	7.7	52	440	K10000
SEP											
07...	1205	1440	261	8.5	23.0	723	--	9.3	39	100	260

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

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	HARD- NESS (MG/L AS CaCO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CaCO3) (95902)	CALCIUM DTS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DTS- SOLVED (MG/L AS Mg) (00925)	SODIUM, DTS- SOLVED (MG/L AS Na) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DTS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CaCO3) (90410)	SULFATE DTS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DTS- SOLVED (MG/L AS Cl) (00940)
OCT										
05...	120	--	39	5.0	--	--	--	--	15	2.2
NOV										
03...	110	0	37	5.1	9.8	.4	5.9	125	15	2.1
DEC										
01...	110	--	36	5.2	--	--	--	--	20	2.3
JAN										
25...	120	--	39	5.7	10	.4	--	--	22	2.1
FEB										
22...	130	13	41	6.3	10	.4	5.8	116	31	1.7
MAR										
22...	120	--	40	5.8	11	.4	--	--	24	2.4
APR										
19...	150	--	48	8.0	15	.6	--	--	44	3.3
MAY										
17...	150	0	46	7.7	17	.6	8.7	152	33	3.2
JUN										
21...	150	--	48	7.8	17	.6	--	--	44	2.9
JUL										
12...	130	--	42	6.5	15	.6	--	--	23	2.7
AUG										
17...	110	0	35	5.0	12	.5	7.9	130	19	2.6
SEP										
07...	110	--	36	5.1	11	.5	--	--	16	2.4

DATE	FLUO- RIDE, DTS- SOLVED (MG/L AS F) (00950)	SILICA, DTS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DTS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DTS- SOLVED (MG/L) (70301)	SOLIDS, DTS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DTS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, DTS- SOLVED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT										
05...	--	--	--	--	--	--	36	--	--	.60
NOV										
03...	.30	46	183	197	.25	731	253	.77	.030	.80
DEC										
01...	--	--	--	--	--	--	244	--	--	.80
JAN										
25...	--	--	--	--	--	--	58	--	--	.90
FEB										
22...	.30	41	213	208	.29	1570	21	.75	.050	.80
MAR										
22...	--	--	--	--	--	--	116	--	--	.90
APR										
19...	--	--	--	--	--	--	268	--	--	.70
MAY										
17...	.50	41	244	249	.33	1940	--	.54	.060	.60
JUN										
21...	--	--	--	--	--	--	540	--	--	.50
JUL										
12...	--	--	--	--	--	--	125	--	--	<.10
AUG										
17...	.40	47	212	207	.29	807	--	--	.030	<.10
SEP										
07...	--	--	--	--	--	--	148	--	--	<.10

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	NITRO- GEN, NO ₂ +NO ₃ 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,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 05...	--	.070	--	2.0	2.10	2.7	.130	--	--	4.7
NOV 03...	.78	.180	.160	1.3	1.50	2.3	.410	.060	.080	9.7
DEC 01...	--	.130	--	2.7	2.80	3.6	.380	--	--	9.1
JAN 25...	--	.140	--	.56	.70	1.6	.150	--	--	3.3
FEB 22...	.78	.220	.210	1.3	1.50	2.3	.280	.070	.060	7.7
MAR 22...	--	.080	--	1.2	1.30	2.2	.400	--	--	8.9
APR 19...	--	.140	--	1.4	1.50	2.2	.300	--	--	6.5
MAY 17...	.54	.100	<.060	1.5	1.60	2.2	.280	.090	.070	12
JUN 21...	--	.060	--	3.0	3.10	3.6	.300	--	--	19
JUL 12...	--	.120	--	1.7	1.80	--	.190	--	--	13
AUG 17...	<.10	.110	.090	1.9	2.00	--	.230	.030	.010	14
SEP 07...	--	.200	--	1.3	1.50	--	.370	--	--	11

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL SOLVED (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARTUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 03...	1010	30	6	5	100	0	<0	<1	1	10	<1
FEB 22...	0930	60	5	4	<100	110	<0	2	<1	10	<1
MAY 17...	1300	80	7	5	200	120	<0	1	<1	<10	<1
AUG 17...	0935	40	9	8	<100	0	<0	<1	<1	<10	<1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 03...	<0	0	2	4900	20	0	<1	20	330	4	.0
FEB 22...	<0	0	2	5000	80	0	<1	20	370	36	.0
MAY 17...	<0	30	3	7500	70	0	1	20	480	9	<.0
AUG 17...	<0	0	2	2800	30	0	<1	20	270	3	.0

NIOBRARA RIVER BASIN

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06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELF- NTUM, TOTAL (UG/L AS SE) (01147)	SELF- NIUM, DIS- SOLVED (UG/L AS SF) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 03...	<.0	<10	<1	2	1	<0	<1	190	7.0	30	10
FEB 22...	.0	<10	3	2	1	<0	<1	220	<6.0	30	0
MAY 17...	<.0	<10	1	3	2	<0	<1	250	8.0	50	0
AUG 17...	<.0	<10	2	2	1	<0	<1	200	14	40	0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV 03...	1010	1480	2.0	1480	5910	8	9
FEB 22...	0930	2730	.5	2240	16500	8	10
MAY 17...	1300	2940	12.5	1920	15200	10	11
AUG 17...	0935	1410	27.5	1260	4800	6	7

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
NOV 03...	11	13	21	31	87	100	--
FEB 22...	10	12	18	37	87	99	100
MAY 17...	12	14	17	40	88	99	100
AUG 17...	--	9	11	17	59	97	100

NIOBRARA RIVER BASIN

06465500 NIOBRARA RIVER NEAR VERDEL, NE--Continued

TEMPERATURE, WATER (DFG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	12.0	10.0	7.0	7.0	2.0	1.0	.5	1.0	1.0	5.5	4.5
2	17.0	11.0	9.0	4.0	6.5	4.5	1.0	1.0	1.0	1.0	8.5	4.5
3	19.5	11.5	4.0	1.0	4.5	3.0	1.0	.5	1.0	1.0	12.0	6.5
4	20.5	13.0	1.0	.5	3.5	1.5	1.0	.5	1.0	.5	10.5	9.5
5	21.5	14.0	2.0	.5	3.5	2.0	1.0	.5	1.0	.5	13.0	10.0
6	18.0	10.5	4.0	1.5	3.0	1.5	.5	.5	1.0	.5	11.0	4.5
7	16.5	9.0	5.0	4.0	1.5	1.5	.5	.5	1.0	.5	4.5	1.0
8	15.0	12.0	5.0	3.5	1.5	1.5	.5	.5	.5	.5	1.0	1.0
9	12.0	10.5	3.5	3.5	1.5	1.5	.5	.5	1.0	1.0	1.0	1.0
10	11.0	9.0	4.5	3.5	1.5	1.5	1.0	.5	1.0	1.0	2.0	1.0
11	10.5	8.5	4.0	.5	2.0	1.5	1.0	.5	1.0	1.0	4.5	1.0
12	9.0	8.5	1.0	.5	2.0	1.0	1.0	.5	1.0	1.0	6.5	3.5
13	11.5	8.5	1.0	.5	1.5	1.0	1.0	.5	1.0	1.0	9.0	5.5
14	15.5	8.0	.5	.5	1.5	1.5	1.0	.5	1.0	1.0	7.0	6.0
15	16.0	11.0	.5	.5	1.5	1.5	1.0	1.0	1.0	1.0	6.0	4.0
16	14.0	9.0	1.0	.5	1.5	1.5	.5	.5	1.0	1.0	4.5	3.0
17	17.0	10.5	1.5	.5	1.5	1.0	1.0	.5	1.0	1.0	4.5	1.5
18	14.5	12.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.5	3.0
19	12.0	5.0	4.5	3.0	1.0	1.0	1.0	1.0	1.0	1.0	4.0	3.0
20	8.5	4.5	5.5	4.5	.5	.5	1.0	.5	1.0	1.0	4.5	2.0
21	10.0	5.0	5.0	4.0	.5	.5	.5	.0	1.0	1.0	6.0	2.0
22	11.0	6.0	4.0	1.5	.5	.5	1.0	.5	1.0	.5	6.0	1.5
23	12.0	8.0	1.5	1.0	.5	.5	1.0	.5	.5	.5	5.5	1.5
24	13.0	8.0	1.5	.5	.5	.5	.5	.5	2.0	1.0	4.0	3.0
25	11.5	9.5	1.0	1.0	1.0	1.0	.5	.5	1.5	.5	3.5	1.5
26	13.5	10.5	1.5	1.0	1.0	.5	.5	.5	3.0	1.0	1.5	1.0
27	13.5	9.5	1.0	1.0	1.0	1.0	.5	.5	6.5	3.0	2.0	.5
28	10.5	8.0	1.0	1.0	1.0	1.0	.5	.5	5.0	4.5	6.5	1.0
29	8.0	6.0	1.0	.5	1.0	1.0	.5	.5	---	---	9.5	3.5
30	9.5	5.5	3.0	1.0	1.0	.5	.5	.5	---	---	10.5	5.0
31	9.0	6.5	---	---	1.0	.5	.5	.5	---	---	12.0	6.5
MONTH	21.5	4.5	10.0	.5	7.0	.5	1.0	.0	6.5	.5	13.0	.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	4.0	10.0	9.5	19.0	13.5	27.0	23.0	29.0	23.5	32.0	22.0
2	4.0	3.0	9.5	7.0	20.5	14.0	29.5	24.5	31.5	23.5	31.0	23.5
3	5.0	3.0	11.0	8.5	24.5	16.0	27.0	21.5	35.5	25.5	29.5	22.0
4	5.0	4.0	16.5	11.0	23.0	17.0	21.5	19.0	34.0	26.0	26.0	21.5
5	4.5	4.0	19.0	13.5	19.0	16.0	27.0	20.0	35.0	26.5	27.0	19.5
6	5.5	4.0	17.0	15.5	23.0	13.5	28.0	21.5	34.5	27.0	23.5	19.5
7	10.5	4.0	16.5	12.0	25.5	15.0	28.5	21.0	35.0	25.5	24.5	16.0
8	9.0	5.5	18.0	11.5	26.0	17.0	30.5	22.0	34.5	24.5	28.5	20.5
9	6.5	6.0	18.0	11.5	23.0	19.0	31.0	23.5	33.5	24.5	31.5	21.0
10	12.0	4.5	20.0	13.5	24.0	18.5	31.0	23.0	31.5	24.0	26.5	20.0
11	10.0	8.0	17.0	15.5	22.0	19.5	29.0	21.5	31.0	22.0	23.5	15.5
12	8.5	4.5	18.0	13.0	21.0	19.5	28.0	21.0	30.5	21.5	20.5	16.0
13	4.5	1.5	16.5	12.0	20.0	16.5	28.5	23.0	31.5	23.5	18.5	15.0
14	6.5	1.5	15.0	10.0	23.0	16.0	30.0	23.0	33.0	22.0	16.0	13.5
15	9.5	2.0	17.0	10.5	25.5	17.0	29.0	21.5	34.0	24.5	20.5	14.0
16	13.5	5.5	18.5	13.0	25.0	19.5	28.5	22.0	36.5	26.0	23.0	13.5
17	10.0	5.5	15.0	10.5	22.0	19.0	29.0	23.0	34.0	26.5	25.5	15.0
18	10.5	6.5	11.5	10.5	25.0	19.0	28.5	24.0	33.0	25.0	23.0	15.0
19	9.5	6.0	12.0	11.5	23.5	19.5	29.5	25.5	34.5	24.0	20.5	13.0
20	9.5	6.5	17.0	12.0	27.0	20.5	31.5	25.5	31.0	24.0	13.0	9.0
21	11.5	8.0	21.5	14.0	30.0	23.5	34.0	25.0	33.0	23.0	15.0	8.0
22	13.0	10.5	20.0	15.5	31.0	23.5	33.5	26.0	31.0	24.0	16.5	9.5
23	16.0	8.5	23.0	13.5	30.0	24.0	26.0	23.0	31.0	23.0	16.0	9.0
24	17.0	9.0	25.0	16.0	31.5	24.0	25.5	22.0	29.0	23.5	20.5	11.0
25	14.0	10.5	23.0	15.0	27.0	24.0	29.0	20.5	32.0	24.0	24.0	14.0
26	14.0	13.0	24.5	15.0	26.0	24.0	29.5	21.5	35.0	25.0	25.0	15.0
27	13.5	11.5	27.0	18.0	24.0	20.5	29.5	23.0	31.5	23.0	23.0	16.0
28	12.0	11.5	25.5	19.0	20.5	18.5	30.0	24.0	33.5	23.5	24.0	18.5
29	11.5	10.5	20.5	15.5	20.0	18.0	31.5	21.5	32.0	24.0	20.0	18.0
30	10.5	10.0	18.5	13.5	26.0	19.5	29.5	23.5	30.5	21.5	23.5	16.5
31	---	---	18.0	14.0	---	---	29.5	23.5	32.0	21.5	---	---
MONTH	17.0	1.5	27.0	7.0	31.5	13.5	34.0	19.0	36.5	21.5	32.0	8.0

NIOBRARA RIVER BASIN

63

06465680 NORTH BRANCH VERDIGRE CREEK NEAR VERDIGRE, NE

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

DRAINAGE AREA.--137 mi².

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

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

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 June 14, 1981, gage height, 5.54 ft, from floodmark; minimum daily, 2.5 ft³/s Jan. 6, 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 102 ft³/s June 27, gage height, 3.68 ft, maximum gage height, 4.05 ft Feb. 8, backwater from ice; minimum daily, 16 ft³/s Dec. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	24	26	25	21	28	45	45	31	38	24	24
2	25	24	26	22	22	28	42	59	31	36	22	22
3	21	23	25	25	20	28	41	46	31	34	23	17
4	20	22	25	27	22	28	40	40	30	33	21	17
5	20	23	25	25	23	36	40	38	29	32	24	23
6	26	24	24	29	22	36	42	38	29	32	24	23
7	21	24	24	32	29	34	41	37	29	30	22	25
8	23	23	23	30	28	33	39	36	29	28	21	23
9	39	25	22	33	30	32	39	35	29	24	20	24
10	30	30	19	30	32	32	38	34	29	23	23	24
11	28	32	16	27	35	32	38	34	28	24	24	24
12	27	36	18	30	37	33	42	35	29	23	24	24
13	26	32	22	32	32	32	42	34	32	23	21	24
14	26	30	27	33	31	32	38	33	32	21	20	25
15	25	29	30	28	34	33	42	33	29	24	20	27
16	25	28	27	32	34	32	44	33	28	28	24	26
17	25	28	28	33	33	32	46	34	37	36	23	26
18	25	29	30	32	33	32	43	44	45	33	20	25
19	26	31	28	23	33	31	41	41	36	30	17	25
20	28	30	28	24	32	32	40	38	35	28	17	25
21	27	28	29	26	31	31	40	36	34	26	20	25
22	27	27	29	27	32	31	39	35	32	22	22	26
23	27	27	28	28	33	31	38	34	32	24	22	26
24	26	27	29	24	31	31	37	34	32	27	23	26
25	25	26	20	25	29	31	37	32	31	26	22	26
26	25	26	27	24	29	33	37	33	38	26	21	26
27	24	25	29	23	30	29	36	32	61	29	17	26
28	24	26	28	24	29	35	36	31	70	29	19	26
29	24	26	25	25	---	34	36	31	58	29	22	26
30	24	26	26	24	---	37	37	31	42	28	24	26
31	24	---	27	24	---	42	---	31	---	28	25	---
TOTAL	786	811	790	846	827	1001	1196	1127	1058	874	671	732
MEAN	25.4	27.0	25.5	27.3	29.5	32.3	39.9	36.4	35.3	28.2	21.6	24.4
MAX	39	36	30	33	37	42	46	59	70	38	25	27
MIN	20	22	16	22	20	28	36	31	28	21	17	17
AC-FT	1560	1610	1570	1680	1640	1990	2370	2240	2100	1730	1330	1450
CAL YR 1982	TOTAL	8456.0	MEAN 23.2	MAX 86	MIN 7.4	AC-FT	16770					
WTR YR 1983	TOTAL	10719.0	MEAN 29.4	MAX 70	MIN 16	AC-FT	21260					

BAZILE CREEK BASIN

06466500 BAZILE CREEK NEAR NIOBRARA, NE

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

DRAINAGE AREA.--440 mi², approximately.

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

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

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

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

AVERAGE DISCHARGE.--31 years, 80.0 ft³/s, 57,960 acre-ft/yr; median of yearly mean discharges, 68 ft³/s, 49,300 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s June 27, gage height, 15.38 ft, no peak above base of 2,000 ft³/s; minimum daily discharge, 30 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	54	72	52	56	280	458	193	90	281	78	32
2	66	54	78	44	60	239	268	615	92	220	71	31
3	59	53	73	48	58	268	214	425	91	170	61	31
4	50	57	70	52	64	304	191	262	87	134	63	32
5	46	52	70	48	68	358	187	202	83	130	61	34
6	69	51	69	56	66	450	200	198	84	131	59	33
7	45	52	66	62	98	376	216	192	81	117	56	32
8	62	52	58	56	86	227	194	167	78	108	52	33
9	268	58	60	64	110	178	176	148	75	104	49	31
10	138	90	50	60	130	167	174	136	75	100	43	30
11	91	98	40	56	160	178	172	130	70	93	42	32
12	66	100	44	64	180	186	187	130	70	89	44	32
13	57	92	52	74	160	185	343	129	99	86	43	35
14	53	86	60	84	150	175	260	124	168	79	46	37
15	51	75	64	72	170	263	164	116	159	72	44	45
16	49	72	54	66	180	315	291	117	116	90	42	43
17	45	74	56	64	170	237	388	119	161	105	41	41
18	44	79	60	60	170	219	298	193	201	122	40	37
19	52	86	56	64	180	208	257	304	195	98	36	37
20	62	90	56	68	180	191	217	224	196	80	32	42
21	62	88	58	74	200	174	216	174	136	70	32	41
22	69	84	58	68	221	168	202	149	104	85	32	39
23	76	82	56	62	262	170	183	131	97	143	36	40
24	84	86	58	66	344	176	165	121	100	120	38	40
25	71	82	40	64	279	174	157	114	86	97	40	39
26	64	80	52	58	229	183	155	108	93	90	37	39
27	57	76	56	64	239	158	143	107	529	102	36	41
28	55	80	54	74	317	145	141	109	900	103	36	38
29	55	88	48	70	---	187	138	96	800	94	36	40
30	54	94	50	64	---	262	144	92	754	83	34	42
31	56	---	54	60	---	436	---	92	---	83	33	---
TOTAL	2117	2265	1792	1938	4587	7237	6499	5417	5870	3479	1393	1099
MEAN	68.3	75.5	57.8	62.5	164	233	217	175	196	112	44.9	36.6
MAX	268	100	78	84	344	450	458	615	900	281	78	45
MIN	41	51	40	44	56	145	138	92	70	70	32	30
AC-FT	4200	4490	3550	3840	9100	14350	12890	10740	11640	6900	2760	2180
CAL YR 1982	TOTAL	28048	MEAN	76.8	MAX	937	MIN	18	AC-FT	55630		
WTR YR 1983	TOTAL	43693	MEAN	120	MAX	900	MIN	30	AC-FT	86670		

MISSOURI RIVER MAIN STEM

65

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 southwest of Yankton, 13.6 mi upstream from James River, 32.5 mi downstream from Niobrara River, and at mi 811.0.

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

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

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

REMARKS.--Reservoir is formed by earthfill dam; storage began in July 1955. Maximum capacity, 504,000 acre-ft below elevation 1,210.0 ft, top of spillway gates. Normal maximum, 443,000 acre-ft below elevation 1,208.0 ft. Inactive storage, 157,000 acre-ft below elevation 1,195.0 ft. Dead storage, 23,000 acre-ft below elevation 1,180.0 ft, crest of spillway. Figures given herein represent elevations at powerhouse and total contents adjusted for wind effect.

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 467,000 ft³/s Nov. 13; minimum, 342,000 ft³/s Apr. 25.

MONTHEND ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,208.10	447,000	-
Oct. 31	1,207.96	440,000	-7,000
Nov. 30	1,208.42	456,000	+16,000
Dec. 31	1,205.21	364,000	-92,000
CAL YR 1982	-	-	-71,000
Jan. 31	1,207.89	439,000	+75,000
Feb. 28	1,205.42	371,000	-68,000
Mar. 31	1,206.48	400,000	+29,000
Apr. 30	1,205.02	361,000	-39,000
May 31	1,205.76	380,000	+19,000
June 30	1,208.05	443,000	+63,000
July 31	1,208.16	446,000	+23,000
Aug. 31	1,207.65	434,000	-12,000
Sept. 30	1,207.85	439,000	+5,000
WTR YR 1983	-	-	-8,000

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 downstream from Gavins Point Dam, 6.0 mi upstream from James River, and at mi 805.8.

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

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1309. Gage-height records collected at same site March 1873 to November 1886, March 1905 to May 1908 (fragmentary), August 1921 to 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1932, nonrecording gage, and Sept. 20, 1932, to Mar. 9, 1967, water-stage recorder at present site and at datum 20.0 ft higher.

REMARKS.--Records good except those for winter period, Dec. 26 to Feb. 7, which are poor. Flow completely regulated by Lewis and Clark Lake 5.2 mi upstream since July 1955 (see station 06467000). Many diversions for irrigation and water supply above station. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years, 26,430 ft³/s, 19,150,000 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45,100 ft³/s at 1915 hours, Dec. 1, gage height, 18.78 ft; minimum daily discharge, 6,000 ft³/s June 22, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33600	37900	44600	24200	24000	23700	19600	24200	28100	12300	37600	39000
2	33500	37800	44600	24100	24000	23800	12900	23700	28600	12300	37200	37300
3	33800	38500	42700	24200	24000	22100	9230	23200	28500	12100	37400	39100
4	33900	40800	40800	24200	24000	19100	12800	21600	28600	12900	37600	39000
5	34000	41400	38800	24200	24000	17500	16900	20100	28500	15000	37700	38800
6	34000	41400	35600	24200	24000	17300	17900	19500	28600	17300	37700	38300
7	34200	41400	33800	24200	24000	16300	18100	19300	28700	18300	37700	38100
8	34800	41500	34200	24200	23700	15000	18100	19400	28600	20300	37800	38900
9	34700	41500	34300	24200	23400	15100	18600	19700	28800	21600	37800	37400
10	34700	41500	34100	24200	23200	16900	18800	21200	28400	22800	37700	38900
11	34700	41600	31100	24100	23700	17100	19100	21500	27800	23700	38000	38800
12	34700	41200	28400	24200	23700	19600	19800	21400	27400	25500	38100	38800
13	35300	41700	25900	24200	23700	19900	17800	22200	27000	27700	38100	38100
14	35900	41500	24600	24200	23500	20200	12600	23100	23300	29600	38200	38600
15	37300	41500	24600	24200	23800	17600	9170	24300	19100	30700	38200	37400
16	37600	41500	24700	21400	23700	16200	11600	25300	19100	31700	37900	37900
17	37600	43500	24300	22500	23600	17000	12100	25900	19800	31800	37900	38300
18	37700	44000	24500	23600	23700	18700	12000	25800	19200	32900	37700	38500
19	37700	44100	24500	23700	23600	20500	13000	25600	19300	36300	37900	36800
20	37500	44100	24500	23800	23500	21700	14200	25600	17500	36600	38600	37700
21	37600	44400	24500	23800	23600	22600	15200	25700	9200	36600	38600	36800
22	37800	44300	24400	23800	23900	23300	17000	25600	6000	37200	38600	38500
23	37800	44300	24400	23800	24000	23800	18400	26100	7500	37000	38700	38100
24	37800	44300	24400	23800	23800	24800	19800	27000	11600	36400	38700	38800
25	37900	44200	24200	23800	24000	25400	20200	27300	12100	37000	38900	38600
26	38000	44200	24200	23800	23900	25600	21000	27400	13200	37200	38900	38700
27	38000	44400	24200	23800	23800	25200	21500	27200	13200	37200	38900	37700
28	37900	44300	24200	23900	23800	25300	22400	27700	8060	37200	38900	38800
29	37800	44200	24200	24000	---	25300	23000	27600	6000	37300	39000	38900
30	37900	44400	24200	24000	---	25300	23400	27600	9100	37400	39100	39000
31	37900	---	24300	24000	---	24200	---	27800	---	37500	39000	---
TOTAL	1123600	1271400	907800	740300	665600	646100	506200	749600	600860	879400	1184100	1149600
MEAN	36250	42380	29280	23880	23770	20840	16870	24180	20030	28370	38200	38320
MAX	38000	44400	44600	24200	24000	25600	23400	27800	28800	37500	39100	39100
MIN	33500	37800	24200	21400	23200	15000	9170	19300	6000	12100	37200	36800
AC-FT	2229000	2522000	1801000	1468000	1320000	1282000	1004000	1487000	1192000	1744000	2349000	2280000
CAL YR 1982	TOTAL	10080000	MEAN	27620	MAX	44600	MIN	9900	AC-FT	19990000		
WTR YR 1983	TOTAL	10424560	MEAN	28560	MAX	44600	MIN	6000	AC-FT	20680000		

BOW CREEK BASIN

67

06478518 BOW CREEK NEAR ST. JAMES, NE

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

DRAINAGE AREA.--304 mi².

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

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

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

AVERAGE DISCHARGE.--5 years, 55.1 ft³/s, 39,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s June 27, 1983, gage height, 12.40 ft, from high-water mark; minimum daily, 7.4 ft³/s Jan. 15, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,200 ft³/s June 27, gage height, 12.40 ft, from high-water mark; minimum daily discharge, 16 ft³/s Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	31	45	22	22	99	247	182	93	241	76	50
2	37	31	47	20	20	94	140	397	91	200	99	51
3	26	31	45	25	19	112	125	267	89	182	86	49
4	23	33	44	24	21	121	115	159	87	162	86	49
5	24	33	44	25	17	162	115	143	85	150	81	47
6	25	33	40	26	16	208	124	148	83	144	77	50
7	24	33	30	25	17	176	127	149	81	140	74	44
8	26	32	27	27	18	99	119	132	81	132	72	43
9	44	35	26	30	19	89	118	122	78	129	68	41
10	42	44	29	28	20	87	128	124	80	121	65	44
11	30	45	27	31	22	94	130	127	77	114	63	45
12	27	72	26	33	25	88	158	132	75	107	60	45
13	26	42	29	35	28	94	362	129	108	107	58	44
14	25	44	34	33	32	87	171	120	188	100	56	46
15	25	39	30	31	35	126	167	110	115	100	56	49
16	25	43	26	30	34	134	218	108	93	99	57	49
17	26	42	31	28	33	109	256	106	112	95	57	46
18	28	41	35	29	43	105	206	104	367	96	57	46
19	33	42	40	30	48	102	194	350	131	95	58	45
20	34	44	41	30	60	89	170	200	158	90	58	45
21	32	40	42	28	80	89	175	140	115	88	55	47
22	33	41	44	26	90	87	165	120	95	85	55	45
23	34	36	45	24	95	85	148	115	89	97	56	46
24	33	30	42	27	107	85	144	110	90	101	56	47
25	31	32	47	28	88	80	142	105	92	90	59	48
26	30	35	35	23	79	81	137	103	92	83	57	48
27	30	37	30	21	107	71	132	101	3960	87	60	50
28	30	40	25	25	133	85	135	99	1330	89	60	49
29	31	55	24	30	---	87	130	99	532	88	57	62
30	31	46	22	27	---	95	131	97	311	83	51	60
31	31	---	21	24	---	186	---	95	---	76	50	---
TOTAL	961	1182	1073	845	1328	3306	4829	4493	8978	3571	1980	1430
MEAN	31.0	39.4	34.6	27.3	47.4	107	161	145	299	115	63.9	47.7
MAX	65	72	47	35	133	208	362	397	3960	241	99	62
MIN	23	30	21	20	16	71	115	95	75	76	50	41
AC-FT	1910	2340	2130	1680	2630	6560	9580	8910	17810	7080	3930	2840
CAL YR 1982	TOTAL	17760	MEAN 48.7	MAX 874	MIN 11	AC-FT 35230						
WTR YR 1983	TOTAL	33976	MEAN 93.1	MAX 3960	MIN 16	AC-FT 67390						

MISSOURI RIVER MAIN STEM

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

LOCATION.--Lat 42°29'09", long 96°24'49", in NW1/4SE1/4 sec.16, T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebraska, Hydrologic Unit 10230001, on right bank on upstream side of bridge on U.S. Highway 20 and 77 at South Sioux City, NE, 1.9 mi downstream from Big Sioux River, and at mi 732.3. Prior to Jan. 31, 1981, at site 227 ft downstream.

DRAINAGE AREA.--314,600 mi², approximately.

PERIOD OF RECORD.--October 1897 to current year in reports of Geological Survey. Prior to October 1928 and October 1931 to September 1938, monthly discharges only published in WSP 1310. January 1879 to December 1890 (monthly discharges only) in House Document 238, 73rd Congress, 2d session, Missouri River. Gage-height records collected in this vicinity September 1878 to December 1899 are contained in reports of Missouri River Commission and since July 1889 are contained in reports of 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 National Geodetic Vertical Datum of 1929. Sept. 2, 1878, to Dec. 31, 1905, nonrecording gages at various locations within 1.7 mi of present site and at various datums. Jan. 1, 1906, to Feb. 14, 1935, nonrecording gage, and Feb. 15, 1935 to Sept. 30, 1969, water-stage recorder at site 227 ft downstream at datum 19.98 ft higher, and Oct. 1, 1969 to Sept. 30, 1970 at datum 20.00 ft higher. Oct. 1, 1970 to Jan. 30, 1981, water-stage recorder at site 227 ft downstream at present datum.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage height telemeter at station. Corps of Engineers rain-gage and gage-height satellite telemeter at station.

AVERAGE DISCHARGE.--86 years, 31,990 ft³/s, 23,180,000 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50,200 ft³/s Nov. 24, maximum gage height, 22.78 ft June 29; minimum daily discharge, 23,300 ft³/s Jan. 18; minimum gage height, 14.60 ft Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35000	39100	48700	27000	25600	40800	37300	29200	31600	35600	40300	37700
2	34900	38900	49200	26800	25200	40900	34700	31800	31500	38100	40700	37800
3	33900	38800	49700	26600	24600	41900	28700	34300	31700	35500	40900	36400
4	34000	39000	48100	26300	24100	40800	27000	34700	31400	34500	40600	37900
5	34300	42600	46500	27000	25400	38400	30400	33300	31400	34000	39900	38200
6	34900	41100	45000	27100	25400	38100	34900	32900	31200	33800	39800	38100
7	35600	41100	42500	27300	24700	40600	35000	32800	30900	35400	39500	37600
8	36100	41100	41000	26400	25400	41600	33600	31400	31000	34300	39200	37300
9	38700	41600	40300	27100	25700	38200	32800	30100	30900	32700	38900	38000
10	38000	42300	39500	27100	25700	37800	33100	28800	30900	31400	38900	36500
11	39300	42600	38600	26500	25600	38800	32600	30000	30600	30900	38500	37500
12	40400	44600	35200	25300	26000	37000	33100	30300	29900	30500	38000	37200
13	40900	44700	33400	27300	26000	36000	36800	29900	30900	31000	38300	37100
14	41200	45300	31000	26100	26200	35500	37400	28900	32200	32500	38500	36700
15	40100	44400	29200	24700	25700	36200	31200	29000	26000	33900	38500	37800
16	40500	44200	28500	24800	25800	34400	30100	29900	23700	35100	38800	36800
17	39900	44400	28900	24100	26300	32800	32400	30500	24700	36300	38800	37000
18	38900	46000	29300	23300	26400	33200	31600	31900	29100	37100	38600	37500
19	38700	47400	28700	25000	27000	33700	29800	31900	27400	37400	38100	37600
20	40200	47600	28500	25300	27200	35000	29500	31500	30900	39600	37700	36400
21	39200	47600	28400	25100	28200	35200	30000	31400	36000	39200	38200	37200
22	40100	48900	28300	26500	29400	34900	30400	31200	37400	39100	38200	36100
23	40300	49900	28300	25200	31000	34300	30800	31100	30400	41700	38300	37000
24	40400	49700	28500	25200	32700	33600	31200	31100	30800	41400	38600	36900
25	40000	48700	28700	25400	33600	33900	31600	31800	31200	40100	39100	37400
26	39600	48300	26600	24600	34000	34600	31200	32200	28100	39400	39000	37300
27	39900	47700	28500	24500	35500	34200	30900	32100	29400	39500	39200	37200
28	40300	48100	26800	25000	38100	32800	30600	31800	40700	39200	39100	36300
29	40500	48000	25800	26500	---	32500	29900	32000	44000	39200	38900	38300
30	39800	48400	27100	25500	---	32600	29300	32000	36700	39700	38500	38100
31	39400	---	26900	25000	---	34100	---	31800	---	40000	38000	---
TOTAL	1195000	1342100	1065700	799600	776500	1124400	957900	971600	942600	1128100	1207600	1118900
MEAN	38550	44740	34380	25790	27730	36270	31930	31340	31420	36390	38950	37300
MAX	41200	49900	49700	27300	38100	41900	37400	34700	44000	41700	40900	38300
MIN	33900	38800	25800	23300	24100	32500	27000	28800	23700	30500	37700	36100
AC-FT	2370000	2662000	2114000	1586000	1540000	2230000	1900000	1927000	1870000	2238000	2395000	2219000
CAL YR 1982	TOTAL	10951400	MEAN	30000	MAX	49900	MIN	10000	AC-FT	21720000		
WTR YR 1983	TOTAL	12630000	MEAN	34600	MAX	49900	MIN	23300	AC-FT	25050000		

OMAHA CREEK BASIN

69

06601000 OMAHA CREEK AT HOMER, NE

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

DRAINAGE AREA.--168 mi².

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

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

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

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

AVERAGE DISCHARGE.--38 years, 34.1 ft³/s, 24,710 acre-ft/yr.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 8	2115	1860	9.40	June 14	----	2420	a11.15
Feb. 20	0315	1300	7.42	June 18	0145	*3900	15.45
May 1	2345	1250	7.26				

a From floodmark.

Minimum daily discharge, 11 ft³/s Oct. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	13	21	25	17	91	326	353	81	94	47	23
2	102	13	24	25	20	80	193	572	81	85	47	23
3	33	13	20	26	18	91	164	427	82	77	45	21
4	14	12	16	25	16	95	145	228	75	72	46	19
5	12	12	16	24	17	181	135	212	71	68	42	20
6	12	12	16	26	15	467	150	208	72	67	41	21
7	12	14	18	27	15	267	142	273	69	64	39	21
8	299	14	17	28	17	121	127	170	67	61	37	20
9	424	16	16	28	18	97	137	151	65	59	37	19
10	30	27	17	27	21	91	173	140	68	57	35	18
11	18	73	16	23	22	93	134	140	63	55	33	18
12	16	102	18	24	23	88	210	135	67	52	31	19
13	14	22	17	29	24	90	330	135	292	54	32	19
14	13	23	18	23	26	83	166	134	941	53	33	20
15	13	22	18	20	45	131	188	129	140	52	32	27
16	12	21	16	17	80	187	254	114	78	50	31	28
17	11	20	20	15	100	120	211	114	290	53	30	23
18	11	19	20	14	110	112	172	216	1250	58	28	21
19	19	23	20	15	350	102	164	192	183	55	27	21
20	48	24	19	18	919	92	150	138	157	48	25	24
21	32	19	20	20	459	85	148	130	149	45	28	24
22	22	18	20	19	335	81	139	120	120	44	28	22
23	18	16	21	20	167	80	127	108	110	52	27	22
24	16	15	32	18	85	82	116	105	105	49	29	22
25	15	16	158	17	59	79	112	97	97	49	29	24
26	15	18	47	16	56	77	106	94	92	48	29	24
27	14	14	35	17	119	66	95	95	198	72	28	22
28	14	19	30	25	135	89	93	87	224	67	27	24
29	14	19	25	22	---	100	94	83	122	75	25	106
30	14	19	22	20	---	108	93	82	103	57	24	47
31	13	---	24	16	---	282	---	83	---	50	23	---
TOTAL	1450	668	797	669	3288	3808	4794	5265	5512	1842	1015	762
MEAN	46.8	22.3	25.7	21.6	117	123	160	170	184	59.4	32.7	25.4
MAX	424	102	158	29	919	467	330	572	1250	94	47	106
MIN	11	12	16	14	15	66	93	82	63	44	23	18
AC-FT	2880	1320	1580	1330	6520	7550	9510	10440	10930	3650	2010	1510
CAL YR 1982	TOTAL	14258.5	MEAN	39.1	MAX	1530	MIN	1.7	AC-FT	28280		
WTR YR 1983	TOTAL	29870.0	MEAN	81.8	MAX	1250	MIN	11	AC-FT	59250		

MISSOURI RIVER MAIN STEM

06610000 MISSOURI RIVER AT OMAHA, NE

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

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

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

REVISED RECORDS.--WSP 761: Drainage area.

GAGE (REVISED).--Water-stage recorder. Datum of gage is 948.24 ft National Geodetic Vertical Datum of 1929. See WSP 1730 for history of changes prior to Sept. 30, 1936. Oct. 1, 1936 to Sept. 30, 1982 at datum 10.00 ft higher.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. National Weather Service gage-height telemeter at station. Corps of Engineers rain-gage and gage-height satellite telemeter at station.

AVERAGE DISCHARGE.--55 years, 30,140 ft³/s, 21,840,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 396,000 ft³/s Apr. 18, 1952, gage height, 40.20 ft, present datum; minimum, about 2,200 ft³/s Jan. 6, 1937; minimum gage height observed, 7.23 ft present datum, Jan. 10, 1957, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 82,200 ft³/s Mar. 8, gage height, 22.41 ft; maximum gage height, 25.94 ft June 30, backwater from Platte River; minimum daily discharge, 28,000 ft³/s Feb. 5; minimum gage height, 14.08 ft Jan. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41900	44900	53500	31200	31700	60600	57100	43300	38800	74500	47200	43000
2	43700	46200	53900	31400	30100	61900	63000	50100	39000	66100	46400	42300
3	44200	47300	55500	31300	29200	61400	57600	62900	39900	61700	44900	42100
4	42400	47800	56900	31400	29300	62100	48700	66800	40400	57000	45200	40800
5	41000	47400	55000	31700	28800	62500	47300	59200	40200	53800	44700	40600
6	41200	48000	52200	32200	28900	66300	50800	53300	39500	51800	44200	42100
7	41200	47600	50200	33100	29600	78200	55100	52700	39400	49500	44100	41800
8	42000	46800	46900	33300	29600	80500	54200	52400	38900	49800	44100	41200
9	43600	47000	44700	32500	29700	72800	51500	48200	38600	48600	43200	41000
10	46800	47400	43300	32500	29800	63100	51400	45200	39000	45600	43700	41400
11	45700	50000	41600	32500	29900	57600	51000	44300	39100	44000	43600	40900
12	44700	53300	39200	31300	29500	54500	51000	44800	39000	43100	43800	41000
13	44600	55000	36200	30600	30100	51200	57100	46100	39500	41300	43400	42500
14	44700	55700	35100	31100	31000	49600	67100	44700	54900	40500	43000	42000
15	44600	55000	33600	31300	32300	51400	69000	42800	65800	40800	42900	41500
16	43700	53700	32900	30200	33500	54500	61800	41400	54200	41800	42600	41400
17	44800	52800	32800	29800	35900	53700	60400	41200	42100	42700	42400	41100
18	45300	53200	33100	29300	36700	48800	62000	42100	46900	43200	42200	39600
19	45400	55200	33800	29100	40100	46700	57700	45900	60400	43000	41800	40900
20	46200	57100	33700	30800	50500	46100	53100	47100	54600	44100	41400	43300
21	46900	56800	33400	31900	46900	45900	52300	44600	58900	45900	41000	42400
22	45900	56000	33600	31200	44200	44800	51300	41700	75500	47700	40800	40400
23	45000	58000	34000	32200	44900	44300	50500	40600	76300	46600	41800	40500
24	45600	57400	34100	31500	45300	43900	49800	39800	62300	49300	42100	39900
25	46800	56200	35900	31100	45900	43600	48500	39000	55600	50900	42500	40500
26	47800	55000	36700	30600	46600	44600	48400	39100	53400	49000	42700	41500
27	47500	53700	35000	29800	48900	45400	47300	39800	52400	48600	42700	40700
28	47400	54100	34100	31100	55600	43700	46000	39000	56600	50900	43000	40300
29	46200	54700	31500	31900	---	42200	44700	38400	69800	49900	43100	40200
30	44800	53700	29900	34200	---	43800	43200	38000	74200	48700	42900	41800
31	44700	---	30400	33600	---	47600	---	38300	---	48100	42700	---
TOTAL	1386300	1567000	1232700	975700	1024500	1673300	1608900	1412800	1525200	1518500	1340100	1238700
MEAN	44720	52230	39760	31470	36590	53980	53630	45570	50840	48980	43230	41290
MAX	47800	58000	56900	34200	55600	80500	69000	66800	76300	74500	47200	43300
MIN	41000	44900	29900	29100	28800	42200	43200	38000	38600	40500	40800	39600
AC-FT	2750000	3108000	2445000	1935000	2032000	3319000	3191000	2802000	3025000	3012000	2658000	2457000
CAL YR 1982	TOTAL	12918400	MEAN	35390	MAX	58000	MIN	10000	AC-FT	25620000		
WTR YR 1983	TOTAL	16503700	MEAN	45220	MAX	80500	MIN	28800	AC-FT	32740000		

PLATTE RIVER BASIN

71

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 upstream from bridge on Nebraska State Highway 86, 700 ft downstream from Wyoming-Nebraska State line, and 0.5 mi south of Henry, NE.

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

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records fair. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.8 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 17,900 ft³/s June 2, 1929, gage height, 7.04 ft, site and datum then in use; minimum daily, 13 ft³/s May 21, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,190 ft³/s July 23, gage height, 6.56 ft; minimum daily, 131 ft³/s Mar. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	631	322	250	206	185	148	143	3130	6860	7580	6940	6390
2	661	314	246	203	185	143	141	3060	6900	7540	6570	6390
3	765	306	243	203	185	143	146	3170	6570	7420	5810	6350
4	725	298	243	203	185	143	151	3190	6530	7380	5680	6280
5	643	294	243	206	185	164	154	3260	6790	7340	5280	6280
6	595	286	243	206	185	159	154	3400	6750	7210	5250	6010
7	566	290	236	203	182	154	156	3500	6530	7340	5370	5940
8	533	283	225	203	182	159	162	3580	6570	7500	5550	5810
9	533	275	219	203	185	156	162	3730	6490	7250	5650	5940
10	544	271	225	203	185	151	162	3770	6830	7290	5680	5680
11	538	283	229	203	185	148	162	3880	7340	7340	5460	5520
12	516	279	229	200	185	143	164	3990	7130	7250	5250	5550
13	495	268	232	197	185	138	164	3970	6750	7020	5340	5740
14	474	260	232	197	185	138	159	4040	7060	7540	5280	5870
15	469	257	232	194	185	136	162	4230	6830	7540	5310	5870
16	459	250	225	194	179	133	179	4210	7060	7380	5340	5870
17	449	250	225	191	176	131	725	4800	7710	7170	5430	5840
18	434	246	222	194	176	133	1150	4880	7100	7100	5430	5780
19	449	250	225	191	173	138	1340	4580	6940	6940	5520	5840
20	429	246	222	191	167	138	1430	4610	7020	6710	6350	4780
21	410	246	222	191	164	136	1450	4800	6860	6570	5940	4350
22	396	246	222	194	162	136	1620	5100	6830	6530	5910	5190
23	382	243	219	194	162	133	1810	5710	6980	7210	5910	4790
24	378	239	219	194	159	136	1930	6420	7250	7420	5810	2880
25	365	243	210	194	154	143	2210	6750	7500	7060	5780	1620
26	356	243	210	191	154	143	2450	6640	7710	6940	5740	1360
27	343	243	209	194	154	141	2890	6350	7540	6790	5870	1180
28	339	246	205	194	151	143	3060	6140	7460	7020	6110	1090
29	339	243	205	191	---	143	3150	5910	7580	6980	6210	1320
30	330	239	205	188	---	143	3210	6310	7420	6940	6280	1480
31	330	---	203	185	---	143	---	6640	---	6980	6240	---
TOTAL	14876	7959	6975	6101	4900	4436	30946	143750	210890	222280	178290	142990
MEAN	480	265	225	197	175	143	1032	4637	7030	7170	5751	4766
MAX	765	322	250	206	185	164	3210	6750	7710	7580	6940	6390
MIN	330	239	203	185	151	131	141	3060	6490	6530	5250	1090
AC-FT	29510	15790	13830	12100	9720	8800	61380	285100	418300	440900	353600	283600
CAL YR 1982	TOTAL	174237	MEAN	477	MAX	1920	MIN	23	AC-FT	345600		
WTR YR 1983	TOTAL	974393	MEAN	2670	MAX	7710	MIN	131	AC-FT	1933000		

PLATTE RIVER BASIN

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 downstream from discharge station.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CTIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 15...	1430	163	1020	8.3	5.5	663	2.0	8.9	470
JAN 03...	1400	202	1080	8.0	4.0	578	1.7	11.0	28
FEB 08...	1500	180	1000	8.0	6.0	575	3.5	9.9	92
MAR 14...	1300	141	1550	8.2	13.0	570	5.5	8.4	K17
MAY 03...	1620	3000	715	8.2	12.0	580	22	8.4	K170
JUN 04...	0800	6690	590	8.2	16.0	580	23	6.7	80
29...	1230	7460	640	8.0	19.0	580	11	6.9	76
JUL 18...	1700	7080	595	7.8	22.5	660	24	7.8	48
AUG 16...	1445	5380	580	8.2	24.0	657	27	7.2	140
SEP 20...	1230	5210	640	8.2	14.0	666	--	8.6	100

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

DATE	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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 15...	300	41	84	22	110	2.9	8.0	260	230
JAN 03...	290	15	85	20	120	3.2	8.4	280	240
FEB 08...	300	58	83	22	120	3.1	9.6	240	260
MAR 14...	310	22	87	23	140	3.6	10	290	260
MAY 03...	250	78	66	20	62	1.8	4.8	170	180
JUN 04...	230	72	60	20	46	1.4	4.4	160	150
29...	240	82	62	21	47	1.4	4.5	160	160
JUL 18...	220	67	57	18	43	1.3	3.5	150	140
AUG 16...	200	51	54	16	46	1.5	3.5	150	140
SEP 20...	220	69	58	18	45	1.4	3.5	150	140

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, TOTAL (MG/L AS P) (00665)
NOV 15...	21	.70	27	659	.90	290	2.4	.060
JAN 03...	22	.80	29	693	.94	378	2.0	.020
FEB 08...	22	.60	29	690	.94	335	2.0	.000
MAR 14...	27	.30	26	747	1.0	284	2.1	.030
MAY 03...	15	.70	11	461	.63	3740	.10	.160
JUN 04...	12	.50	11	400	.54	7220	.20	.080
JUN 29...	12	.30	11	414	.56	8330	.30	.060
JUL 18...	9.3	.00	12	373	.51	7130	.20	.030
AUG 16...	9.7	.50	12	372	.51	5400	.30	.470
SEP 20...	10	.10	12	377	.51	5300	.30	.010

PLATTE RIVER BASIN

06677500 HORSE CREEK NEAR LYMAN, NE

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

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

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,992.84 ft, 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.--52 years, 70.7 ft³/s, 51,220 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 911 ft³/s May 19, gage height, 5.77 ft; minimum daily, 24 ft³/s Jan. 29-31, Feb. 5-7, Mar. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	56	43	30	27	25	67	475	516	365	181	183
2	131	55	43	30	27	24	66	500	509	323	181	169
3	117	53	42	30	26	24	67	459	462	330	173	183
4	109	53	43	30	26	24	66	450	421	365	181	235
5	104	53	43	31	24	74	66	453	424	365	176	233
6	100	53	43	39	24	43	83	416	421	365	188	247
7	95	52	41	36	24	48	116	354	453	340	194	261
8	95	51	39	34	26	51	123	306	421	263	184	249
9	101	50	39	34	26	43	124	282	394	211	175	251
10	99	50	39	32	27	39	124	282	466	180	151	259
11	88	52	39	33	27	38	126	291	556	178	137	253
12	83	50	39	32	26	35	135	311	481	151	135	245
13	80	50	40	32	27	33	143	347	497	139	148	257
14	79	48	40	31	27	32	128	372	512	122	152	259
15	79	47	38	30	27	37	164	362	496	105	152	282
16	77	48	39	30	27	37	167	370	484	93	145	295
17	73	47	40	30	27	37	166	714	490	92	150	286
18	73	48	38	29	26	36	166	620	481	93	154	253
19	81	48	37	29	26	36	163	650	447	96	155	251
20	78	48	39	29	26	36	160	716	439	86	175	288
21	77	46	39	29	26	36	154	559	413	86	172	295
22	77	46	39	28	26	35	150	512	436	92	169	278
23	73	44	38	28	26	34	147	549	424	112	188	253
24	71	44	34	28	26	36	151	516	386	188	198	265
25	69	44	34	28	26	37	152	472	360	190	196	267
26	67	43	32	28	25	36	154	506	399	191	192	280
27	65	44	35	28	25	36	159	519	496	196	188	267
28	62	44	32	26	25	45	172	506	503	184	196	288
29	60	45	30	24	---	45	207	503	487	189	201	286
30	58	44	30	24	---	46	258	503	416	192	196	280
31	57	---	30	24	---	69	---	496	---	189	188	---
TOTAL	2647	1456	1177	926	728	1207	4124	14371	13690	6071	5371	7698
MEAN	85.4	48.5	38.0	29.9	26.0	38.9	137	464	456	196	173	257
MAX	169	56	43	39	27	74	258	716	556	365	201	295
MIN	57	43	30	24	24	24	66	282	360	86	135	169
AC-FT	5250	2890	2330	1840	1440	2390	8180	28500	27150	12040	10650	15270
CAL YR 1982	TOTAL	30796.1	MEAN	84.4	MAX	439	MIN	6.5	AC-FT	61080		
WTR YR 1983	TOTAL	59466.0	MEAN	163	MAX	716	MIN	24	AC-FT	118000		

PLATTE RIVER BASIN

75

06678000 SHEEP CREEK NEAR MORRILL, NE

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

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

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,995.04 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1940, nonrecording gage at site 20 ft 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.--52 years, 55.1 ft³/s, 39,920 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 140 ft³/s Sept. 26, gage height, 2.86 ft; minimum daily, 3.4 ft³/s Sept. 9-11, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	92	88	73	75	71	67	69	65	42	5.5	5.2
2	113	92	86	74	73	71	67	63	65	43	5.5	5.0
3	112	92	86	75	72	71	69	62	65	17	5.5	5.0
4	111	91	86	78	71	71	69	61	65	3.8	6.4	5.0
5	110	90	86	78	72	72	69	61	66	3.9	6.4	4.6
6	110	90	86	77	71	70	69	61	63	4.6	14	3.9
7	109	90	85	74	71	69	69	61	60	4.6	9.6	3.9
8	111	90	83	73	71	68	69	59	60	4.3	5.5	3.8
9	116	90	83	78	71	68	69	59	59	4.6	5.2	3.4
10	114	90	78	77	71	68	69	59	59	4.6	5.2	3.4
11	108	95	78	78	71	68	68	62	60	5.0	5.0	3.4
12	108	92	78	78	71	68	68	65	61	5.0	5.2	3.8
13	104	91	79	77	71	68	67	63	62	5.0	5.5	3.8
14	104	91	78	76	71	68	67	63	61	5.0	5.5	3.8
15	103	91	79	75	71	69	67	61	61	5.0	5.2	4.3
16	102	89	79	75	71	69	68	63	59	5.5	5.0	4.3
17	101	91	79	75	71	69	67	78	59	5.5	5.0	4.3
18	100	91	78	75	71	70	67	70	58	5.9	5.0	3.8
19	105	91	77	76	71	70	67	69	58	5.9	4.8	3.6
20	102	90	78	75	71	69	68	67	61	5.7	4.3	4.8
21	101	89	78	75	72	69	68	67	63	5.7	4.1	5.2
22	99	89	77	75	72	69	68	65	48	5.9	4.3	4.1
23	97	87	77	75	71	69	67	65	41	5.9	4.6	3.8
24	95	89	77	75	71	69	65	64	41	5.9	4.3	3.8
25	95	89	75	75	71	70	64	63	42	5.9	4.3	3.4
26	94	87	75	75	71	67	63	63	42	5.9	4.3	71
27	94	87	77	75	71	67	63	63	42	5.7	4.3	110
28	93	88	76	76	71	67	63	63	44	5.5	5.0	111
29	93	88	76	78	---	65	65	63	45	5.5	6.4	109
30	93	88	77	78	---	66	65	64	44	5.5	8.2	109
31	92	---	75	77	---	67	---	67	---	5.7	5.2	---
TOTAL	3203	2700	2470	2351	1998	2132	2011	1983	1679	249.0	174.3	613.4
MEAN	103	90.0	79.7	75.8	71.4	68.8	67.0	64.0	56.0	8.03	5.62	20.4
MAX	116	95	88	78	75	72	69	78	66	43	14	111
MIN	92	87	75	73	71	65	63	59	41	3.8	4.1	3.4
AC-FT	6350	5360	4900	4660	3960	4230	3990	3930	3330	494	346	1220
CAL YR 1982	TOTAL	17934.4	MEAN 49.1	MAX 118	MIN 2.4	AC-FT 35570						
WTR YR 1983	TOTAL	21563.7	MEAN 59.1	MAX 116	MIN 3.4	AC-FT 42770						

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 south of Mitchell.

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

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

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

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

REMARKS.--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 June 3, 1909, gage height, 6.45 ft, datum then in use, from graph based on gage readings, from rating curve extended above 17,000 ft³/s; maximum gage height, 7.65 ft June 27, 1983; minimum daily discharge observed, 25 ft³/s Sept. 25-29, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,500 ft³/s June 27, gage height, 7.65 ft; minimum daily, 384 ft³/s Feb. 28-Mar. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	659	568	424	461	384	424	3610	6360	7780	6330	6000
2	1000	659	568	424	457	384	424	3520	6380	7790	6210	6040
3	1000	650	559	432	436	384	436	3360	6400	7740	5430	6100
4	1050	645	555	432	412	384	436	3310	6420	7700	5220	6120
5	981	645	555	440	416	448	444	3340	6440	7600	4940	6020
6	949	641	555	469	392	457	452	3390	6620	7480	4820	5960
7	933	636	537	473	392	444	490	3480	6370	7300	4870	5970
8	923	636	520	477	392	457	503	3590	6300	7540	4970	5970
9	938	645	511	482	396	444	507	3660	6100	7240	5080	6040
10	933	645	511	473	396	428	511	3650	6060	6700	5010	5840
11	891	678	503	473	396	416	507	3660	6990	6720	5060	5550
12	871	673	486	473	396	412	524	3900	7800	6740	4820	5380
13	835	659	490	473	396	408	528	3960	7320	6740	4880	5480
14	810	645	490	473	396	408	516	3960	7350	6820	4890	5690
15	785	641	477	469	396	408	524	4100	7290	6900	4870	5800
16	775	636	477	469	392	408	537	4220	7000	7050	4890	5780
17	755	631	482	469	392	408	752	5330	7280	6650	4950	5750
18	745	627	465	465	388	408	1260	5550	7360	6640	4940	5710
19	795	627	457	465	396	408	1530	5100	6840	6590	5020	5790
20	775	622	448	465	392	408	1660	5120	6720	6190	5400	5630
21	755	618	448	465	392	408	1730	4970	6650	6020	5520	4690
22	745	604	452	465	392	404	1870	4940	6590	5920	5400	5490
23	731	595	452	465	392	404	2020	5120	6790	6330	5440	5490
24	721	586	448	465	388	404	2100	5520	7070	7320	5440	4310
25	716	586	404	461	388	408	2320	5940	7440	6780	5390	2470
26	707	581	408	461	388	408	2460	6160	8000	6610	5390	2130
27	702	577	408	461	388	404	2810	6520	8300	6390	5430	1960
28	688	581	392	461	384	408	3010	6240	8000	6400	5580	1930
29	678	577	408	461	---	412	3230	5940	7850	6460	5880	2130
30	669	577	416	461	---	408	3340	6160	7800	6410	6040	2380
31	664	---	420	461	---	424	---	6340	---	6370	6000	---
TOTAL	25530	18782	14870	14307	11202	12798	37855	143660	209890	212920	164110	149600
MEAN	824	626	480	462	400	413	1262	4634	6996	6868	5294	4987
MAX	1050	678	568	482	461	457	3340	6520	8300	7790	6330	6120
MIN	664	577	392	424	384	384	424	3310	6060	5920	4820	1930
AC-FT	50640	37250	29490	28380	22220	25380	75090	284900	416300	422300	325500	296700
CAL YR 1982 TOTAL	170489			MEAN 467	MAX 1090	MIN 110	AC-FT 338200					
WTR YR 1983 TOTAL	1015524			MEAN 2782	MAX 8300	MIN 384	AC-FT 2014000					

PLATTE RIVER BASIN

77

06681500 GERING DRAIN NEAR GERING, NE

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

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

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

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

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

AVERAGE DISCHARGE.--49 years, 47.9 ft³/s, 34,700 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft³/s May 17, gage height, 4.87 ft; minimum daily, 22 ft³/s May 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	33	30	26	25	30	27	48	52	183	115	159
2	41	33	30	26	25	30	28	32	86	184	114	151
3	38	33	30	26	24	30	28	28	80	179	115	156
4	38	32	29	26	24	30	28	27	90	175	114	178
5	37	31	29	27	23	40	28	27	99	180	181	184
6	37	32	29	28	23	28	27	25	99	145	139	196
7	36	33	29	27	23	26	25	25	100	94	124	200
8	37	33	29	27	23	28	26	25	97	64	119	188
9	42	33	29	27	23	26	26	24	97	72	117	185
10	38	32	29	26	23	26	25	23	96	80	115	185
11	35	36	29	26	23	26	25	56	98	91	110	188
12	35	33	29	26	23	27	28	35	176	103	104	191
13	35	33	29	26	23	28	30	26	185	102	107	188
14	35	32	29	25	23	30	26	24	202	94	108	199
15	35	32	29	25	23	29	25	22	167	93	103	192
16	34	33	29	26	23	29	26	31	166	99	102	184
17	34	33	29	26	25	29	25	338	177	99	108	180
18	34	33	28	26	26	29	27	42	166	98	116	178
19	36	33	27	26	25	29	26	32	155	104	120	197
20	35	33	28	26	25	28	26	33	150	101	133	199
21	35	32	28	26	25	28	26	32	167	110	124	213
22	35	31	28	26	25	27	24	30	168	107	168	195
23	35	31	28	26	26	27	24	28	167	117	174	208
24	34	30	27	25	26	28	25	28	162	125	174	190
25	34	30	26	25	27	31	26	27	173	108	172	196
26	34	30	26	25	27	28	28	27	196	115	186	205
27	33	30	26	25	28	28	29	26	221	117	184	209
28	33	30	27	25	28	29	28	27	197	121	176	208
29	33	31	26	25	---	30	37	26	198	124	170	205
30	33	30	26	25	---	30	43	26	192	118	162	164
31	33	---	26	25	---	26	---	26	---	116	160	---
TOTAL	1128	961	873	802	687	890	822	1226	4379	3618	4214	5671
MEAN	36.4	32.0	28.2	25.9	24.5	28.7	27.4	39.5	146	117	136	189
MAX	64	36	30	28	28	40	43	338	221	184	186	213
MIN	33	30	26	25	23	26	24	22	52	64	102	151
AC-FT	2240	1910	1730	1590	1360	1770	1630	2430	8690	7180	8360	11250
CAL YR 1982	TOTAL	23159	MEAN 63.4	MAX 311	MIN 20	AC-FT 45940						
WTR YR 1983	TOTAL	25271	MEAN 69.2	MAX 338	MIN 22	AC-FT 50130						

PLATTE RIVER BASIN

06682000 NORTH PLATTE RIVER NEAR MINATARE, NE

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

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

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

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

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

Nine Mile channel: Water-stage recorder. Datum of gage is 3,812.3 ft 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 July 2, 1917, from graph based on mean daily discharge and discharge measurement published by State engineer of Nebraska; minimum daily, 11 ft³/s Aug. 16-18, 1940.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,750 ft³/s June 27; minimum daily, 581 ft³/s Mar. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1420	1030	854	719	664	606	616	3930	6640	8200	6720	6090
2	1320	1020	856	716	657	606	610	4010	6740	8190	6650	6110
3	1300	1010	816	714	649	605	619	3860	6670	8200	6190	6130
4	1360	1000	806	709	647	606	630	3760	6630	8070	5680	6200
5	1290	999	801	716	647	653	625	3730	6790	7950	5540	6200
6	1250	996	804	724	641	668	625	3770	6880	7710	5310	6090
7	1220	989	806	736	636	639	637	3840	6860	7400	5300	6060
8	1190	980	801	729	636	639	653	3950	6680	7360	5360	5980
9	1260	962	803	726	636	639	653	4070	6590	7400	5400	5870
10	1260	960	803	721	636	626	648	4110	6440	6960	5390	5910
11	1210	993	808	716	632	621	650	4280	6810	6810	5250	5710
12	1180	999	798	716	630	608	649	4480	7750	6810	4920	5600
13	1150	978	808	714	630	606	664	4560	8120	6760	4890	5570
14	1130	966	796	709	630	604	652	4580	7970	6660	4950	5950
15	1110	960	786	700	625	590	640	4600	7830	6860	4910	6010
16	1100	950	781	698	618	586	651	4760	7630	6970	4880	6020
17	1090	949	779	694	630	590	690	5800	7710	6870	4920	6040
18	1080	947	765	692	635	590	1110	5800	8000	6620	4990	5980
19	1130	942	753	692	630	597	1500	5520	7900	6640	5080	5990
20	1120	928	753	689	618	591	1700	5250	7540	6430	5310	5990
21	1120	929	753	682	604	582	1870	5100	7570	6240	6090	5170
22	1110	921	753	682	621	581	1950	5040	7240	6100	5950	5360
23	1100	913	746	682	621	581	2080	5210	7420	6240	6000	5730
24	1080	883	749	678	612	586	2230	5580	7520	6760	5980	5200
25	1070	883	714	676	612	609	2440	6080	7600	6920	5910	3370
26	1080	876	709	676	615	600	2670	6490	8000	6740	5860	2700
27	1070	872	716	676	613	592	2860	6590	8600	6690	5860	2430
28	1050	872	699	676	608	596	3170	6600	8640	6620	5930	2410
29	1050	872	729	668	---	604	3420	6360	8510	6740	6060	2590
30	1050	870	724	670	---	597	3630	6330	8380	6710	6100	2750
31	1040	---	721	668	---	594	---	6580	---	6710	6100	---
TOTAL	35990	28449	23990	21664	17633	18792	41542	154620	223660	217340	173480	157210
MEAN	1161	948	774	699	630	606	1385	4988	7455	7011	5596	5240
MAX	1420	1030	856	736	664	668	3630	6600	8640	8200	6720	6200
MIN	1040	870	699	668	604	581	610	3730	6440	6100	4880	2410
AC-FT	71390	56430	47580	42970	34980	37270	82400	306700	443600	431100	344100	311800
CAL YR 1982	TOTAL	269133	MEAN	737	MAX	1640	MIN	265	AC-FT	533800		
WTR YR 1983	TOTAL	1114370	MEAN	3053	MAX	8640	MIN	581	AC-FT	2210000		

PLATTE RIVER BASIN

79

06682505 NORTH PLATTE RIVER AT MC GREW, NE

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHQS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PFK 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
18...	0915	1230	940	8.2	11.0	8.6	15	4800	K13000	310	86
NOV											
15...	0900	1020	970	7.8	3.5	11.3	29	240	830	290	84
DEC											
06...	0930	945	960	8.1	6.0	10.1	22	770	580	320	92
JAN											
10...	0945	800	970	8.0	2.0	11.1	13	450	440	320	90
FEB											
14...	0920	750	985	8.0	6.5	10.6	24	370	1300	300	85
MAR											
23...	0915	652	985	8.1	4.0	11.4	18	K78	600	320	92
APR											
11...	0930	706	960	8.0	9.5	10.1	20	220	290	290	81
MAY											
16...	1000	4800	770	8.1	12.0	9.0	31	110	580	270	69
JUN											
13...	0945	8070	740	8.0	16.5	9.8	29	430	1200	250	64
JUL											
20...	0845	6370	625	7.9	23.0	6.8	33	150	2700	230	61
AUG											
22...	1000	5910	--	7.8	23.0	7.1	33	460	4000	220	60
SEP											
19...	0945	6070	642	8.1	15.0	8.2	30	150	2000	230	60

K Results based on colony count outside 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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
18...	22	240	20	87	2.8	<.060	--	1.30	4.1	.130	4.4
NOV											
15...	20	220	23	26	3.2	<.060	--	1.70	4.9	.110	4.6
DEC											
06...	23	230	24	9	3.4	.120	1.9	2.00	5.4	.080	3.6
JAN											
10...	23	240	24	29	3.7	.220	1.5	1.70	5.4	.140	4.1
FEB											
14...	22	230	23	44	3.3	.130	.77	.90	4.2	.140	3.7
MAR											
23...	22	220	24	32	3.0	.150	1.2	1.30	4.3	.090	4.6
APR											
11...	22	210	23	92	2.9	.210	1.3	1.50	4.4	.120	5.7
MAY											
16...	24	210	18	128	.40	.120	.98	1.10	1.5	.090	7.6
JUN											
13...	21	170	14	40	.30	.070	1.4	1.50	1.8	.110	7.8
JUL											
20...	18	150	13	128	.40	.120	1.3	1.40	1.8	.090	8.6
AUG											
22...	17	150	11	154	.70	.080	1.2	1.30	2.0	.290	9.2
SEP											
19...	19	160	13	139	.50	.030	1.4	1.40	1.9	.090	3.8

PLATTE RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY LAB (MG/L AS CAC03) (90410)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS Si02) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 15...	0900	20	100	2.6	10	273	.50	39	660	.90
FEB 14...	0920	27	110	2.9	10	276	.50	20	666	.91
MAY 16...	1000	82	70	1.9	6.5	189	.50	13	525	.71
AUG 22...	1000	52	53	1.6	5.0	168	.40	16	414	.56

DATE	TIME	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 15...	1820	3.2	.060	6	100	160	1	<10	0	1300	
FEB 14...	1350	3.2	.040	--	--	170	--	--	--	--	--
MAY 16...	6800	.42	.050	4	<100	110	<1	<10	270	3700	
AUG 22...	6600	.64	.010	--	--	0	--	--	--	--	--

DATE	TIME	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 15...	1300	20	0	120	110	8	.0	4	<0	80	
FEB 14...	--	20	--	--	--	20	--	--	--	--	--
MAY 16...	3600	60	190	190	170	20	.0	4	<0	90	
AUG 22...	--	440	--	--	--	40	--	--	--	--	--

PLATTE RIVER BASIN

81

06684500 NORTH PLATTE RIVER AT BRIDGEPORT, NE

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

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

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

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

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

REMARKS.--Records fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. River flows in two independently rated channels for which separate records are computed; figures herein represent combined discharge.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,690 ft³/s June 28; minimum daily, 724 ft³/s Feb. 4, May 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1770	1180	988	889	754	782	771	3640	7040	8070	6460	5930
2	1660	1150	988	850	741	763	761	3850	7350	7850	6450	5940
3	1610	1160	983	850	736	744	792	3800	7500	7810	6260	5980
4	1610	1160	980	840	724	744	833	3650	7400	7750	5810	6080
5	1620	1170	1010	859	726	782	852	3610	7150	7780	5410	6300
6	1580	1150	1020	872	742	820	872	3760	6990	7680	5260	6270
7	1510	1070	989	888	767	811	872	3790	6990	7390	5020	6180
8	1490	1040	965	851	775	791	874	3790	6870	6980	4950	6120
9	1540	1030	952	841	797	782	846	3880	6710	6850	4930	6010
10	1640	1040	934	838	784	797	817	3950	6610	6760	4910	5970
11	1560	1120	915	918	804	803	800	4190	6550	6370	4830	5970
12	1510	1170	883	919	800	783	799	4430	7020	6160	4720	5830
13	1430	1150	863	905	808	763	840	4570	7570	6030	4600	5760
14	1390	1110	877	888	812	781	826	4510	7820	5940	4680	5920
15	1360	1100	896	860	805	780	820	4380	7390	5970	4740	6070
16	1360	1100	948	802	809	761	867	4510	7280	6260	4720	5860
17	1300	1090	950	771	805	761	893	5850	7310	6350	4760	5990
18	1310	1070	906	771	800	724	1020	6730	7590	6200	4900	5990
19	1390	1060	915	762	812	762	1430	6300	8030	6130	4950	6050
20	1410	1040	928	765	820	781	1670	5880	7860	6010	5070	6240
21	1330	1050	922	771	824	790	1840	5640	7580	5630	5390	5990
22	1270	1070	899	790	815	800	2000	5510	7450	5490	5410	5230
23	1230	1080	879	803	833	800	2000	5330	7200	5480	6040	5820
24	1230	1040	869	803	840	800	2180	5380	7200	5730	5890	5660
25	1200	1030	811	827	846	831	2260	5730	7260	6530	5820	4350
26	1190	1020	775	819	839	830	2420	6340	7500	6650	5750	3320
27	1160	993	760	807	820	809	2580	6760	8030	6620	5720	2920
28	1160	1010	740	792	801	809	2820	6960	8500	6460	5710	2730
29	1190	1030	760	793	---	790	3120	6860	8460	6400	5900	2770
30	1200	999	800	790	---	790	3400	6760	8240	6460	5900	2730
31	1200	---	820	772	---	789	---	6810	---	6490	5870	---
TOTAL	43410	32482	27925	25706	22239	24353	42875	157150	222450	204280	166830	161980
MEAN	1400	1083	901	829	794	786	1429	5069	7415	6590	5382	5399
MAX	1770	1180	1020	919	846	831	3400	6960	8500	8070	6460	6300
MIN	1160	993	740	762	724	724	761	3610	6550	5480	4600	2730
AC-FT	86100	64430	55390	50990	44110	48300	85040	311700	441200	405200	330900	321300
CAL YR 1982 TOTAL		350894		961	MAX 2160	MIN 337	AC-FT 696000					
WTR YR 1983 TOTAL		1131680		3100	MAX 8500	MIN 724	AC-FT 2245000					

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 bank 250 ft downstream from bridge on U.S. Highway 385 and State Highway 92, 0.5 mi upstream from mouth, and 4 mi southeast of Bridgeport.

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

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

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

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

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

AVERAGE DISCHARGE.--52 years, 28.3 ft³/s, 20,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,880 ft³/s June 9, 1965, gage height, 9.98 ft, from floodmark, from rating curve extended above 3,500 ft³/s on basis of rating extension for main channel and determination of flow over road; no flow 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; July 26, 27, Aug. 7-11, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 84 ft³/s Apr. 23, gage height, 2.28 ft; minimum daily, 2.0 ft³/s Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	11	12	13	15	17	18	50	40	51	7.5	26
2	25	10	11	13	15	17	18	49	39	47	5.3	26
3	23	11	10	13	15	17	18	45	38	39	2.2	26
4	22	12	12	13	15	18	19	33	35	40	2.6	26
5	21	12	12	12	16	22	18	28	35	40	2.0	26
6	10	12	12	15	15	23	20	28	34	34	2.4	26
7	7.5	12	12	17	16	19	19	23	34	14	4.3	26
8	7.5	12	13	16	17	18	18	19	34	12	5.3	27
9	7.6	12	13	15	16	18	18	30	34	9.6	4.6	28
10	7.1	12	14	14	15	17	17	31	32	7.9	4.3	27
11	7.5	13	14	16	15	15	17	32	33	8.3	4.3	27
12	7.5	13	15	15	15	15	18	31	38	7.9	3.9	21
13	7.5	13	15	15	15	15	18	28	41	7.5	2.6	17
14	7.5	13	15	15	15	15	17	28	39	6.9	3.9	17
15	7.9	13	15	15	15	15	19	26	42	6.0	3.1	22
16	7.9	13	15	16	14	15	18	34	44	6.7	3.4	30
17	7.5	13	14	16	14	14	18	49	44	6.4	4.6	31
18	7.3	13	13	16	14	13	18	60	44	6.0	4.9	30
19	7.5	12	13	16	14	13	18	43	44	5.6	3.1	30
20	7.9	12	13	17	15	13	18	54	42	4.6	2.8	30
21	7.9	12	13	17	15	13	18	53	41	3.9	2.4	30
22	7.9	12	13	17	15	14	19	54	40	3.4	3.4	27
23	7.9	12	14	17	15	15	33	54	38	5.3	26	26
24	8.3	12	13	17	15	16	47	54	37	6.4	28	25
25	9.1	12	12	16	16	18	42	52	44	7.9	27	24
26	9.6	12	13	16	16	20	41	38	55	7.5	25	18
27	9.6	12	13	16	16	19	42	23	54	9.6	26	9.6
28	10	12	13	16	16	19	38	22	58	9.6	24	13
29	10	12	13	15	---	20	38	22	55	8.3	26	18
30	10	12	13	15	---	18	38	33	53	7.5	27	19
31	10	---	13	15	---	18	---	39	---	7.1	27	---
TOTAL	333.0	364	406	475	425	519	718	1165	1241	436.9	318.9	728.6
MEAN	10.7	12.1	13.1	15.3	15.2	16.7	23.9	37.6	41.4	14.1	10.3	24.3
MAX	26	13	15	17	17	23	47	60	58	51	28	31
MIN	7.1	10	10	12	14	13	17	19	32	3.4	2.0	9.6
AC-FT	661	722	805	942	843	1030	1420	2310	2460	867	633	1450
CAL YR 1982	TOTAL	4624.48	MEAN	12.7	MAX	50	MIN	.00	AC-FT	9170		
WTR YR 1983	TOTAL	7130.40	MEAN	19.5	MAX	60	MIN	2.0	AC-FT	14140		

PLATTE RIVER BASIN

83

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

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

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

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--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, 20,100 ft³/s June 27, 29, 1917, from graph based on daily gage readings, from rating curve extended above 15,000 ft³/s; minimum daily, 8 ft³/s Aug. 4, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,700 ft³/s June 29, gage height, 4.62 ft; minimum daily discharge, 766 ft³/s Apr. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1940	1280	1230	1000	956	906	906	3940	6520	8210	6200	5620
2	1800	1260	1250	1040	940	906	894	3970	6820	7980	6240	5620
3	1600	1230	1230	1060	880	906	894	4100	6950	7700	6200	5690
4	1580	1220	1170	1060	840	956	894	3910	7340	7520	6080	5850
5	1680	1220	1190	1060	840	1380	870	3650	7340	7430	5730	6040
6	1720	1200	1170	1060	860	1300	858	3710	7080	7340	5470	6120
7	1620	1170	1170	1060	870	1120	870	3780	6860	7120	5280	6160
8	1600	1190	1140	1080	870	1050	906	3870	6950	6780	5100	6120
9	1780	1200	1140	1080	870	995	870	3870	6950	6440	5030	6040
10	1780	1230	1160	1100	870	943	870	3910	6820	6240	5070	5880
11	1800	1540	1140	1100	906	930	870	4230	6820	6120	5030	5850
12	1760	1410	1120	1100	930	930	882	4260	7030	5770	4960	5810
13	1660	1300	1100	1070	956	918	870	4420	7430	5650	4790	5690
14	1540	1260	1100	1050	969	918	810	4450	7840	5580	4690	5770
15	1500	1280	1060	1020	982	906	810	4420	7880	5540	4760	5880
16	1520	1280	1050	1020	982	870	834	4580	7740	5580	4690	6040
17	1500	1300	1020	1030	1020	906	822	5330	7650	5850	4660	6080
18	1520	1280	995	1050	982	930	766	6820	7610	5880	4690	6080
19	1580	1280	969	1040	956	930	995	7430	7560	5730	4720	6080
20	1580	1250	969	1000	894	894	1430	6650	7880	5580	4790	6080
21	1560	1190	995	930	882	870	1780	6000	7650	5390	5030	6240
22	1490	1200	1010	930	882	846	2000	5650	7610	5030	5320	5920
23	1490	1260	960	918	906	858	2080	5320	7120	5000	5650	5500
24	1470	1260	940	906	918	850	2100	5250	6900	5250	6040	6000
25	1410	1250	900	894	930	894	2240	5320	6900	5470	5880	5540
26	1330	1200	900	894	930	982	2260	5620	7080	6040	5690	4140
27	1310	1160	900	906	930	918	2480	5960	7520	6440	5580	3370
28	1250	1170	940	906	918	930	2700	6320	8020	6360	5540	2900
29	1260	1170	980	956	---	943	3010	6570	8550	6280	5500	2830
30	1260	1220	1000	956	---	956	3490	6610	8500	6200	5620	2950
31	1260	---	1000	956	---	943	---	6570	---	6240	5690	---
TOTAL	48150	37460	32898	31232	25669	29584	42061	156490	220920	193740	165720	163890
MEAN	1553	1249	1061	1007	917	954	1402	5048	7364	6250	5346	5463
MAX	1940	1540	1250	1100	1020	1380	3490	7430	8550	8210	6240	6240
MIN	1250	1160	900	894	840	846	766	3650	6520	5000	4660	2830
AC-FT	95510	74300	65250	61950	50910	58680	83430	310400	438200	384300	328700	325100

CAL YR 1982 TOTAL 393493 MEAN 1078 MAX 2480 MIN 324 AC-FT 780500
WTR YR 1983 TOTAL 1147814 MEAN 3145 MAX 8550 MIN 766 AC-FT 2277000

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 September 1981.

WATER TEMPERATURES: October 1970 to September 1981.

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
19...	1300	1590	919	8.1	7.0	--	--	10.3	18	K27	K18000
NOV											
16...	1015	1280	973	8.1	3.0	662	15	12.1	14	K7	210
DEC											
07...	1005	1170	1060	8.1	2.0	680	--	12.2	11	270	K2700
JAN											
11...	1215	1090	--	8.2	2.0	680	35	11.7	25	K44	740
FEB											
15...	1000	965	940	8.1	5.0	670	--	11.7	18	15	660
MAR											
22...	1015	837	930	8.1	2.0	666	25	12.4	21	K11	140
APR											
12...	1030	872	930	8.0	7.5	663	--	9.8	22	35	280
MAY											
17...	0910	5440	803	8.2	7.0	664	27	10.6	27	290	800
JUN											
14...	1300	7720	775	8.2	20.0	670	--	9.2	27	60	700
JUL											
19...	1100	5800	690	8.0	25.0	670	50	7.1	35	70	190
AUG											
23...	1105	5560	678	7.9	21.0	670	--	7.6	46	1100	5000
SEP											
20...	1230	6210	698	8.2	11.0	681	38	10.8	33	110	780

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

DATE	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 PATI0 (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY LAB AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RINE, DIS- SOLVED (MG/L AS CL) (00940)
OCT										
19...	290	--	81	22	--	--	--	--	210	21
NOV										
16...	300	33	86	20	98	2.6	11	266	210	23
DEC										
07...	300	--	86	21	--	--	--	--	210	24
JAN										
11...	290	28	83	20	97	2.6	10	262	210	23
FEB										
15...	290	--	82	21	98	2.6	--	--	200	29
MAR										
22...	290	27	82	21	100	2.6	10	266	200	23
APR										
12...	290	--	81	21	100	2.7	--	--	210	22
MAY										
17...	260	56	66	22	74	2.1	7.3	200	200	18
JUN										
14...	250	--	67	21	65	1.8	--	--	170	15
JUL										
19...	230	39	59	19	56	1.7	6.3	187	160	14
AUG										
23...	230	--	62	18	57	1.7	--	--	150	13
SEP										
20...	230	49	62	19	60	1.8	5.7	184	170	14

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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, DTS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 19...	--	--	--	--	--	--	87	--	--	2.5
NOV 16...	.50	41	641	650	.87	2220	70	--	<.020	3.1
DEC 07...	--	--	--	--	--	--	47	--	--	3.3
JAN 11...	.50	40	666	641	.91	1960	146	--	<.020	3.2
FEB 15...	--	--	--	--	--	--	94	--	--	3.1
MAR 22...	.50	41	625	638	.85	1410	74	--	<.020	3.0
APR 12...	--	--	--	--	--	--	88	--	--	2.9
MAY 17...	.50	17	530	526	.73	7920	93	.66	.040	.70
JUN 14...	--	--	--	--	--	--	--	--	--	.10
JUL 19...	.40	18	451	446	.61	7060	126	.37	.030	.40
AUG 23...	--	--	--	--	--	--	121	--	--	.60
SEP 20...	.40	20	459	461	.62	7700	106	--	<.020	.60

DATE	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,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, DTS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 19...	--	.070	--	1.3	1.40	3.9	.120	--	--	4.7
NOV 16...	3.1	<.060	.100	--	1.70	4.8	.090	.030	.020	4.4
DEC 07...	--	<.060	--	--	2.40	5.7	.120	--	--	2.3
JAN 11...	3.3	<.060	<.060	--	2.30	5.5	.180	.050	.020	7.4
FEB 15...	--	<.060	--	--	1.70	4.8	.110	--	--	3.9
MAR 22...	3.1	.060	.190	1.6	1.70	4.7	.120	.030	.020	4.6
APR 12...	--	.090	--	1.4	1.50	4.4	.100	--	--	5.2
MAY 17...	.50	.160	.100	1.0	1.20	1.9	.090	.050	.010	7.7
JUN 14...	--	.060	--	1.0	1.10	1.2	.070	--	--	7.8
JUL 19...	.41	.100	.100	1.3	1.40	1.8	.140	.060	.020	9.4
AUG 23...	--	.070	--	1.4	1.50	2.1	.220	--	--	12
SEP 20...	.61	.050	.040	1.1	1.10	1.7	.110	.010	<.010	6.1

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BF) (01010)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 16...	1015	30	7	8	100	110	<0	<1	<1	20	20
MAR 22...	1015	20	--	6	--	0	0	--	<1	--	<1
MAY 17...	0910	30	4	5	<100	0	0	2	1	30	20
JUL 19...	1100	200	--	4	--	0	0	--	<1	--	<1

PLATTE RIVER BASIN

06686000 NORTH PLATTE RIVER AT LISCO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (01900)
NOV 16...	<0	0	2	1200	10	0	<1	60	80	6	.5
MAR 22...	<0	--	6	--	20	--	<1	50	--	4	--
MAY 17...	<0	100	8	3100	10	50	3	40	130	15	.0
JUL 19...	<0	--	18	--	60	--	2	30	--	21	--

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (01890)	MOLYB- DENIUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELF- NIUM, TOTAL (UG/L AS SE) (01147)	SELF- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 16...	.0	<10	2	3	4	<0	<1	940	9.0	20	30
MAR 22...	<.0	<10	<1	--	4	--	<1	920	10	--	10
MAY 17...	<.0	<10	2	4	4	<0	<1	660	<6.0	40	20
JUL 19...	.0	<10	<1	--	2	--	<1	570	<6.0	--	10

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV 16...	1015	1280	3.0	216	746	--	--
JAN 11...	1215	1090	2.0	353	1040	--	--
MAR 22...	1015	837	2.0	158	357	--	--
JUL 19...	1100	5800	25.0	263	4120	29	35
SEP 20...	1230	6210	11.0	283	4750	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70331)
NOV 16...	--	49	65	92	98	100	--
JAN 11...	--	50	66	88	100	--	--
MAR 22...	--	42	66	90	100	--	--
JUL 19...	48	58	64	81	100	--	--
SEP 20...	--	--	--	--	--	--	38

PLATTE RIVER BASIN

87

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 downstream from county highway bridge, 0.5 mi downstream from bridge on U.S. Highway 26, 0.8 mi upstream from mouth, and 1.5 mi west of Lewellen.

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

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,310.04 ft 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.--53 years, 69.4 ft³/s, 50,280 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 280 ft³/s June 13, gage height, 5.02 ft; maximum gage height, 5.34 ft Dec. 31, backwater from ice; minimum daily discharge, 0.42 ft³/s July 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	88	98	82	86	86	86	128	90	66	6.0	5.7
2	22	86	97	84	80	86	81	129	92	55	1.3	7.1
3	29	84	94	84	84	86	86	107	96	64	2.3	7.1
4	37	84	94	86	89	90	86	96	102	49	5.7	50
5	44	88	98	86	86	131	92	94	115	41	1.7	63
6	45	89	96	88	86	136	92	93	111	32	1.4	19
7	48	88	92	90	87	111	94	93	104	23	1.3	16
8	75	89	90	88	89	98	94	93	104	13	1.0	14
9	75	93	92	83	89	94	93	93	102	5.7	2.6	13
10	84	93	92	86	90	96	92	100	100	2.0	1.4	14
11	86	118	92	93	90	96	90	115	115	2.0	1.3	16
12	85	124	89	96	90	94	90	139	145	1.7	1.1	14
13	85	112	90	96	90	94	88	120	189	1.0	3.1	16
14	84	102	90	96	92	94	86	101	114	.70	6.2	26
15	85	101	88	92	92	92	89	97	93	1.1	8.2	22
16	85	104	89	90	89	90	90	97	90	7.1	4.4	21
17	85	104	89	90	89	93	90	111	94	8.2	1.7	18
18	85	104	89	85	89	92	88	131	74	11	1.4	16
19	85	104	85	80	89	92	89	121	72	8.9	1.0	11
20	85	104	88	96	86	92	89	128	72	.88	1.0	8.8
21	85	102	90	92	85	89	90	102	67	.49	1.0	8.2
22	90	100	90	92	88	89	90	98	64	.42	1.0	8.2
23	90	97	92	94	88	88	90	98	60	.42	2.3	14
24	89	94	89	96	86	88	89	96	55	.56	1.3	16
25	89	97	31	93	84	93	86	89	45	1.4	2.0	25
26	89	97	50	92	86	102	85	89	61	4.1	3.5	26
27	89	97	76	92	86	93	86	89	101	12	6.6	26
28	86	97	78	90	86	97	88	86	93	7.1	4.7	28
29	85	98	80	98	---	93	94	88	81	6.6	2.5	23
30	85	98	80	98	---	90	97	85	70	11	1.4	19
31	88	---	80	93	---	90	---	86	---	14	5.7	---
TOTAL	2293	2936	2668	2801	2451	2955	2680	3192	2771	451.37	86.1	571.1
MEAN	74.0	97.9	86.1	90.4	87.5	95.3	89.3	103	92.4	14.6	2.78	19.0
MAX	90	124	98	98	92	136	97	139	189	66	8.2	63
MIN	19	84	31	80	80	86	81	85	45	.42	1.0	5.7
AC-FT	4550	5820	5290	5560	4860	5860	5320	6330	5500	895	171	1130
CAL YR 1982	TOTAL	25043.83	MEAN 68.6	MAX 130	MIN .14	AC-FT 49670						
WTR YR 1983	TOTAL	25855.57	MEAN 70.8	MAX 189	MIN .42	AC-FT 51280						

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 upstream from county highway bridge, 1 mi south of Lewellen, and approximately 1.5 mi upstream from high-water line of Lake McConaughy.

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

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,290.16 ft 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 downstream at datum approximately 6 ft 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 June 4, 1971; minimum daily, 44 ft³/s July 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,480 ft³/s June 30, gage height, 7.57 ft; maximum gage height, 7.76 ft Feb. 5, backwater from ice; minimum daily discharge, 929 ft³/s Feb. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1990	1450	1330	1200	1050	973	988	4230	6330	8300	6040	5710
2	1990	1470	1330	1180	1050	1080	1000	4420	6430	7660	5990	5710
3	1890	1450	1290	1160	1070	1080	1080	4200	6700	7540	6040	5710
4	1810	1450	1280	1200	1000	1110	1110	4160	7130	7300	6180	5800
5	1810	1450	1290	1200	1020	1540	1160	4090	7540	7360	6280	5620
6	1810	1490	1280	1250	1020	1650	1140	4050	7480	7420	5710	5710
7	1710	1490	1280	1250	1020	1470	1160	4120	7130	7420	5390	5710
8	1710	1520	1310	1250	1020	1290	1160	4120	6960	7190	5220	5660
9	1810	1560	1240	1300	1020	1160	1160	4200	6960	7020	4890	5480
10	1850	1600	1240	1250	1020	1100	1080	4050	7190	6800	4810	5480
11	1810	1810	1290	1400	1040	1050	1050	4230	7490	6690	4850	5440
12	1830	1810	1280	1450	1070	1050	1130	4650	7490	6530	4690	5570
13	1830	1560	1240	1600	1070	1050	1210	4690	7910	6330	4810	5850
14	1830	1420	1240	1450	1080	1050	1100	4730	7360	6180	4690	5990
15	1830	1380	1240	1300	1020	1080	1080	4810	7420	5890	4570	5960
16	1830	1380	1340	1250	973	1100	1110	4810	7730	5940	4730	6050
17	1790	1380	1340	1250	973	1130	1110	5050	7790	5850	4650	5960
18	1750	1380	1310	1200	973	1050	1070	5310	7600	5990	4690	5960
19	1600	1360	1280	1140	973	1020	1050	6040	7730	6040	4690	5960
20	1630	1330	1280	1120	958	1050	1310	6910	7730	5890	4730	5960
21	1710	1290	1280	1100	958	1030	1600	6330	7790	5710	4850	6010
22	1710	1280	1280	1100	973	1070	1890	5940	7480	5520	5130	6010
23	1690	1280	1310	1100	973	1080	2100	5620	7130	5480	5570	5880
24	1630	1260	1200	1140	973	1050	2150	5520	6960	5480	5850	5430
25	1600	1280	1100	1200	1000	1050	2290	5390	6850	5570	6180	5640
26	1620	1260	1060	1180	973	1210	2340	5520	7070	5750	6040	5320
27	1580	1280	1100	1140	944	1190	2440	5850	7540	6040	5940	3870
28	1540	1290	1140	1180	929	1130	2700	6130	7910	6330	5750	3140
29	1520	1340	1140	1110	---	1100	2980	6230	8040	6280	5570	3020
30	1430	1340	1140	1080	---	1020	3500	6330	8300	6180	5480	3110
31	1400	---	1160	1050	---	1020	---	6280	---	6080	5570	---
TOTAL	53540	42640	38620	37780	28143	35033	46248	158010	221170	199760	165580	162720
MEAN	1727	1421	1246	1219	1005	1130	1542	5097	7372	6444	5341	5424
MAX	1990	1810	1340	1600	1080	1650	3500	6910	8300	8300	6280	6050
MIN	1400	1260	1060	1050	929	973	988	4050	6330	5480	4570	3020
AC-FT	106200	84580	76600	74940	55820	69490	91730	313400	438700	396200	328400	322800
CAL YR 1982	TOTAL	434420	MEAN	1190	MAX	2640	MIN	282	AC-FT	861700		
WTR YR 1983	TOTAL	1189244	MEAN	3258	MAX	8300	MIN	929	AC-FT	2359000		

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 10190014, near right bank at outlet tower of Kingsley Dam on North Platte River, 4.5 mi west of Keystone.

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

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

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 1,907,000 acre-ft June 5-10, 13-16, 18, elevation, 3,268.7 ft; minimum observed, 1,443,000 acre-ft Oct. 1, elevation, 3,252.7 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	3,252.5	1,437,000	-
Oct.	31	3,255.5	1,518,000	+81,000
Nov.	30	3,256.8	1,553,000	+35,000
Dec.	31	3,257.4	1,570,000	+17,000
CAL YR 1982		-	-	+52,000
Jan.	31	3,258.0	1,587,000	+17,000
Feb.	28	3,258.6	1,604,000	+17,000
Mar.	31	3,259.8	1,638,000	+34,000
Apr.	30	3,261.0	1,673,000	+35,000
May	31	3,268.5	1,901,000	+228,000
June	30	3,268.2	1,891,000	-10,000
July	31	3,267.9	1,882,000	-9,000
Aug.	31	3,262.3	1,711,000	-171,000
Sept.	30	3,257.6	1,576,000	-135,000
WTR YR 1983		-	-	+139,000

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 downstream from diversion dam of Sutherland Reservoir supply canal and 2.5 mi southwest of Keystone.

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

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

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

GAGE.--Water-stage recorder. Datum of gage is 3,105.59 ft National Geodetic Vertical Datum of 1929 (Nebraska Public Power District bench mark). See WSP 1318 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 upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,300 ft³/s June 30, 1917, from graph based on daily gage readings; no flow for many days in 1975-83.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,470 ft³/s Aug. 10, gage height, 7.57 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	636	.00	.00	.00	.00	.00	.00	3580	6350	5450	6490
2	40	808	.00	.00	.00	.00	.00	.00	4400	6450	5670	6450
3	35	806	.00	.00	.00	.00	.00	.00	4800	6450	5630	6450
4	35	678	.00	.00	.00	.00	.00	.00	4860	6420	5830	6420
5	35	569	.00	.00	.00	.00	.00	.00	4920	6350	6170	6420
6	30	457	.00	.00	.00	.00	.00	.00	5130	6380	6070	6130
7	30	340	.00	.00	.00	.00	.00	.00	5130	6350	6070	6080
8	30	258	.00	.00	.00	.00	.00	.00	5190	6350	6030	6380
9	30	214	.00	.00	.00	.00	.00	.00	5190	6310	6140	6490
10	30	194	.00	.00	.00	.00	.00	.00	5280	6900	6420	6420
11	28	191	.00	.00	.00	.00	.00	23	5280	6900	6420	6210
12	28	191	.00	.00	.00	.00	.00	14	5310	6490	6450	6210
13	28	191	.00	.00	.00	.00	.00	10	5410	2940	6490	6210
14	28	188	.00	.00	.00	.00	.00	.00	5050	1040	6450	6140
15	28	188	.00	.00	.00	.00	.00	.00	5800	1030	6530	6530
16	28	93	.00	.00	.00	.00	.00	.00	5860	1070	6600	6670
17	150	9.3	.00	.00	.00	.00	.00	.00	5960	1110	6640	6710
18	261	.00	.00	.00	.00	.00	.00	.00	5930	1240	6640	6640
19	288	.00	.00	.00	.00	.00	.00	.00	5930	2770	6670	6640
20	296	.00	.00	.00	.00	.00	.00	.00	6000	3900	6640	6640
21	316	.00	.00	.00	.00	.00	.00	.00	6030	4850	6640	6640
22	440	.00	.00	.00	.00	.00	.00	.00	6000	5310	6670	6670
23	472	.00	.00	.00	.00	.00	.00	.00	6000	5310	6780	6710
24	496	.00	.00	.00	.00	.00	.00	.00	6000	5250	6710	6750
25	515	.00	.00	.00	.00	.00	.00	.00	5970	5220	6670	6710
26	525	.00	.00	.00	.00	.00	.00	.00	5970	5220	6640	6780
27	549	.00	.00	.00	.00	.00	.00	.00	6000	5280	6600	6640
28	544	.00	.00	.00	.00	.00	.00	1570	6280	5250	6560	6560
29	564	.00	.00	.00	.00	.00	.00	3100	6420	5220	6560	5030
30	584	.00	.00	.00	.00	.00	.00	3440	6420	5190	6530	1850
31	600	---	.00	.00	---	.00	---	3330	---	5220	6490	---
TOTAL	7103	6011.30	.00	.00	.00	.00	.00	11635.00	166100	150120	197860	188670
MEAN	229	200	.000	.000	.000	.000	.000	375	5537	4843	6383	6289
MAX	600	808	.00	.00	.00	.00	.00	3440	6420	6900	6780	6780
MIN	28	.00	.00	.00	.00	.00	.00	.00	3580	1030	5450	1850
AC-FT	14090	11920	.00	.00	.00	.00	.00	23080	329500	297800	392500	374200
CAL YR 1982	TOTAL	125694.00	MEAN	344	MAX	2480	MIN	.00	AC-FT	249300		
WTR YR 1983	TOTAL	727499.30	MEAN	1993	MAX	6900	MIN	.00	AC-FT	1443000		

PLATTE RIVER BASIN

91

06691000 NORTH PLATTE RIVER NEAR SUTHERLAND, NE

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

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

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

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

GAGE.--Water-stage recorder. Altitude of gage is 2,920 ft, from topographic map. Prior to Apr. 29, 1936, nonrecording gage near present site at different datums. Apr. 29, 1936, to Oct. 6, 1971, water-stage recorder at site 80 ft upstream at present datum.

REMARKS.--Records good except those above 1,000 ft³/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 June 29, 1917, from discharge graph based on daily gage readings, from rating curve extended above 16,000 ft³/s; no flow July 24-28, 30, 31, 1931, Aug. 7, 1934, July 20-28, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,540 ft³/s Aug. 23, gage height, 5.19 ft; maximum gage height, 5.31 ft June 27; minimum daily discharge, 91 ft³/s May 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	647	137	110	122	123	132	194	3350	6020	5070	6100
2	230	720	131	120	120	123	133	202	3360	5960	5150	5960
3	195	812	129	120	126	126	136	178	4060	5960	5430	6030
4	177	848	128	120	120	126	140	162	4550	5910	5370	6030
5	175	755	128	120	122	201	148	155	4850	5830	5450	6010
6	178	668	128	125	120	223	146	148	4830	5730	5820	5910
7	168	598	128	130	120	177	136	147	4920	5670	5800	5840
8	177	518	138	130	122	154	131	136	5040	5570	5780	5960
9	199	648	137	130	122	149	125	132	5020	5540	5710	6010
10	190	432	134	140	124	149	123	117	5020	5540	5670	6030
11	171	505	143	140	124	147	121	117	5140	5730	5960	6010
12	168	500	143	135	125	137	197	131	5170	5880	6150	5980
13	168	400	143	135	130	131	237	109	5190	5600	6150	6010
14	168	370	137	130	130	123	184	100	5170	2960	6270	5980
15	168	320	135	130	139	122	175	98	5000	981	6240	5940
16	168	280	135	130	134	130	159	99	5440	1050	6190	6220
17	206	260	131	125	133	137	148	161	5830	994	6240	6290
18	271	220	132	125	131	133	140	259	5810	1030	6190	6320
19	336	190	128	120	129	133	131	215	5960	1110	6080	6270
20	366	175	133	120	126	132	145	165	5990	2310	6030	6270
21	377	170	132	120	124	127	142	135	5960	3780	6030	6270
22	388	160	131	120	122	130	174	124	5830	4560	6010	6270
23	432	160	128	120	122	127	182	112	5830	5370	6370	6240
24	474	155	120	122	119	124	160	102	5830	5390	6340	6170
25	499	155	120	122	117	147	153	92	5750	5210	6320	6220
26	518	152	114	120	120	185	152	91	5780	5130	6290	6190
27	557	149	110	120	123	167	111	107	6070	5410	6320	6120
28	570	149	110	120	123	153	130	131	5990	5330	6290	6050
29	577	143	108	122	---	148	134	1260	5990	5290	6220	6010
30	598	140	100	122	---	140	138	2290	6030	5250	6220	4950
31	640	---	100	122	---	134	---	3280	---	5230	6150	---
TOTAL	9792	11399	3951	3865	3489	4458	4463	10749	158760	141325	185310	181660
MEAN	316	380	127	125	125	144	149	347	5292	4559	5978	6055
MAX	640	848	143	140	139	223	237	3280	6070	6020	6370	6320
MIN	168	140	100	110	117	122	111	91	3350	981	5070	4950
AC-FT	19420	22610	7840	7670	6920	8840	8850	21320	314900	280300	367600	360300
CAL YR 1982	TOTAL	127337	MEAN	349	MAX	2200	MIN	18	AC-FT	252600		
WTR YR 1983	TOTAL	719221	MEAN	1970	MAX	6370	MIN	91	AC-FT	1427000		

PLATTE RIVER BASIN

06692000 BIRDWOOD CREEK NEAR HERSHEY, NE

LOCATION.--Lat 41°13'20", long 101°04'12", in NE1/4NW1/4 sec.2, T.14 N., R.33 W., Lincoln County, Hydrologic Unit 10180014, on left bank 60 ft downstream from bridge on county road, 1 mi upstream from mouth, and 5 mi northwest of Hershey.

DRAINAGE AREA.--940 mi², approximately, of which about 80 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 1390: 1948(M), 1949, 1951-52(M). WDR NE-67, WDR NE 76-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,920 ft, from topographic map. Jan. 1, 1931, to Dec. 16, 1934, nonrecording gage and Dec. 17, 1934 to Nov. 4, 1953, water-stage recorder, at site 50 ft upstream at present datum.

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

AVERAGE DISCHARGE.--52 years, 152 ft³/s, 110,100 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 285 ft³/s July 27, gage height, 1.57 ft; maximum gage height, 3.36 ft Dec. 29, backwater from ice; minimum daily discharge, 105 ft³/s July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	142	149	140	138	158	167	167	169	148	131	129
2	124	142	149	140	138	153	147	144	165	135	122	130
3	138	131	144	140	136	153	153	153	169	126	114	130
4	149	126	144	150	136	162	153	156	171	129	106	135
5	149	124	147	144	138	199	162	156	178	135	106	132
6	149	129	144	151	144	167	158	153	147	132	107	130
7	138	136	144	153	138	165	153	140	160	134	111	129
8	156	126	144	153	142	158	165	144	158	135	122	129
9	147	131	147	158	142	142	167	144	160	129	122	129
10	136	129	149	151	144	144	162	153	158	126	116	126
11	131	174	147	151	144	151	158	174	153	126	116	121
12	140	187	144	151	147	160	192	176	156	116	116	120
13	151	165	153	151	144	158	162	167	156	109	114	121
14	142	165	156	149	158	158	142	151	147	105	116	121
15	153	165	147	138	149	140	158	162	153	110	114	130
16	147	156	144	140	151	136	151	160	156	163	113	123
17	144	151	147	147	156	140	156	176	168	137	113	124
18	151	151	147	133	149	140	151	210	151	152	109	120
19	149	149	142	138	153	138	149	178	155	143	106	123
20	133	151	144	144	138	149	144	176	158	126	108	130
21	147	147	147	144	133	149	156	171	151	114	111	129
22	149	144	147	144	153	158	151	167	145	116	113	135
23	158	144	147	140	158	149	144	153	145	152	193	133
24	149	140	120	151	142	147	156	151	145	135	153	133
25	144	144	135	151	136	162	169	149	147	118	136	131
26	151	144	135	142	144	180	169	149	151	111	131	131
27	151	142	140	142	147	156	169	151	159	212	128	129
28	149	147	140	149	149	162	153	151	148	159	126	133
29	133	144	140	151	---	167	156	162	143	142	127	135
30	140	147	140	156	---	176	151	165	151	140	131	139
31	144	---	140	144	---	171	---	165	---	137	127	---
TOTAL	4468	4373	4463	4536	4047	4848	4724	4974	4673	4152	3758	3860
MEAN	144	146	144	146	145	156	157	160	156	134	121	129
MAX	158	187	156	158	158	199	192	210	178	212	193	139
MIN	124	124	120	133	133	136	142	140	143	105	106	120
AC-FT	8860	8670	8850	9000	8030	9620	9370	9870	9270	8240	7450	7660
CAL YR 1982	TOTAL	49217	MEAN 135	MAX 210	MIN 97	AC-FT	97620					
WTR YR 1983	TOTAL	52876	MEAN 145	MAX 212	MIN 105	AC-FT	104900					

PLATTE RIVER BASIN

93

06693000 NORTH PLATTE RIVER AT NORTH PLATTE, NE

LOCATION.--Lat 41°09'13", long 100°45'16", in sec.28, T.14 N., R.30 W., Lincoln County, Hydrologic Unit 10180014, on right bank 150 ft downstream from bridge on U.S. Highway 83, 0.5 mi north of city of North Platte, and 4.5 mi upstream from confluence with South Platte River.

DRAINAGE AREA.--30,900 mi², approximately, of which about 26,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--February 1895 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-67, WDR NE-76-1: Drainage area. WSP 2118: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 2,792.14 ft 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 June 11, 1909, discharge measurement; minimum daily, 20 ft³/s Sept. 20, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,800 ft³/s Aug. 23, gage height, 6.63 ft; maximum gage height, 6.67 ft June 28; minimum daily discharge, 240 ft³/s Jan. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	626	861	372	260	310	348	391	533	3590	7010	5470	6410
2	527	861	364	280	300	343	385	561	3740	6910	5280	6410
3	443	931	360	300	290	333	380	520	3740	6720	5320	6450
4	401	934	367	310	280	338	385	486	4320	6820	5550	6540
5	415	915	373	300	300	413	391	474	5160	6720	5510	6500
6	426	847	366	300	320	533	408	455	5430	6630	5640	6450
7	438	772	367	300	350	455	408	455	5400	6360	6100	6450
8	464	722	380	300	370	402	402	419	5470	6320	6100	6450
9	555	675	378	300	390	369	396	408	5840	6230	6060	6320
10	519	632	385	300	380	348	391	380	5510	6180	5970	6320
11	426	693	398	290	374	338	380	385	5510	6230	5970	6270
12	385	750	401	280	364	323	455	408	5470	6630	6230	6230
13	411	606	417	280	364	323	590	396	5510	6770	6590	6230
14	417	591	407	260	358	333	500	380	5510	6410	6590	6230
15	427	582	388	250	369	338	486	358	5360	2860	6590	6270
16	432	589	399	250	369	343	437	353	5280	1720	6360	6180
17	434	584	405	250	358	353	413	486	5880	1570	6100	6540
18	482	531	402	240	353	353	385	913	6410	1400	6100	6870
19	537	467	400	240	348	353	369	816	6180	1330	5970	6910
20	585	446	410	250	348	353	369	684	6450	1540	5930	6910
21	624	418	403	260	353	353	358	554	6360	2830	5930	6960
22	653	414	390	260	343	364	374	413	6140	3740	5930	6960
23	683	419	381	260	343	385	396	380	6060	4460	7550	7010
24	716	412	350	270	343	380	385	374	6010	5360	7500	6960
25	761	427	300	270	348	402	380	369	6010	5430	7200	6910
26	798	414	300	280	348	467	358	364	6060	5200	7060	6910
27	806	393	280	280	348	437	374	369	6770	5720	6960	6820
28	806	401	270	280	343	419	391	374	7060	6060	6770	6770
29	806	368	270	280	---	413	396	590	6720	5720	6540	6720
30	816	361	260	290	---	408	413	1750	6770	5470	6410	6630
31	842	---	260	300	---	391	---	2640	---	5470	6410	---
TOTAL	17661	18016	11203	8570	9664	11711	12146	18047	169720	157820	193690	197590
MEAN	570	601	361	276	345	378	405	582	5657	5091	6248	6586
MAX	842	934	417	310	390	533	590	2640	7060	7010	7550	7010
MIN	385	361	260	240	280	323	358	353	3590	1330	5280	6180
AC-FT	35030	35730	22220	17000	19170	23230	24090	35800	336600	313000	384200	391900
CAL YR 1982 TOTAL	209389			574	MAX 2240	MIN 174	AC-FT 415300					
WTR YR 1983 TOTAL	825838			2263	MAX 7550	MIN 240	AC-FT 1638000					

PLATTE RIVER BASIN

06762500 LODGEPOLE CREEK AT BUSHNELL, NE

LOCATION.--Lat 41°13'50", long 103°53'28", in sec.32, T.15 N., R.57 W., Kimball County, Hydrologic Unit 10190016, on right bank 0.1 mi south of Bushnell at south end of highway bridge on State Highway 53c.

DRAINAGE AREA.--1,350 mi².

PERIOD OF RECORD.--October 1931 to current year. Records for March to September 1931 at site 1.5 mi upstream not equivalent owing to diversions. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1933, 1935, 1937-38, 1941, 1948-49. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,845.31 ft National Geodetic Vertical Datum of 1929. Prior to Mar. 26, 1938, nonrecording gage, Mar. 26, 1938 to July 2, 1981 water stage recorder, July 3, 1981 to Sept. 30, 1981 a nonrecording gage at previous site 1.7 mi downstream from present site at datum 33.01 ft lower.

REMARKS.--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 above station.

AVERAGE DISCHARGE.--52 years, 10.9 ft³/s, 7,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/s Sept. 15, 1950, gage height, 9.98 ft, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 10.06 ft July 2, 1981, from highwater mark, site and datum then in use; minimum daily discharge, 0.09 ft³/s July 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 586 ft³/s July 23, gage height, 3.09 ft; minimum daily, 3.4 ft³/s Feb. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.3	4.8	3.5	5.3	6.1	8.2	9.7	131	11	8.9	6.7
2	3.7	4.3	4.5	3.6	4.5	5.9	7.6	10	134	11	8.9	6.7
3	3.7	4.3	4.5	4.1	4.0	5.9	8.2	9.7	125	11	8.9	7.0
4	3.8	4.3	4.8	4.0	3.6	5.9	6.7	9.7	119	10	9.3	6.7
5	3.8	4.3	4.6	4.1	3.6	6.8	8.2	10	119	9.3	9.3	7.0
6	3.8	4.3	4.6	4.0	3.5	3.7	8.6	8.6	100	8.9	26	6.4
7	3.8	4.3	4.5	4.2	3.4	7.6	8.6	8.9	93	8.6	11	6.7
8	3.8	4.3	4.3	4.3	3.4	11	8.9	9.3	108	7.6	9.7	7.0
9	4.1	4.3	4.5	4.5	3.5	14	10	9.3	93	7.6	8.6	7.0
10	4.2	4.3	4.6	4.5	3.6	10	10	9.7	84	7.6	7.6	6.4
11	4.2	4.3	4.5	4.6	3.6	8.9	10	12	69	7.9	7.3	6.4
12	4.0	4.1	4.6	4.6	3.8	8.6	9.3	12	66	7.9	7.3	6.1
13	4.0	5.3	4.8	4.6	4.5	8.2	7.6	12	62	7.6	7.6	6.4
14	4.0	4.8	4.6	4.8	5.2	8.2	8.6	12	115	7.3	7.0	6.4
15	4.0	5.0	4.8	4.8	5.2	7.6	8.9	13	98	6.7	7.0	6.1
16	4.0	4.6	4.5	4.8	5.0	7.3	8.9	25	71	6.7	6.7	6.1
17	4.0	4.6	4.5	4.8	5.2	7.3	8.2	39	51	6.1	7.0	6.1
18	4.1	4.6	4.2	4.8	5.7	7.3	8.2	42	39	5.9	7.0	6.4
19	4.0	4.8	4.3	5.0	5.7	7.0	8.2	41	31	6.1	7.0	6.4
20	4.1	4.8	4.3	5.0	5.7	7.0	8.2	29	25	5.7	6.7	6.4
21	4.2	4.6	4.3	5.0	5.5	8.2	8.2	85	22	5.5	6.4	6.7
22	4.2	4.5	4.3	5.2	5.3	8.6	8.2	95	18	5.9	6.4	6.7
23	4.2	4.3	4.3	5.0	5.5	7.6	8.2	69	15	345	7.3	6.7
24	4.2	4.8	3.5	5.2	5.5	8.6	8.2	62	15	86	7.3	6.7
25	4.2	4.3	3.5	5.2	5.7	8.2	8.6	69	12	23	7.6	6.7
26	4.2	4.5	4.0	5.2	6.4	3.9	8.2	75	11	13	7.0	7.0
27	4.2	4.3	4.0	5.3	6.4	7.2	8.6	81	13	13	6.7	7.0
28	4.2	4.8	3.8	5.3	6.4	8.6	8.6	86	15	11	6.7	6.7
29	4.2	4.8	4.0	5.3	---	9.5	8.9	86	12	11	6.4	6.4
30	4.3	5.0	4.0	5.5	---	14	8.9	95	12	12	6.4	6.7
31	4.3	---	3.9	5.5	---	10	---	119	---	9.3	6.4	---
TOTAL	125.2	135.8	134.4	146.3	134.7	248.7	255.7	1253.9	1878	695.2	253.4	197.7
MEAN	4.04	4.53	4.34	4.72	4.81	8.02	8.52	40.4	62.6	22.4	8.17	6.59
MAX	4.3	5.3	4.8	5.5	6.4	14	10	119	134	345	26	7.0
MIN	3.7	4.1	3.5	3.5	3.4	3.7	6.7	8.6	11	5.5	6.4	6.1
AC-FT	248	269	267	290	267	493	507	2490	3730	1380	503	392
CAL YR 1982	TOTAL	1604.8	MEAN	4.40	MAX	78	MIN	1.9	AC-FT	3180		
WTR YR 1983	TOTAL	5459.0	MEAN	15.0	MAX	345	MIN	3.4	AC-FT	10830		

PLATTE RIVER BASIN

95

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO, 1982

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 downstream from bridge, and on right bank of channel no. 2, 800 ft downstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

DRAINAGE AREA.--23,138 mi².

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-08, 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 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 downstream at present datum. Channel no. 4: Oct. 1, 1956, to Dec. 10, 1958, at site 135 ft downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft upstream at same datum.

REMARKS.--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 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.--80 years, 487 ft³/s, 352,800 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,560 ft³/s July 6, gage height, 5.15 ft; minimum daily, 26 ft³/s Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	92	165	234	431	273	96	48	87	784	66	32
2	44	96	174	253	383	269	99	50	136	813	50	34
3	52	98	192	252	275	292	106	40	166	860	39	35
4	74	98	189	268	250	294	114	35	241	1280	39	33
5	82	98	190	246	250	283	123	45	236	1510	35	33
6	91	97	193	175	250	270	125	43	229	1540	33	43
7	100	95	194	110	235	268	127	54	226	1260	36	36
8	108	94	192	70	225	268	131	61	214	789	33	29
9	124	93	187	85	230	266	125	61	194	437	32	31
10	138	92	191	80	305	272	120	51	160	252	35	30
11	146	92	193	70	465	257	115	50	152	175	35	31
12	155	93	194	65	675	204	110	60	123	125	34	68
13	153	92	195	70	780	185	111	104	217	106	33	105
14	153	92	195	80	790	162	104	138	767	109	47	186
15	164	92	197	75	810	150	117	150	487	95	127	261
16	174	91	200	80	730	140	115	141	482	80	232	301
17	152	93	205	150	710	135	96	145	486	61	179	320
18	121	97	201	230	604	129	95	151	360	47	132	440
19	116	99	198	280	388	126	79	186	320	44	122	643
20	110	101	224	290	357	118	83	148	267	46	126	656
21	106	104	225	325	355	115	79	116	189	43	90	571
22	106	104	213	360	355	112	62	107	169	40	67	450
23	105	103	208	370	335	109	53	102	243	38	55	316
24	103	103	193	350	317	109	52	91	159	39	44	263
25	102	103	205	280	304	108	43	88	148	39	44	207
26	104	103	225	305	288	107	44	91	286	39	42	179
27	102	101	226	340	289	106	64	88	210	43	35	172
28	107	102	233	490	284	105	56	92	217	56	30	166
29	102	142	224	650	---	105	58	90	207	112	26	154
30	100	174	218	570	---	104	52	89	406	126	28	144
31	94	---	218	468	---	96	---	87	---	101	30	---
TOTAL	3425	3034	6257	7671	11670	5537	2754	2802	7784	11089	1956	5969
MEAN	110	101	202	247	417	179	91.8	90.4	259	358	63.1	199
MAX	174	174	233	650	810	294	131	186	767	1540	232	656
MIN	37	91	165	65	225	96	43	35	87	38	26	29
AC-FT	6790	6020	12410	15220	23150	10980	5460	5560	15440	22000	3880	11840
CAL YR 1981	TOTAL	103073	MEAN 282	MAX 1790	MIN 16	AC-FT 204400						
WTR YR 1982	TOTAL	69948	MEAN 192	MAX 1540	MIN 26	AC-FT 138700						

PLATTE RIVER BASIN

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 downstream from bridge, and on right bank of channel no. 2, 800 ft downstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

DRAINAGE AREA.--23,138 mi².

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-08, 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 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 downstream at present datum. Channel no. 4: Oct. 1, 1956, to Dec. 10, 1958, at site 135 ft downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft upstream at same datum.

REMARKS.--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 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.--81 years, 517 ft³/s, 374,600 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 14,500 ft³/s June 18, gage height, 8.85 ft; minimum daily, 95 ft³/s Oct. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	220	409	400	1390	1020	2020	7150	9080	11900	2030	958
2	151	226	408	550	1360	975	2000	7060	9250	12600	1950	926
3	151	230	421	750	1360	947	2010	6780	10800	11600	1880	891
4	150	231	439	850	1350	893	2030	6660	11700	10800	1700	958
5	152	235	464	900	1350	894	2100	6650	12800	10000	1600	1010
6	152	239	491	950	1360	983	2150	6600	13000	9110	1540	970
7	150	247	504	1100	1400	1010	2160	6200	12600	8230	1460	926
8	141	247	515	1400	1360	891	2180	5890	12800	7320	1410	916
9	142	260	606	1600	1350	892	2230	5700	13000	5660	1520	936
10	141	270	762	1800	1320	1210	2270	5460	13200	4610	1750	996
11	120	302	866	2000	1310	1290	2290	5170	13300	4270	1700	1080
12	113	302	975	1900	1290	1290	2330	4960	13200	4240	1550	1080
13	113	290	1040	1950	1270	1280	2360	4930	13000	4370	1440	1080
14	113	277	1080	2000	1260	1240	2400	4960	12700	4850	1300	1060
15	115	283	1130	2050	1230	1190	2480	5180	12800	4920	1200	1050
16	121	290	1250	2000	1210	1160	2500	5350	13100	4050	1130	1010
17	120	286	1290	1950	1200	1110	2560	5550	13900	3510	1080	1000
18	115	282	1320	1900	1210	1050	2590	5660	14300	3260	1070	1000
19	109	282	1270	1800	1240	1140	2570	5660	13000	2920	1110	1000
20	107	275	1250	1700	1230	1420	2480	5720	11800	2510	1060	1070
21	102	275	1230	1750	1190	1590	2400	6290	11200	2230	1040	1110
22	100	274	1210	1600	1190	1630	2340	7640	11000	2010	983	1150
23	97	269	1210	1550	1180	1670	2330	8310	11200	2030	962	1190
24	95	270	1190	1500	1150	1710	2380	8910	11900	2240	1120	1210
25	95	284	700	1500	1130	1870	2700	9420	12200	2270	1240	1210
26	101	277	500	1400	1120	2000	3530	8900	12200	2620	1230	1200
27	107	278	450	1400	1110	1990	4800	8750	12100	3000	1200	1200
28	115	300	400	1450	1060	2000	5520	8690	11900	2880	1170	1220
29	170	352	350	1500	---	2030	5860	8710	11500	2440	1130	1250
30	199	383	300	1480	---	2060	6670	8980	11600	2200	1110	1250
31	209	---	300	1430	---	2050	---	9050	---	2170	1050	---
TOTAL	4006	8236	24330	46110	35180	42485	84240	210940	366130	156820	41715	31907
MEAN	129	275	785	1487	1256	1370	2808	6805	12200	5059	1346	1064
MAX	209	383	1320	2050	1400	2060	6670	9420	14300	12600	2030	1250
MIN	95	220	300	400	1060	891	2000	4930	9080	2010	962	891
AC-FT	7950	16340	48260	91460	69780	84270	167100	418400	726200	311100	82740	63290
CAL YR 1982 TOTAL	93804		MEAN	257	MAX	1540	MIN	26	AC-FT	186100		
WTR YR 1983 TOTAL	1052099		MEAN	2882	MAX	14300	MIN	95	AC-FT	2087000		

PLATTE RIVER BASIN

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06764880 SOUTH PLATTE RIVER AT ROSCOE, NE

LOCATION.--Lat 41°07'33" long 101°34'35", in NW1/4SW1/4 sec.4, T.13 N., R.37 W., Keith County, Hydrologic Unit 10190018, on left bank 20 ft downstream from bridge on Highway L-51B connecting Interstate 80 and U.S. Highway 30, 0.5 mi southeast of Roscoe.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder. Altitude of gage is 3,150 ft, from topographic map.

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 CURRENT YEAR.--Maximum discharge, 14,700 ft³/s July 2, gage height, 9.31 ft; maximum gage height, 9.55 ft June 18; minimum daily discharge, 108 ft³/s Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	197	333	580	1600	1100	1910	7650	9670	12200	2230	1070
2	155	207	355	560	1460	1070	1900	7440	9510	13700	4960	988
3	155	217	355	560	1420	1060	1940	7130	9960	13900	1970	959
4	147	217	375	540	1410	1050	1980	6800	11800	12500	1850	892
5	123	217	415	1000	1400	1160	2030	6600	12400	11400	1690	969
6	136	237	448	1300	1370	1160	2050	6540	13000	10300	1600	988
7	138	240	459	1400	1380	1210	2040	6480	12100	9220	1550	921
8	141	240	465	1500	1410	1110	2040	6350	11500	8300	1490	856
9	136	244	487	1800	1390	1000	2120	6320	12000	6880	1500	828
10	133	248	558	1900	1370	1120	2170	5860	12600	5620	1800	856
11	130	292	700	1900	1330	1410	2230	5260	13000	4940	1890	828
12	120	315	794	1950	1300	1410	2600	4660	12600	4530	1760	978
13	118	315	885	1900	1280	1350	2660	4280	12300	4530	1640	1060
14	115	299	964	1800	1260	1320	2620	4400	12100	4580	1550	1150
15	118	292	972	1750	1250	1250	2700	4590	12100	4820	1420	1220
16	123	292	1020	1700	1220	1240	2710	5200	11900	4650	1220	1220
17	133	288	1110	1600	1220	1210	2730	5680	12300	3500	1080	1200
18	123	284	1110	1600	1240	1160	2710	6320	13500	3010	988	1190
19	113	273	1110	1600	1250	1140	2710	6160	13600	2680	949	1250
20	113	284	1110	1600	1240	1360	2520	5890	13900	2230	969	1260
21	110	288	1120	1600	1240	1680	2340	6010	12400	1840	902	1340
22	110	288	1110	1600	1240	1840	2220	7030	12100	1670	883	1300
23	108	303	1090	1550	1220	1900	2160	8530	12500	1690	911	1290
24	110	303	1090	1550	1190	1940	2150	9470	12400	1690	902	1160
25	113	317	1000	1550	1170	2040	2230	10300	12200	1840	1050	1170
26	118	300	880	1500	1160	2040	2730	10500	12500	2030	1170	1160
27	120	250	820	1500	1150	1950	3660	9550	12300	2830	1200	1230
28	120	350	700	1500	1140	1920	4880	9270	12500	3430	1240	1270
29	110	328	640	1450	---	1950	5570	9030	11900	3040	1220	1330
30	141	311	600	1450	---	2010	6290	9390	11800	2530	1140	1360
31	173	---	580	1500	---	2000	---	9670	---	2330	1120	---
TOTAL	3976	8236	23655	45290	36310	45160	80600	218360	364440	168410	45844	33293
MEAN	128	275	763	1461	1297	1457	2687	7044	12150	5433	1479	1110
MAX	173	350	1120	1950	1600	2040	6290	10500	13900	13900	4960	1360
MIN	108	197	333	540	1140	1000	1900	4280	9510	1670	883	828
AC-FT	7890	16340	46920	89830	72020	89570	159900	433100	722900	334000	90930	66040
WTR YR 1983 TOTAL	1073574		MEAN 2941		MAX 13900		MIN 108		AC-FT 2129000			

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 southeast of Roscoe.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 20...	1200	113	1990	7.9	8.0	11.7	23	K50	200	750	170
NOV 17...	1145	287	2120	8.3	3.5	12.0	22	K12	270	800	210
DEC 08...	1100	464	2000	8.2	1.0	13.1	31	42	5400	740	190
JAN 12...	1315	1950	1690	7.9	.5	13.7	17	130	1300	590	150
FEB 16...	1130	1220	1790	8.3	5.0	11.3	23	540	1200	640	160
MAR 21...	1130	1690	1510	8.1	3.0	11.9	67	46	7100	560	140
APR 14...	1100	2620	1540	8.1	4.0	12.5	40	310	1400	530	130
MAY 18...	1030	6410	910	8.0	7.0	11.0	43	460	8000	310	78
JUN 15...	1000	12100	675	7.8	18.0	8.8	49	180	4500	240	63
JUL 18...	1130	3020	985	8.0	24.5	7.3	37	560	1800	360	93
AUG 24...	1215	860	1400	8.4	25.0	7.7	57	180	510	440	100
SEP 21...	1245	1340	1480	8.3	12.5	10.2	55	180	320	510	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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 20...	78	790	91	8	1.3	.140	1.5	1.60	2.9	.130	5.0
NOV 17...	68	850	100	70	2.2	.130	2.1	2.20	4.4	.150	7.2
DEC 08...	65	760	90	88	3.6	.150	2.2	2.30	5.9	.340	6.3
JAN 12...	53	620	76	63	4.2	.830	.77	1.60	5.8	.490	6.8
FEB 16...	59	640	84	125	5.3	.140	2.2	2.30	7.6	.700	6.3
MAR 21...	52	540	69	404	4.0	.070	3.2	3.30	7.3	1.30	23
APR 14...	51	520	68	224	4.1	.190	2.0	2.20	6.3	.690	11
MAY 18...	29	260	36	344	1.7	.160	2.1	2.30	4.0	.470	12
JUN 15...	21	210	28	314	.70	.070	1.5	1.60	2.3	.220	14
JUL 18...	30	300	37	35	1.7	.060	1.2	1.30	3.0	.450	10
AUG 24...	46	510	61	210	<.20	.130	2.9	3.00	--	.170	16
SEP 21...	52	570	68	206	1.4	.050	2.3	2.30	3.7	.260	11

06764880 SOUTH PLATTE RIVER AT ROSCOE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY 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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 17...	1145	552	210	3.3	16	253	.80	25	1630	2.2
FEB 16...	1130	396	170	3.0	11	247	1.0	18	1290	1.8
MAY 18...	1030	177	72	1.8	6.0	138	.90	13	578	.79
AUG 24...	1215	305	130	2.8	10	135	.80	14	953	1.3

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 17...	1260	2.3	.070	3	<100	330	<1	20	0	1400
FEB 16...	4250	5.2	.540	--	--	320	--	--	--	--
MAY 18...	10000	1.7	.200	2	100	150	1	10	460	6500
AUG 24...	2210	.20	<.010	--	--	260	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 17...	1300	70	0	130	110	20	.0	4	<0	30
FEB 16...	--	<0	--	--	--	5	--	--	--	--
MAY 18...	6500	20	70	390	380	10	.5	2	0	160
AUG 24...	--	20	--	--	--	6	--	--	--	--

PLATTE RIVER BASIN

06765500 SOUTH PLATTE RIVER AT NORTH PLATTE, NE

LOCATION.--Lat 41°07'08", long 100°45'45", in NE1/4NW1/4 sec.9, T.13 N., R.30 W., Lincoln County, Hydrologic Unit 10190018, on left bank 50 ft downstream from bridge on U.S. Highway 83, 0.5 mi north of intersection of U.S. Highway 83 and Interstate 80 south of North Platte, and 4.5 mi upstream from confluence with North Platte River.

DRAINAGE AREA.--24,300 mi², approximately.

PERIOD OF RECORD.--June to November 1897, June to August 1914, May to September 1915, and May 1917 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1932-33, 1935.

GAGE.--Water-stage recorder. Datum of gage is 2,787.73 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Dec. 11, 1956. Dec. 11, 1956, to Mar. 29, 1973, at site 50 ft upstream at same datum. Mar. 30, 1973, to Aug. 12, 1981, at site 0.5 mi upstream at same datum.

REMARKS.--Records good except those for winter period or no gage height record, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. South Platte canal diverts around station; diversion began Nov. 13, 1946.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,900 ft³/s June 19, gage height, 8.90 ft; minimum daily, 117 ft³/s Dec. 5, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	138	142	150	912	208	1060	5030	8460	11200	1890	645
2	147	138	138	150	823	203	921	5950	8540	11400	1830	588
3	142	129	134	140	707	193	867	6040	8540	12000	1740	631
4	142	129	121	130	699	193	884	5770	8820	12000	1720	721
5	138	129	117	200	760	245	930	5690	9580	10600	1620	761
6	129	129	134	300	680	290	970	5660	9990	9530	1580	870
7	129	129	121	458	900	284	1060	5620	10400	8520	1460	941
8	151	121	117	637	1060	272	1050	5510	10300	7630	1400	978
9	184	138	121	823	1250	256	1100	5160	10100	6970	1320	987
10	169	138	125	959	1340	240	1070	4890	10600	5820	1240	1010
11	156	169	121	1180	1300	224	1110	4770	11200	4650	1260	1040
12	147	165	125	1130	1220	278	1220	4530	12600	3820	1240	1060
13	147	165	125	1190	1060	343	1410	4190	12300	3250	1160	1080
14	147	151	134	1080	806	325	1440	4060	11900	3100	1120	1110
15	142	151	129	960	675	301	1520	4070	11700	3190	1060	1130
16	151	151	134	1040	615	272	1670	4130	11800	3880	941	1110
17	156	142	125	1000	510	256	1720	4570	12400	3450	802	1060
18	147	134	169	1020	465	240	1740	4950	13000	2830	668	1010
19	147	151	245	940	426	240	1770	5160	14400	2340	595	1040
20	142	151	301	940	368	229	1730	4890	14500	2110	560	1080
21	134	151	313	960	362	285	1670	4690	12500	1950	560	1120
22	138	134	313	980	349	504	1530	4890	10700	1780	554	1200
23	147	156	310	979	313	652	1440	5640	10200	1770	690	1230
24	142	151	300	1010	284	772	1330	6740	10200	1820	595	1260
25	142	151	250	1000	250	921	1330	7360	10500	1780	527	1260
26	134	138	190	940	234	1050	1420	7950	11700	1750	588	1290
27	147	138	169	921	224	1110	1910	8160	12200	1970	698	1310
28	142	142	142	940	219	1100	2780	7560	11900	2360	745	1280
29	138	138	134	990	---	1020	3840	7630	12000	2710	737	1260
30	142	142	130	1100	---	1040	4360	7730	11400	2420	713	1270
31	138	---	150	1070	---	1040	---	8080	---	2120	675	---
TOTAL	4513	4289	5279	25317	18811	14586	46852	177070	334430	150720	32288	31332
MEAN	146	143	170	817	672	471	1562	5712	11150	4862	1042	1044
MAX	184	169	313	1190	1340	1110	4360	8160	14500	12000	1890	1310
MIN	129	121	117	130	219	193	867	4060	8460	1750	527	588
AC-FT	8950	8510	10470	50220	37310	28930	92930	351200	663300	299000	64040	62150
CAL YR 1982	TOTAL	62465	MEAN	171	MAX	421	MIN	110	AC-FT	123900		
WTR YR 1983	TOTAL	845487	MEAN	2316	MAX	14500	MIN	117	AC-FT	1677000		

PLATTE RIVER BASIN

101

C6766000 PLATTE RIVER AT BRADY, NE

LOCATION.--Lat 41°01'10", long 100°22'16" (north channel only), on two channels in secs.11 and 23, T.12 N., R.27 W., Lincoln County, Hydrologic Unit 10200101, on downstream side of highway bridges 0.5 mi and 2.5 mi, respectively, south of Brady and 18 mi downstream from confluence of North Platte and South Platte Rivers.

DRAINAGE AREA.--56,200 mi², approximately, of which about 51,400 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--May to September 1937, May 1938 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1941(M). WDR NE-67, WDR NE-76-1: Drainage area.

GAGE.--Two water-stage recorders. Datum of gage on north channel is 2,639.19 ft and on south channel, 2,641.66 ft National Geodetic Vertical Datum of 1929. No information available on gages operated by State engineer prior to Nov. 18, 1938. Nov. 18, 1938, to Sept. 30, 1942, gage on north channel at datum 1 ft higher.

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. Tri-County main supply canal, capacity, about 2,000 ft³/s, diverts 18 mi above station; diversion started Nov. 26, 1940. River flows in two channels for which separate records are computed; figures given herein represent combined discharge. 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, 23,500 ft³/s June 29, 1983; no flow Aug. 22-24, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,500 ft³/s June 29; minimum daily, 172 ft³/s Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327	255	277	711	483	277	1120	5920	11100	21600	7640	7210
2	299	241	273	657	482	266	1230	7530	12500	21400	7430	7010
3	293	240	268	957	469	250	1330	8100	13100	21500	7150	6840
4	283	240	267	1080	565	247	1440	7720	13100	21800	6980	6920
5	281	257	268	1050	816	304	1500	7300	14700	21600	6950	7030
6	280	265	264	970	954	525	1460	6780	16200	20600	6890	7140
7	275	261	256	931	1070	591	1500	6840	16700	19600	6800	7190
8	291	258	249	851	1170	460	1660	6660	17900	18400	7070	7140
9	301	261	268	771	1050	418	1690	6370	18600	16600	6890	7140
10	300	262	277	852	953	455	1720	6000	19200	15400	6880	6940
11	284	288	259	932	854	442	1700	5740	19300	14100	7200	6770
12	285	292	266	992	794	426	1890	5570	19700	12600	7110	6540
13	285	279	287	1150	736	464	2400	5040	20600	12000	7340	6300
14	285	263	283	1260	640	473	2440	4700	20600	11200	7410	6140
15	285	263	276	1350	544	442	2450	4510	20200	9950	7520	6300
16	267	266	262	1290	378	436	2170	4380	20300	7390	7440	6330
17	257	262	276	1190	421	452	2450	5050	20500	7000	7170	6600
18	253	260	259	1070	388	357	2420	6490	20800	5720	6940	6760
19	232	261	269	890	382	320	2240	7360	21600	4600	6740	6820
20	225	259	245	909	366	276	2360	6860	21800	5040	6600	6680
21	232	258	303	1050	349	261	2250	6280	21200	5390	6510	6390
22	243	253	292	1210	321	297	2030	5850	20400	5880	6540	8260
23	243	251	280	1310	325	308	1860	6230	19600	6170	7510	8420
24	243	250	259	1370	327	295	1830	7680	19400	7130	7740	7710
25	243	259	172	1090	307	441	1840	9190	19500	7610	7480	6990
26	241	259	524	931	331	843	1840	10300	20100	7230	7350	7920
27	244	278	630	771	282	967	2020	11100	22500	7920	7440	6620
28	238	280	865	632	269	941	2710	10600	23000	8310	7340	6430
29	246	283	985	612	---	818	3590	9930	23100	8580	7220	6380
30	248	281	928	563	---	757	4660	10300	22400	8360	7160	6360
31	251	---	751	484	---	965	---	10800	---	7910	7160	---
TOTAL	8260	7885	11338	29886	16026	14774	61800	223180	569700	368590	221600	207280
MEAN	266	263	366	964	572	477	2060	7199	18990	11890	7148	6909
MAX	327	292	985	1370	1170	967	4660	11100	23100	21800	7740	8420
MIN	225	240	172	484	269	247	1120	4380	11100	4600	6510	6140
AC-FT	16380	15640	22490	59280	31790	29300	122600	442700	1130000	731100	439500	411100
CAL YR 1982	TOTAL	127457	MEAN	349	MAX	1720	MIN	85	AC-FT	252800		
WTR YR 1983	TOTAL	1740319	MEAN	4768	MAX	23100	MIN	172	AC-FT	3452000		

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 upstream from highway bridge, 1.5 mi 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 of highway bridge, 1.5 mi south of Cozad.

DRAINAGE AREA.--56,500 mi², approximately, of which about 51,700 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July to September 1932, May 1937 to current year (prior to April 1939, irrigation seasons only). Monthly discharge only for some periods, published in WSP 1310.

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

GAGE.--Two water-stage recorders. Datum of gage on south channel is 2,473.07 ft and on north channel, 2,475.72 ft National Geodetic Vertical Datum of 1929 (Nebraska Department of Roads bench mark). See WSP 2118 for history of changes prior to May 10, 1966. North channel gage: May 10, 1966, to May 10, 1976, at datum 1.00 ft higher and May 11, 1976, to June 16, 1977, at present datum, both at downstream side of highway bridge 30 ft downstream. South channel gage: May 10, 1966, to July 17, 1980, at downstream side of highway bridge at present datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s June 29, 1983; no flow at times in 1937-40.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,500 ft³/s June 29; minimum daily, 317 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	317	348	383	904	632	442	1360	5000	9760	19800	6330	6320
2	351	347	377	842	628	442	1430	6050	10800	19600	5930	6130
3	346	343	363	1200	623	438	1480	6810	11700	19300	5570	6000
4	353	343	360	1250	726	442	1560	7140	11800	19200	5380	6000
5	352	340	367	1150	967	469	1620	7400	12000	19400	5630	6140
6	349	337	367	1060	967	551	1650	7150	13500	18900	5570	6170
7	362	335	357	982	1180	727	1630	6880	15100	17800	5550	6240
8	384	335	347	932	1280	788	1690	6580	16000	16500	5860	6330
9	432	341	343	874	1270	725	1750	6410	18700	14900	5900	6500
10	431	351	341	928	1180	654	1760	6090	18900	13900	5820	6480
11	414	364	330	1010	1080	671	1850	5820	18800	12600	6100	6080
12	404	391	331	1130	1050	626	1880	5480	19000	11400	6020	5910
13	414	391	336	1340	963	615	2030	5130	18600	10400	6200	6150
14	426	384	344	1410	891	626	2330	4740	18600	9880	6390	6030
15	416	374	351	1510	836	573	2220	4450	18100	9190	6430	5930
16	384	384	335	1460	807	456	2200	4300	17800	7480	6350	6340
17	374	384	344	1390	763	460	2160	4630	18200	6100	6150	6390
18	372	371	366	1360	665	434	2270	5580	17800	5220	5880	6650
19	362	378	365	1080	589	467	2170	6540	19500	4420	5670	6730
20	332	381	364	1100	562	437	2190	6900	20400	3820	5610	6160
21	322	373	376	1260	532	433	2190	6310	21200	3970	5620	6270
22	328	370	412	1450	510	433	2120	5740	20600	4500	5610	7210
23	338	361	410	1530	494	433	2000	5520	19200	4400	6480	8060
24	344	358	416	1540	480	433	1930	6080	18600	5080	6980	8170
25	358	357	476	1300	476	494	1900	7200	18400	5860	7110	6800
26	361	360	546	1120	472	816	1880	7880	18400	6000	6800	7160
27	368	362	696	975	472	1240	1950	8450	20200	6470	6930	7020
28	351	370	796	821	442	1400	2180	8890	20700	6830	6910	6490
29	344	380	1050	790	---	1370	2900	8080	20900	7090	6550	6680
30	335	386	992	734	---	1220	3820	7850	20400	7170	6400	6790
31	348	---	950	626	---	1220	---	8840	---	6750	6400	---
TOTAL	11372	10899	14191	35058	21537	20535	60100	199920	523660	323930	190130	195330
MEAN	367	363	458	1131	769	662	2003	6449	17460	10450	6133	6511
MAX	432	391	1050	1540	1280	1400	3820	8890	21200	19800	7110	8170
MIN	317	335	330	626	442	433	1360	4300	9760	3820	5380	5910
AC-FT	22560	21620	28150	69540	42720	40730	119200	396500	1039000	642500	377100	387400

CAL YR 1982 TOTAL 80208 MEAN 220 MAX 1050 MIN 23 AC-FT 159100
WTR YR 1983 TOTAL 1606662 MEAN 4402 MAX 21200 MIN 317 AC-FT 3187000

PLATTE RIVER BASIN

103

06768000 PLATTE RIVER NEAR OVERTON, NE

LOCATION.--Lat 40°40'57", long 99°32'19", in NW1/4NE1/4 sec.12, T.8 N., R.20 W., Dawson County, Hydrologic Unit 10200101, on left bank 600 ft downstream from county highway bridge, 4 mi south of Overton and 4 mi downstream from Plum Creek.

DRAINAGE AREA.--57,700 mi², approximately, of which about 52,900 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to September 1914 (gage heights only), October 1914 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Elm Creek" 1914-15.

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

GAGE.--Water-stage recorder. Datum of gage is 2,298.83 ft National Geodetic Vertical Datum of 1929. July 1914, to October 1917, nonrecording gages at site 8 mi downstream at different datum. June 1918, to Sept. 12, 1928, nonrecording gage at site 600 ft upstream (south channel only) at datum 3.0 ft higher. Sept. 13, 1928, to Sept. 30, 1930, nonrecording gage and Oct. 1, 1930, to Sept. 30, 1968, water-stage recorder, at site 600 ft upstream (south channel only) at datum 1.0 ft higher. Oct. 1, 1968, to Feb. 3, 1976, water-stage recorder on south channel at site 600 ft upstream at datum 1.0 ft 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 upstream at datum 1.0 ft 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 June 5, 1935, gage height, 6.25 ft south channel; maximum gage height, 6.44 ft June 22, 1983; no flow at times in 1919, 1922, 1925, 1927-28, 1930-41.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,900 ft³/s June 28, gage height, 6.38 ft; maximum gage height, 6.44 ft June 22; minimum daily discharge, 553 ft³/s Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	934	2260	1500	2700	2950	4000	5770	10300	21200	6970	7070
2	1460	1250	2220	1900	2600	2970	3910	6640	11800	20200	6730	7140
3	1040	952	2060	2100	2200	2970	3790	7800	12600	19800	6470	7140
4	657	744	2160	2100	2300	2970	3730	8530	13900	19800	6110	7170
5	618	677	2110	2300	2400	3050	3660	8770	14300	19800	6000	7350
6	553	676	2210	2300	2500	3110	3700	8530	14900	19700	6100	7600
7	631	1060	2080	2270	2700	2780	3530	8440	16900	19500	5970	7740
8	816	1320	2090	2400	2850	2630	3260	7930	18200	18200	5900	7830
9	785	1490	1950	2420	3290	2610	3480	7580	18700	17400	6180	7630
10	707	1460	1850	2350	3570	2610	3530	7580	19500	16600	5830	7820
11	735	1650	1950	2350	3530	2610	3590	7490	20000	15500	5800	7850
12	752	1570	1840	2800	3350	2610	3620	7360	20500	14000	5970	7600
13	786	1750	1740	2920	3500	2610	3730	7270	20500	12600	5970	7620
14	1290	1950	1700	3010	3460	2680	3950	7140	20200	11100	6290	7810
15	1440	2090	1790	3050	3390	2680	4280	6910	20400	10100	6500	7980
16	1190	1710	1720	3090	3390	2700	4500	6780	20400	9450	6580	7880
17	988	1970	1940	3140	3380	2740	4330	7310	20400	7400	6610	8060
18	845	2230	1970	3180	3350	2740	4250	7890	20400	6220	6320	8070
19	789	2230	1920	2900	3220	2780	4330	8440	20400	5150	6320	8200
20	741	2170	2150	2800	3140	2760	4050	8680	21200	4800	6170	8220
21	727	2270	1990	2600	3010	2780	4160	8530	22000	4160	6180	8340
22	700	2190	2230	2400	2950	2800	3490	8070	22300	3830	6020	8180
23	641	2270	2440	2400	2900	2820	3970	7360	21300	4460	6760	8660
24	612	2300	2490	2600	2950	3080	3950	7310	20600	4670	7190	9370
25	626	2140	1800	3180	2920	3090	3780	7620	20200	5560	7590	9300
26	671	2060	1500	3130	3030	3220	3790	8210	19900	6140	7740	8500
27	690	2150	2100	3040	3030	3620	3830	8820	20700	6470	8190	8980
28	734	2020	1600	2840	2950	3880	4050	9450	22200	7020	8480	8300
29	745	2270	1300	2700	---	3980	4440	10200	22200	7210	8120	8560
30	738	2180	1000	2740	---	4050	4880	9650	22100	7420	7550	9240
31	706	---	1300	2820	---	3910	---	9500	---	7390	7060	---
TOTAL	26043	51733	59460	81330	84560	92790	117560	247560	569000	352850	205670	241210
MEAN	840	1724	1918	2624	3020	2993	3919	7986	18970	11380	6635	8040
MAX	1630	2300	2490	3180	3570	4050	4880	10200	22300	21200	8480	9370
MIN	553	676	1000	1500	2200	2610	3260	5770	10300	3830	5800	7070
AC-FT	51660	102600	117900	161300	167700	184000	233200	491000	1129000	699900	407900	478400
CAL YR 1982 TOTAL	360658	MEAN	988	MAX	2490	MIN	88	AC-FT	715400			
WTR YR 1983 TOTAL	2129766	MEAN	5835	MAX	22300	MIN	553	AC-FT	4224000			

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, 1,310 micromhos Feb. 18 (south chan.); minimum daily, 722 micromhos June 29 (north chan.).

WATER TEMPERATURES: Maximum daily, 31.0°C July 22 (north chan.); minimum daily, 2.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (100 ML) (31625)	STREP- TOCUCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)
OCT										
15...	1300	1350	830	8.0	11.5	10.7	--	26000	1800	270
19...	1415	--	832	8.2	8.0	--	--	--	--	260
NOV										
03...	1030	550	800	8.0	3.0	14.9	16	950	23000	280
DEC										
08...	1030	890	820	8.0	.0	10.1	<10	K75	700	280
JAN										
07...	1045	950	950	7.9	.0	11.9	11	120	5500	310
FEB										
02...	1000	2150	995	8.0	.0	12.0	15	50	600	330
MAR										
03...	0900	1730	1010	8.2	6.0	12.3	24	K110	1000	340
APR										
13...	1345	4760	1220	8.6	5.0	13.0	50	920	K8600	350
MAY										
04...	1215	E9160	1130	8.4	14.0	9.5	37	1100	2100	350
JUN										
08...	0900	15500	--	8.1	16.5	7.6	38	6200	1300	270
30...	1315	23700	755	8.0	23.5	7.0	39	K120	1200	230
AUG										
03...	1400	6380	890	8.5	27.5	7.8	36	160	K128000	260
SEP										
08...	1100	7760	760	8.4	22.0	7.3	36	170	840	240

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

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT										
15...	77	20	180	21	7	1.2	.120	.78	.90	2.1
19...	69	22	210	25	--	--	--	--	--	--
NOV										
03...	76	22	170	26	21	1.1	.060	.74	.80	1.9
DEC										
08...	78	21	190	24	9	1.4	.060	1.2	1.30	2.7
JAN										
07...	83	26	260	34	8	1.5	.170	.93	1.10	2.6
FEB										
02...	88	27	260	35	16	2.2	.150	1.4	1.50	3.7
MAR										
03...	88	28	270	37	10	1.8	.080	1.1	1.20	3.0
APR										
13...	83	34	350	46	86	1.2	.060	1.8	1.90	3.1
MAY										
04...	87	32	340	46	13	1.2	.100	1.8	1.90	3.1
JUN										
08...	71	22	220	28	65	.42	.090	1.2	1.30	1.7
30...	61	19	180	22	151	.50	.060	1.4	1.50	2.0
AUG										
03...	69	22	200	25	78	.20	.060	1.3	1.40	1.6
SEP										
08...	63	21	200	22	115	<.10	.080	1.0	1.10	--

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS RA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, 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)
OCT									
15...	.080	--	--	--	--	--	--	--	0
19...	--	--	--	--	--	--	--	--	--
NOV									
03...	.090	--	--	--	--	--	--	--	0
DEC									
08...	.100	--	--	--	--	--	--	--	0
JAN									
07...	.130	--	--	--	--	--	--	--	0
FEB									
02...	.170	5	100	<1	<10	0	320	310	10
MAR									
03...	.150	--	--	--	--	--	--	--	0
APR									
13...	.200	--	--	--	--	--	--	--	30
MAY									
04...	.220	4	100	2	10	10	2300	2300	20
JUN									
08...	.240	--	--	--	--	--	--	--	40
30...	.300	--	--	--	--	--	--	--	20
AUG									
03...	.150	11	<100	1	10	20	3100	3100	0
SEP									
08...	.120	--	--	--	--	--	--	--	20

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
15...	--	--	--	9	--	--	--	--	4.3
19...	--	--	--	--	--	--	--	--	--
NOV									
03...	--	--	--	6	--	--	--	--	3.7
DEC									
08...	--	--	--	11	--	--	--	--	4.0
JAN									
07...	--	--	--	19	--	--	--	--	3.5
FEB									
02...	<0	60	50	6	.0	3	<0	10	3.7
MAR									
03...	--	--	--	6	--	--	--	--	4.7
APR									
13...	--	--	--	3	--	--	--	--	8.0
MAY									
04...	0	160	150	6	.0	3	<0	40	10
JUN									
08...	--	--	--	4	--	--	--	--	7.4
30...	--	--	--	9	--	--	--	--	11
AUG									
03...	0	250	250	5	.0	2	<0	40	10
SEP									
08...	--	--	--	10	--	--	--	--	8.2

PLATTE RIVER BASIN

06768000 PLATTE RIVER NEAR OVERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 LAR (MG/L AS CACO3) (90410)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT							
15...	1300	55	70	1.9	13	220	.60
NOV							
03...	1030	62	71	1.9	12	219	.50
DEC							
08...	1030	61	68	1.8	13	221	.50
JAN							
07...	1045	103	85	2.2	12	212	.60
FEB							
02...	1000	121	85	2.1	11	210	.60
MAR							
03...	0900	124	90	2.2	12	211	.60
APR							
13...	1345	182	110	2.6	11	166	.70
MAY							
04...	1215	185	97	2.3	11	164	.70
JUN							
08...	0900	96	71	2.0	9.8	172	.70
30...	1315	57	64	1.9	8.9	174	.60
AUG							
03...	1400	53	81	2.2	10	210	.60
SEP							
08...	1100	42	83	2.4	9.9	202	.50

DATE	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)
OCT							
15...	37	551	.75	2010	1.2	.100	120
NOV							
03...	36	545	.74	809	1.1	.060	110
DEC							
08...	36	563	.77	1350	1.4	.070	120
JAN							
07...	31	659	.90	1690	1.5	.100	140
FEB							
02...	30	663	.90	3850	2.3	.140	150
MAR							
03...	28	680	.93	3180	1.7	.110	160
APR							
13...	13	747	1.0	--	1.2	.030	200
MAY							
04...	14	726	.99	--	1.1	.070	180
JUN							
08...	19	545	.74	22800	.42	.090	140
30...	20	480	.65	30700	.47	.150	120
AUG							
03...	21	555	.75	9550	.13	.070	150
SEP							
08...	23	544	.74	11400	<.10	<.010	140

06767998 PLATTE RIVER NEAR OVERTON, NE (NORTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	814	828	834	1020	986	1030	918	1060	905	735	865	827
2	804	795	812	1050	1020	1040	985	1040	857	772	865	798
3	813	807	848	994	1030	1030	1030	1030	862	776	866	796
4	844	794	838	995	1090	1030	1020	1040	862	785	867	803
5	845	807	853	1010	1130	973	1030	1080	856	776	875	802
6	844	817	850	1010	1170	975	1030	1110	835	770	876	798
7	845	797	858	958	1120	956	1050	1090	836	775	865	813
8	784	796	828	932	1160	947	1030	1090	837	806	875	825
9	776	788	857	905	1160	962	1050	1090	845	815	862	823
10	836	796	854	884	1050	946	1050	1090	845	808	858	825
11	837	756	945	884	1050	957	1060	1080	848	808	858	819
12	838	762	855	996	1010	963	1030	1070	828	822	866	808
13	838	757	865	978	997	966	1040	1040	828	838	854	798
14	847	766	875	993	1010	966	989	1050	812	852	856	808
15	835	766	845	1020	999	956	1010	1050	818	863	856	808
16	846	777	857	996	998	959	1040	1050	818	852	848	795
17	852	776	856	1030	1010	953	1050	975	796	863	847	815
18	863	783	853	1050	1010	962	1070	985	794	832	845	813
19	855	767	845	1060	1040	962	1090	976	796	857	847	813
20	846	767	845	1070	1040	986	1110	966	784	866	846	807
21	846	773	852	1050	1050	1000	1070	974	786	895	837	805
22	844	779	852	1090	1040	1010	1100	996	803	904	842	776
23	845	814	857	1070	1050	1030	1110	1020	806	885	798	824
24	838	835	912	1010	1050	1010	1070	1020	805	876	806	815
25	845	835	1050	1010	1060	993	1080	998	796	876	806	815
26	844	817	915	965	1060	908	1070	1020	786	865	836	812
27	846	814	1030	995	1040	914	1070	1030	736	862	836	805
28	838	808	1050	1010	1020	907	1080	1010	723	835	840	766
29	836	813	1030	1030	---	897	1100	1010	722	867	836	768
30	846	825	1010	1020	---	918	1090	986	725	862	836	735
31	838	---	908	993	---	924	---	984	---	867	835	---

06767999 PLATTE RIVER NEAR OVERTON, NE (SOUTH CHANNEL)

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	845	836	863	1060	1270	1210	1140	1110	1010	757	848	805
2	865	826	865	1050	1280	1210	1150	1090	976	777	848	835
3	848	857	888	1050	1130	1200	1180	1110	988	794	858	833
4	867	852	878	1050	1270	1190	1180	1210	983	794	856	829
5	865	855	887	1060	1270	1160	1180	1160	948	795	862	838
6	877	855	896	1050	1290	1170	1180	1170	937	786	857	845
7	867	826	886	1060	1290	1170	1190	1180	945	788	855	848
8	843	822	913	985	1300	1170	1170	1190	937	808	855	855
9	835	837	905	1080	1240	1170	1190	1180	886	818	848	875
10	847	836	915	947	1300	1170	1200	1190	910	816	853	876
11	853	806	866	945	1300	1170	1210	1190	910	816	845	868
12	845	806	936	1090	1300	1150	1190	1170	883	828	855	875
13	854	843	938	1130	1300	1150	1200	1180	885	843	846	882
14	856	827	932	1070	1300	1150	1200	1170	903	865	838	886
15	846	828	927	1150	1290	1120	1200	1170	876	855	846	895
16	833	821	928	1160	1300	1120	1200	1170	884	863	845	895
17	855	844	943	1160	1300	1120	1210	1050	853	866	842	897
18	858	807	947	1170	1310	1140	1210	1040	865	836	833	816
19	853	807	942	1190	1310	1130	1220	1070	865	855	836	826
20	856	814	954	1190	1270	1140	1120	1110	863	885	835	898
21	846	819	955	1210	1270	1150	1190	1110	854	905	828	902
22	836	844	968	1220	1270	1150	1130	1120	856	912	826	897
23	845	846	978	1150	1270	1140	1210	1120	856	905	829	898
24	845	845	979	1250	1270	1150	1230	1110	855	875	795	898
25	846	856	1010	1250	1250	1140	1200	1110	826	868	805	898
26	843	846	1020	1240	1250	1140	1190	1110	825	878	826	902
27	845	854	1010	1250	1230	1130	1240	1050	818	856	866	918
28	838	875	854	1250	1160	1140	1230	1080	805	832	878	898
29	837	887	1020	1270	---	1130	1240	1080	803	867	866	897
30	843	886	1030	1270	---	1140	1230	1060	796	875	836	885
31	843	---	946	1270	---	1140	---	1020	---	858	833	---

PLATTE RIVER BASIN

06767998 PLATTE RIVER NEAR OVERTON, NE (NORTH CHANNEL)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	10.0	8.0	2.0	2.0	7.0	6.0	12.0	15.0	27.0	29.0	27.0
2	12.0	9.0	7.0	2.0	2.0	10.0	8.0	13.0	18.0	28.0	28.0	28.0
3	19.0	7.0	4.0	2.0	2.0	14.0	5.0	12.0	22.0	27.0	30.0	27.0
4	15.0	4.0	6.0	2.0	2.0	11.0	5.0	17.0	22.0	25.0	29.0	27.0
5	16.0	6.0	6.0	2.0	2.0	13.0	7.0	14.0	19.0	26.0	28.0	26.0
6	17.0	7.0	4.0	2.0	2.0	12.0	7.0	17.0	18.0	26.0	28.0	25.0
7	14.0	10.0	2.0	2.0	2.0	8.0	7.0	15.0	20.0	25.0	29.0	25.0
8	13.0	6.0	2.0	2.0	2.0	3.0	11.0	16.0	22.0	26.0	29.0	26.0
9	11.0	5.0	2.0	2.0	2.0	8.0	9.0	15.0	25.0	27.0	29.0	25.0
10	11.0	5.0	2.0	2.0	2.0	3.0	14.0	15.0	21.0	27.0	28.0	23.0
11	10.0	8.0	2.0	2.0	2.0	11.0	13.0	18.0	23.0	25.0	28.0	23.0
12	9.0	4.0	2.0	2.0	2.0	12.0	8.0	20.0	20.0	24.0	28.0	22.0
13	12.0	2.0	2.0	2.0	3.0	14.0	6.0	12.0	20.0	26.0	27.0	21.0
14	11.0	2.0	2.0	2.0	4.0	11.0	8.0	16.0	22.0	26.0	28.0	20.0
15	16.0	2.0	2.0	2.0	7.0	7.0	10.0	15.0	23.0	24.0	30.0	21.0
16	16.0	6.0	2.0	2.0	9.0	5.0	9.0	15.0	23.0	24.0	30.0	21.0
17	17.0	5.0	2.0	2.0	6.0	5.0	13.0	11.0	22.0	27.0	30.0	23.0
18	17.0	7.0	3.0	2.0	10.0	5.0	16.0	10.0	22.0	29.0	28.0	19.0
19	12.0	8.0	2.0	2.0	5.0	5.0	11.0	10.0	22.0	29.0	29.0	18.0
20	11.0	9.0	2.0	2.0	5.0	5.0	12.0	11.0	25.0	26.0	26.0	16.0
21	11.0	9.0	5.0	2.0	5.0	7.0	11.0	19.0	25.0	30.0	25.0	15.0
22	8.0	5.0	5.0	2.0	7.0	8.0	12.0	19.0	27.0	31.0	29.0	15.0
23	9.0	2.0	5.0	2.0	5.0	6.0	13.0	22.0	29.0	28.0	27.0	15.0
24	15.0	2.0	2.0	2.0	5.0	3.0	18.0	22.0	28.0	25.0	27.0	16.0
25	12.0	2.0	2.0	2.0	4.0	4.0	13.0	23.0	28.0	26.0	29.0	19.0
26	15.0	3.0	2.0	2.0	4.0	3.0	15.0	20.0	27.0	27.0	29.0	20.0
27	12.0	2.0	2.0	2.0	8.0	3.0	15.0	22.0	25.0	29.0	26.0	20.0
28	12.0	2.0	2.0	2.0	10.0	7.0	17.0	25.0	22.0	29.0	27.0	20.0
29	11.0	3.0	2.0	2.0	---	8.0	16.0	21.0	22.0	29.0	27.0	20.0
30	10.0	5.0	2.0	2.0	---	12.0	10.0	19.0	26.0	29.0	25.0	19.0
31	10.0	---	2.0	2.0	---	5.0	---	17.0	---	28.0	25.0	---

06767999 PLATTE RIVER NEAR OVERTON, NE (SOUTH CHANNEL)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	10.0	5.0	2.0	2.0	5.0	5.0	12.0	16.0	27.0	28.0	27.0
2	13.0	8.0	5.0	2.0	2.0	8.0	7.0	12.0	17.0	28.0	27.0	27.0
3	19.0	7.0	3.0	2.0	2.0	10.0	5.0	12.0	20.0	26.0	29.0	26.0
4	15.0	6.0	4.0	2.0	2.0	8.0	5.0	15.0	21.0	25.0	28.0	26.0
5	15.0	7.0	4.0	2.0	2.0	10.0	6.0	14.0	18.0	26.0	27.0	26.0
6	17.0	9.0	3.0	2.0	2.0	9.0	6.0	16.0	18.0	26.0	27.0	25.0
7	14.0	9.0	2.0	2.0	2.0	7.0	6.0	15.0	19.0	25.0	28.0	24.0
8	13.0	6.0	2.0	2.0	2.0	4.0	7.0	16.0	21.0	26.0	28.0	25.0
9	11.0	6.0	2.0	2.0	2.0	7.0	6.0	15.0	24.0	27.0	28.0	25.0
10	11.0	6.0	2.0	2.0	2.0	5.0	9.0	15.0	22.0	27.0	28.0	23.0
11	11.0	7.0	2.0	2.0	2.0	9.0	10.0	17.0	23.0	24.0	28.0	22.0
12	9.0	4.0	2.0	2.0	2.0	9.0	6.0	18.0	20.0	24.0	28.0	22.0
13	13.0	3.0	2.0	2.0	2.0	13.0	6.0	12.0	20.0	25.0	26.0	21.0
14	12.0	3.0	2.0	2.0	2.0	9.0	7.0	15.0	22.0	26.0	27.0	19.0
15	15.0	3.0	2.0	2.0	3.0	6.0	8.0	14.0	23.0	24.0	29.0	21.0
16	15.0	6.0	2.0	2.0	5.0	5.0	8.0	15.0	23.0	24.0	29.0	21.0
17	17.0	5.0	2.0	2.0	3.0	5.0	10.0	11.0	22.0	27.0	30.0	23.0
18	17.0	6.0	3.0	2.0	6.0	5.0	12.0	12.0	22.0	27.0	27.0	19.0
19	10.0	6.0	2.0	2.0	3.0	5.0	10.0	11.0	22.0	28.0	27.0	19.0
20	12.0	6.0	2.0	2.0	4.0	5.0	11.0	12.0	25.0	26.0	26.0	16.0
21	14.0	7.0	3.0	2.0	4.0	6.0	10.0	16.0	25.0	30.0	25.0	16.0
22	10.0	4.0	3.0	2.0	5.0	7.0	11.0	17.0	27.0	29.0	28.0	16.0
23	9.0	2.0	3.0	2.0	4.0	5.0	12.0	19.0	29.0	27.0	26.0	15.0
24	15.0	3.0	2.0	2.0	4.0	4.0	14.0	19.0	28.0	25.0	27.0	16.0
25	11.0	2.0	2.0	2.0	5.0	4.0	12.0	20.0	28.0	26.0	28.0	18.0
26	15.0	3.0	2.0	2.0	5.0	4.0	13.0	24.0	26.0	27.0	28.0	20.0
27	12.0	2.0	2.0	2.0	5.0	4.0	13.0	23.0	25.0	29.0	27.0	19.0
28	12.0	2.0	2.0	2.0	8.0	6.0	15.0	26.0	22.0	28.0	28.0	19.0
29	11.0	2.0	2.0	2.0	---	7.0	14.0	22.0	23.0	28.0	27.0	18.0
30	9.0	3.0	2.0	2.0	---	10.0	11.0	16.0	26.0	27.0	25.0	18.0
31	10.0	---	2.0	2.0	---	5.0	---	16.0	---	28.0	25.0	---

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 south of Odessa and 5 mi downstream from Elm Creek.

DRAINAGE AREA.--58,100 mi², approximately, of which about 53,300 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--March 1937 to current year. Monthly discharge only for some periods, published in WSP 1310.

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

GAGE.--Water-stage recorder. Datum of gage is 2,197.07 ft 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 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, 22,900 ft³/s June 29, 1983, gage height, 5.82 ft; maximum gage height, 5.90 ft June 22, 1983; no flow for periods in each year prior to 1947 and in 1953-57, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,900 ft³/s June 29, gage height, 5.82 ft; maximum gage height, 5.90 ft June 22; minimum daily discharge, 590 ft³/s Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	918	1600	1500	2800	3100	3560	5050	9430	21200	6980	6500
2	1580	1360	1700	1700	2800	3180	3590	5950	10700	20400	6660	6380
3	1540	1400	1470	1900	2400	3070	3530	6580	11200	20000	6260	6260
4	998	838	1430	2300	2400	3040	3400	7420	12400	20000	5980	6190
5	762	720	1410	2400	2500	3290	3500	8280	13000	20000	5700	6190
6	692	590	1400	2450	2700	3590	3650	8370	12900	20000	5600	6380
7	678	638	1540	2500	3000	3310	3650	8200	13900	19700	5600	6580
8	720	1170	1650	2500	3000	3260	3370	8080	16500	19100	5570	6820
9	998	1320	1400	2500	3260	3260	3560	8000	17800	18000	5480	6780
10	1050	1400	1340	2320	3960	3210	3560	7800	18300	16300	5450	6900
11	998	1540	1300	2290	3960	3100	3450	7600	18300	15200	5450	7100
12	902	1510	1400	2770	3650	3070	3560	7510	19400	14000	5540	7060
13	822	1450	1400	2940	3650	2960	3840	7230	20000	12300	5630	6900
14	950	1860	1380	3040	3590	2940	3750	7040	20100	10900	5840	6980
15	1400	1900	1630	3100	3530	3070	4150	6420	20100	9900	5980	7100
16	1220	1860	1740	3180	3620	2960	4360	6130	19500	9230	5980	6980
17	1280	1470	1950	3150	3560	2960	4290	6730	19400	7800	6050	7100
18	982	1790	1950	3150	3480	2940	4150	7590	19700	6190	5980	7060
19	934	1840	1900	3000	3420	3100	4290	8040	19500	5480	5770	7200
20	886	1790	2020	3000	3400	3070	3900	8320	20000	4530	5670	7300
21	806	1880	1970	3000	3230	3100	3870	8570	21100	4020	5770	7500
22	806	1880	2210	2600	3100	3070	3590	8570	22300	3940	5740	7500
23	822	1880	2370	2450	3070	2960	3040	7990	22000	4330	6420	7650
24	854	1810	2610	2600	3070	2990	3680	7590	19900	4590	6740	8580
25	822	1790	2300	2700	3100	3070	3780	7590	18300	5070	7100	8690
26	790	1540	1700	2700	3100	3310	3780	8200	18100	5510	7020	7900
27	806	1560	2300	2700	3100	3400	3450	8740	19200	5980	7100	7750
28	838	1540	1750	2700	3100	3590	3530	8830	21700	6380	7850	7750
29	854	1740	1500	2600	---	3780	3680	9340	22500	6700	7900	7800
30	886	1600	1350	2600	---	3810	4060	9520	22100	6900	7350	7950
31	934	---	1250	2600	---	3720	---	9130	---	7100	6700	---
TOTAL	30420	44584	52920	80940	89550	99280	111570	240410	539330	350750	192860	214830
MEAN	981	1486	1707	2611	3198	3203	3719	7755	17980	11310	6221	7161
MAX	1810	1900	2610	3180	3960	3810	4360	9520	22500	21200	7900	8690
MIN	678	590	1250	1500	2400	2940	3040	5050	9430	3940	5450	6190
AC-FT	60340	88430	105000	160500	177600	196900	221300	476900	1070000	695700	382500	426100
CAL YR 1982	TOTAL	329444	MEAN	903	MAX	2610	MIN	30	AC-FT	653500		
WTR YR 1983	TOTAL	2047444	MEAN	5609	MAX	22500	MIN	590	AC-FT	4061000		

PLATTE RIVER BASIN

06770200 PLATTE RIVER NEAR KEARNEY, NE

LOCATION.--Lat 40°39'32", long 99°05'08", in SE1/4SE1/4 sec.14, T.8 N., R.16 W., Kearney county, Hydrologic Unit 10200101, on right bank near downstream side of bridge on State Highway 44, 2 mi south of Kearney.

DRAINAGE AREA.--58,200 mi², approximately, of which about 53,400 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--January 1982 to current year.

GAGE.--Water stage recorder.

REMARKS.--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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s June 29, 1983, gage height, 7.42 ft; minimum daily discharge, 61 ft³/s July 25, Sept. 11, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,700 ft³/s June 29, gage height, 7.42 ft; minimum daily discharge, 695 ft³/s Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	764	1550	1600	2800	2360	3010	4970	8620	21500	6650	7280
2	1890	1040	1620	1500	2600	2390	2970	5810	9530	21100	6270	7290
3	1780	1250	1470	1550	2200	2430	3010	6650	10700	19200	6090	7310
4	1270	977	1430	1600	1950	2470	2900	7120	11600	18800	5840	7200
5	960	836	1400	1750	2000	2840	2970	7660	12700	19100	5550	7170
6	800	777	1330	1900	1900	3060	3060	8000	12700	19300	5760	7290
7	704	758	1420	2000	2700	2860	3150	7780	13000	19500	5760	7390
8	695	1140	1560	2100	2650	2790	2810	7640	15200	18000	5670	7530
9	886	1320	1430	2100	2700	2770	3010	7160	16600	16400	5880	7540
10	925	1450	1390	1950	3000	2660	3080	7010	17700	14800	6000	7660
11	908	1530	1340	1850	3500	2620	3100	6950	19600	13700	5880	7900
12	861	1520	1460	1850	3800	2620	3100	6900	19200	13000	5880	7930
13	822	1420	1450	2100	3600	2570	3150	6630	21700	11800	6020	7780
14	863	1710	1440	2300	3310	2600	3150	6560	20000	10500	6210	7850
15	1200	1780	1520	2450	3160	3500	3340	6120	20200	9570	6330	8010
16	1160	1910	1630	2500	3120	3600	3540	5790	19200	8870	6300	7970
17	1080	1560	1720	2450	2990	3000	3620	6440	19700	7930	6210	8170
18	802	1820	1840	2250	2930	2800	3510	7260	19600	6000	6000	8240
19	745	1890	1790	2100	2820	2650	3600	7590	19400	5210	5670	8140
20	776	1690	1810	2100	2750	2500	3420	7980	20000	4110	5610	7890
21	828	1750	1840	2150	2570	2300	3310	8240	20500	3420	5470	8040
22	841	1800	1960	2150	2430	2200	3260	8220	21800	3450	5500	8120
23	841	1750	2100	2200	2380	2100	2680	7780	20200	4100	6420	8080
24	814	1780	2370	2250	2470	2000	3180	7400	19200	4330	6880	8950
25	801	1820	2350	2300	2480	2100	3170	7260	18800	5090	7350	9230
26	788	1530	1760	2400	2410	2300	3080	7650	18100	5660	7440	8740
27	814	1570	1800	2600	2450	2600	3080	8220	18800	6220	7390	7990
28	831	1600	1700	2800	2470	2500	3160	8440	21600	6710	8220	8230
29	783	1640	1600	3000	---	2800	3380	8680	22300	6880	8290	8190
30	770	1640	1500	2800	---	3200	3850	9090	21600	6920	8040	7990
31	762	---	1550	2600	---	3040	---	8730	---	6960	7600	---
TOTAL	30090	44022	51130	67250	76140	82230	95650	227730	529850	338130	198180	237100
MEAN	971	1467	1649	2169	2719	2653	3188	7346	17660	10910	6393	7903
MAX	2090	1910	2370	3000	3800	3600	3850	9090	22300	21500	8290	9230
MIN	695	758	1330	1500	1900	2000	2680	4970	8620	3420	5470	7170
AC-FT	59680	87320	101400	133400	151000	163100	189700	451700	1051000	670700	393100	470300
WTR YR 1983	TOTAL	1977502	MEAN	5418	MAX	22300	MIN	695	AC-FT	3922000		

PLATTE RIVER BASIN

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06770500 PLATTE RIVER NEAR GRAND ISLAND, NE

LOCATION.--Lat 40°52'28", long 98°16'54", in SW1/4SW1/4 sec.31, T.11 N., R.8 W., Merrick County, Hydrologic Unit 10200101, on left bank 20 ft downstream from bridge on U.S. Highway 34, 2 mi upstream from Burlington Northern Inc. bridge, and 5 mi southeast of Grand Island.

DRAINAGE AREA.--58,800 mi², approximately, of which about 54,000 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1942. WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,831.89 ft National Geodetic Vertical Datum of 1929 (Nebraska Department of Highways bench mark). Prior to Oct. 23, 1933, nonrecording gage at bridge 68 ft downstream and Oct. 23, 1933, to Aug. 19, 1980, water-stage recorder at site 98 ft downstream, all at same datum.

REMARKS.--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 June 6, 1935, gage height, 5.99 ft, from rating curve extended above 18,000 ft³/s; maximum gage height, 6.16 ft Mar. 27, 1960, backwater from ice; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,900 ft³/s June 30, gage height, 5.97 ft; minimum daily discharge, 608 ft³/s Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	787	1910	1750	2250	2670	3560	4730	9360	22800	6880	6370
2	2090	795	1890	1650	2100	2500	3290	5690	9330	22000	6840	6100
3	1800	784	1990	1700	2050	2500	3170	6030	9960	20300	6340	5800
4	1610	998	1930	1800	2050	2770	3210	6770	11000	18900	5930	5740
5	1430	985	1760	1900	2100	3300	3120	7610	11700	18200	5520	5710
6	1050	890	1770	2150	2250	3710	3210	8710	12700	17900	5180	5820
7	924	817	1660	2200	2450	3760	3470	9860	12800	18100	5390	5940
8	852	759	1640	2300	2650	3470	3560	8720	12800	18000	5500	6100
9	888	867	1670	2300	2800	3200	3290	8140	14600	17000	5380	6100
10	870	1070	1640	2150	3050	3170	3340	7590	16300	15900	5270	5960
11	906	1290	1670	2050	3300	3080	3480	7400	16700	14500	5180	6090
12	924	1350	1620	2050	3600	2990	3930	8130	17400	13500	5250	6560
13	893	1450	1670	2300	3800	2970	3920	7860	19800	12500	5470	6480
14	910	1410	1770	2500	3900	3010	3790	7520	20600	11200	5940	6310
15	897	1520	1800	2650	4000	3970	3790	7090	19800	10000	6020	6520
16	1060	1670	1840	2700	4000	4060	3870	6470	19600	9510	5970	6340
17	1290	1790	2000	2650	4250	3590	4030	6730	19600	8920	6160	6240
18	1150	1580	1950	2450	4150	3330	4120	8340	19100	7750	5900	6280
19	1030	1710	1960	2300	3810	3080	4030	9150	18700	5660	5360	6490
20	928	1910	1910	2250	3140	2960	4090	8930	18400	4590	5120	6640
21	837	1900	1920	2300	3040	2770	3950	9050	18200	3410	5070	6640
22	812	1790	2090	2300	2970	2570	3670	9080	18400	2830	5020	6750
23	835	1830	2080	2350	2890	2410	3490	9100	19300	2810	5790	6590
24	775	1790	2350	2400	2820	2370	2900	8550	19900	3190	5920	6750
25	722	1850	2560	2450	2880	2510	3440	7880	19500	3530	5980	7570
26	696	1920	2550	2500	2940	2870	3510	7680	18600	3920	6320	8030
27	663	1720	2500	2500	2830	3090	3490	8080	19300	4530	6330	7680
28	608	1880	2400	2500	2700	2990	3530	8420	20300	5200	6270	7340
29	638	1830	1900	2500	---	3330	3550	8720	22600	5750	6870	8460
30	686	1690	1600	2450	---	3760	3770	9140	23500	6260	6920	7860
31	748	---	1700	2300	---	3750	---	9560	---	6430	6730	---
TOTAL	31252	42632	59700	70350	84770	96510	107570	246730	509850	335090	181820	197260
MEAN	1008	1421	1926	2269	3028	3113	3586	7959	17000	10810	5865	6575
MAX	2090	1920	2560	2700	4250	4060	4120	9860	23500	22800	6920	8460
MIN	608	759	1600	1650	2050	2370	2900	4730	9330	2810	5020	5710
AC-FT	61990	84560	118400	139500	168100	191400	213400	489400	1011000	664700	360600	391300
CAL YR 1982	TOTAL	403015	MEAN	1104	MAX	3400	MIN	85	AC-FT	799400		
WTR YR 1983	TOTAL	1963534	MEAN	5380	MAX	23500	MIN	608	AC-FT	3895000		

PLATTE RIVER BASIN

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1972 to September 1980.

WATER TEMPERATURES: July 1972 to September 1980.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,250 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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)
OCT										
14...	0915	884	903	8.0	9.0	10.7	24.00	K62.00	4500	280
21...	1145	855	890	8.3	8.0	--	--	--	--	280
NOV										
10...	1000	1060	875	8.1	5.0	11.9	27.00	270	280	260
DEC										
08...	1000	1630	1000	8.4	.5	13.4	26.00	50.00	130	290
JAN										
06...	0935	2170	1060	7.9	.5	12.2	11.00	76.00	110	330
FEB										
04...	1020	2050	1220	8.0	.5	11.9	19.00	K5.00	K21.00	380
MAR										
24...	1050	2410	1120	8.6	4.5	12.8	32.00	K1300	2800	330
APR										
28...	0940	3720	1140	8.5	13.0	11.4	34.00	K92.00	100	340
MAY										
26...	0850	7760	1040	8.2	19.0	9.0	24.00	K36.00	96.00	330
JUN										
23...	0950	19200	832	8.1	26.0	5.6	35.00	320	800	260
JUL										
14...	0930	11500	859	8.1	24.5	6.8	34.00	K380	620	260
AUG										
18...	0900	6000	872	8.5	27.0	7.7	61.00	1400	2000	260
SEP										
15...	0850	6900	845	7.5	18.0	8.7	42.00	320	660	250

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- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT									
14...	77.000	73.0	23.0	81.00	2.2	13.00	200	200	28.0
21...	72.000	73.0	23.0	80.00	2.2	12.00	205	220	27.0
NOV									
10...	64.000	69.0	21.0	80.00	2.2	12.00	195	210	27.0
DEC									
08...	84.000	78.0	24.0	85.00	2.2	12.00	210	230	28.0
JAN									
06...	117	88.0	27.0	92.00	2.3	12.00	214	290	33.0
FEB									
04...	160	100	32.0	100	2.3	11.00	222	330	44.0
MAR									
24...	148	84.0	30.0	98.00	2.4	12.00	186	310	40.0
APR									
28...	187	83.0	33.0	110	2.7	11.00	157	350	51.0
MAY									
26...	155	86.0	29.0	88.00	2.2	10.00	180	290	39.0
JUN									
23...	73.000	69.0	22.0	70.00	1.9	11.00	190	210	24.0
JUL									
14...	59.000	68.0	22.0	75.00	2.1	9.60	202	200	26.0
AUG									
18...	44.000	67.0	22.0	83.00	2.3	13.00	214	200	23.0
SEP									
15...	44.000	62.0	22.0	82.00	2.4	11.00	202	200	23.0

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT									
14...	.50	27.00	566	.770	1350	8	.72	.72	.120
21...	.60	26.00	585	.790	1350	--	--	.81	--
NOV									
10...	.50	27.00	564	.770	1610	23	.72	.72	.090
DEC									
08...	.50	29.00	613	.830	2700	29	1.00	.98	.110
JAN									
06...	.60	29.00	700	.950	4100	2	1.19	1.10	.270
FEB									
04...	.60	27.00	778	1.100	4310	3	1.80	1.90	.080
MAR									
24...	.60	18.00	704	.960	4580	80	1.40	1.40	<.060
APR									
28...	.70	10.00	743	1.000	7460	50	.80	.76	.070
MAY									
26...	.70	14.00	665	.900	13900	18	.60	.51	.080
JUN									
23...	.70	23.00	544	.740	28200	44	.40	.34	<.060
JUL									
14...	.70	22.00	545	.740	16900	85	.40	.36	.100
AUG									
18...	.60	22.00	559	.760	9060	164	<.10	<.10	.080
SEP									
15...	.50	22.00	544	.740	10100	126	<.10	<.10	.040

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									
14...	1.40	1.50	2.20	.140	.070	130	<3	2.00	4.70
21...	--	--	--	--	--	--	--	--	--
NOV									
10...	1.30	1.40	2.10	.090	.050	130	8	3.00	5.20
DEC									
08...	1.50	1.60	2.60	.090	.050	140	7	5.00	4.70
JAN									
06...	1.00	1.30	2.50	.090	.080	140	6	6.00	4.20
FEB									
04...	1.00	1.10	2.90	.100	.080	170	4	9.00	3.60
MAR									
24...	--	1.90	3.30	.140	.040	170	<3	7.00	7.70
APR									
28...	1.40	1.50	2.30	.180	.020	200	<3	4.00	8.40
MAY									
26...	1.19	1.30	1.90	.140	.060	170	7	6.00	6.60
JUN									
23...	--	1.20	1.60	.280	.190	140	11	13.00	11.00
JUL									
14...	1.30	1.40	1.80	.180	.140	140	20	11.00	8.70
AUG									
18...	2.00	2.10	--	.200	.030	150	3	2.00	15.00
SEP									
15...	1.70	1.70	--	.140	.010	140	8	3.00	10.00

PLATTE RIVER BASIN

06770500 PLATTE RIVER NEAR GRAND ISLAND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ARSENIC TOTAL (UG/L) AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L) AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L) AS CD) (01027)	CHROMIUM, TOTAL RECOV- ERABLE (UG/L) AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L) AS FE) (01045)	IRON, SUS- PENDE RECOV- ERABLE (UG/L) AS FE) (01044)
NOV 10...	1000	4	<.00	<1.0	<10	3.0	530	520
FEB 04...	1020	4	<.00	<1.0	<10	1.0	60	60
MAY 26...	0850	5	.00	<1.0	<10	9.0	800	790
AUG 18...	0900	7	<.00	<1.0	<10	11	4300	4300

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L) AS PB) (01051)	MANGANESE, TOTAL RECOV- ERABLE (UG/L) AS MN) (01055)	MANGANESE, SUS- PENDE RECOV- ERABLE (UG/L) AS MN) (01054)	MERCURY TOTAL RECOV- ERABLE (UG/L) AS HG) (71900)	SELENIUM, TOTAL RECOV- ERABLE (UG/L) AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L) AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN) (01092)
NOV 10...	0	80	77	.0	2	<1.0	20
FEB 04...	0	20	--	.0	3	<1.0	10
MAY 26...	0	90	80	.0	2	<1.0	50
AUG 18...	0	400	400	<.0	2	<1.0	30

PLATTE RIVER BASIN

115

06772000 WOOD RIVER NEAR ALDA, NE

LOCATION.--Lat 40°51'10", long 98°28'20", in NE1/4SE1/4 sec.7, T.10 N., R.10 W., Hall County, Hydrologic Unit 10200102, on right bank 1.2 mi south of Alda, 2.2 miles upstream from old north channel of the Platte River, and 19 miles upstream from present mouth.

DRAINAGE AREA.--628 mi².

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

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

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

AVERAGE DISCHARGE.--30 years, 10.0 ft³/s, 7,240 acre-ft/yr; median of yearly mean discharges, 6.7 ft³/s, 4,900 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 144 ft³/s, May 20, gage height, 6.71 ft, no peak above base of 300 ft³/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	4.4	4.4	40	.07	6.0	7.0	18
2	1.9	.00	.00	.00	.00	4.7	4.2	20	.04	3.0	6.4	13
3	2.0	.00	.00	.00	.00	3.5	1.6	9.0	.04	2.0	6.4	11
4	.06	.00	.00	.00	.00	3.0	2.4	8.5	.06	.50	7.0	8.7
5	.03	.00	.00	.00	.00	5.1	2.4	7.0	.02	.02	8.0	6.6
6	.00	.00	.00	.00	.00	3.6	1.9	5.5	.02	.00	8.7	5.1
7	.00	.00	.00	.00	.00	2.0	1.4	3.0	.01	.00	11	3.5
8	.09	.00	.00	.00	.00	1.3	1.2	1.5	.00	.00	10	2.8
9	.02	.00	.00	.00	.00	.29	1.0	.90	.00	.00	8.4	1.6
10	.00	.00	.00	.00	.00	.04	.90	.30	3.0	.08	8.0	1.0
11	2.1	.00	.00	.00	.00	1.2	.60	.06	10	.34	6.4	.44
12	.04	.00	.00	.00	.00	2.6	1.4	12	40	.44	6.6	.29
13	.00	.00	.00	.00	.00	1.8	1.1	9.2	50	2.8	6.8	.03
14	.00	.00	.00	.00	.00	.90	.50	3.0	40	4.4	7.2	.00
15	.00	.00	.00	.00	.00	1.6	2.5	1.4	45	4.4	6.6	.00
16	.00	.00	.00	.00	1.4	2.0	2.6	.39	50	4.7	6.6	.00
17	.00	.00	.00	.00	4.9	3.0	1.9	7.3	90	4.4	6.6	.00
18	.00	.00	.00	.00	1.6	1.9	1.1	54	55	2.6	6.2	.00
19	.00	.00	.00	.00	.60	1.2	.80	62	40	3.0	6.8	.00
20	.00	.00	.00	.00	.02	.55	.60	112	20	2.4	6.4	.00
21	.00	.00	.00	.00	.00	.24	.40	98	10	2.0	6.2	.00
22	.00	.00	.00	.00	.00	.07	.20	59	6.0	4.2	6.6	.00
23	.00	.00	.00	.00	.00	.03	.00	30	7.0	5.5	15	.00
24	.00	.00	.00	.00	.00	.00	.00	15	5.0	5.7	5.7	.00
25	.00	.00	.00	.00	7.3	.00	.00	8.0	16	7.0	3.1	.00
26	.00	.00	.00	.00	14	.01	.00	4.9	40	7.5	2.5	.00
27	.00	.00	.00	.00	9.2	.03	.00	5.7	60	8.9	4.4	.00
28	.00	.00	.00	.00	6.4	.02	.00	5.3	50	10	26	.00
29	.00	.00	.00	.00	---	2.9	.00	2.5	30	7.0	67	.00
30	.00	.00	.00	.00	---	4.7	20	.70	10	9.2	62	.00
31	.00	---	.00	.00	---	5.3	---	.07	---	8.0	29	---
TOTAL	6.24	.00	.00	.00	45.42	57.98	55.10	586.22	677.26	116.08	374.6	72.06
MEAN	.20	.000	.000	.000	1.62	1.87	1.84	18.9	22.6	3.74	12.1	2.40
MAX	2.1	.00	.00	.00	14	5.3	20	112	90	10	67	18
MIN	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	2.5	.00
AC-FT	12	.00	.00	.00	90	115	109	1160	1340	230	743	143
CAL YR 1982	TOTAL	3006.17	MEAN	8.24	MAX	232	MIN	.00	AC-FT	5960		
WTR YR 1983	TOTAL	1990.96	MEAN	5.45	MAX	112	MIN	.00	AC-PT	3950		

PLATTE RIVER BASIN

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 downstream from highway bridge, 1.5 mi south of Duncan, and 12 mi upstream from Loup River.

DRAINAGE AREA.--60,900 mi², approximately, of which about 56,100 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1895 to December 1909 (irrigation seasons only 1895-1900), July 1910 to December 1911 (gage heights and discharge measurements only), April 1912 to September 1915, June 1928 to current year. Published as "near Columbus" 1895-1915.

REVISED RECORDS.--WSP 956: 1935. WSP 1390: 1897, 1899-1901, 1903-5, 1929-32, 1935(M), 1936. WDR NE-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,478.82 ft National Geodetic Vertical Datum of 1929. June 1895 to December 1909, April 1912 to September 1915, and June to October 1928, nonrecording gage at site 7 mi downstream at different datums. Oct. 25, 1928, to Feb. 20, 1935, nonrecording gage 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 June 23, 1905, gage height, 6.50 ft, site and datum then in use; no flow at times in 1896, 1902, 1904-5, 1910-11, 1913-14, 1928, all at site downstream, 1931, 1933-42, 1944, 1952-57, 1959, 1963, 1974, 1976, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,200 ft³/s June 18, gage height, 5.96 ft; maximum gage height, 6.07 ft June 14, shifting control; minimum daily discharge, 663 ft³/s Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	721	1680	1500	3000	3040	6200	4460	9240	23800	6980	6710
2	1790	696	1750	1800	3200	2970	5190	6060	9640	23700	7100	6230
3	2040	663	1680	1900	3000	2900	4500	6500	9550	23100	7020	5910
4	2030	668	1680	2100	3000	2940	4090	6450	9840	21900	6600	5830
5	1770	783	1680	2400	3200	3520	4060	6560	11000	20600	6210	5710
6	1600	920	1600	2600	3000	3840	4310	6950	12100	19700	6010	5780
7	1340	845	1530	3000	2900	3710	4580	7460	12800	19300	5680	5660
8	1220	779	1490	3200	2800	3490	4540	8690	13400	19200	5560	5830
9	1280	779	1410	3300	2800	3240	4560	8470	13600	19300	5530	5850
10	1150	792	1350	3500	2800	3020	4440	7960	14400	19000	5390	5890
11	1120	1070	1300	3500	2800	3080	4180	7490	16000	17900	5420	5930
12	1100	1220	1250	3500	3000	3000	4450	7370	17500	16600	5570	6160
13	1090	1300	1200	3500	3200	2880	5420	7620	20000	15500	5550	6560
14	1070	1290	1190	3600	3400	2900	5500	7670	22800	14600	5740	6790
15	1010	1330	1400	3600	3700	3740	5280	7370	22600	13200	5840	6730
16	961	1330	1500	3600	4000	4640	5350	7040	22400	11800	5920	6720
17	933	1430	1570	3600	4600	4750	5300	6990	22000	11000	5930	6570
18	1030	1560	1650	3500	5400	4170	5180	7670	23600	9980	5850	6380
19	1070	1610	1880	3500	6600	3900	5230	8760	23700	8730	5710	6530
20	1100	1450	2030	3400	8370	3670	4940	9660	23200	6460	5560	7250
21	1070	1570	1960	3200	3840	3540	4920	9560	22300	5370	5660	7490
22	964	1650	1770	3300	3550	3390	4870	9320	21900	4310	5390	7410
23	894	1600	1800	3300	3540	3280	4500	9100	21600	3500	5850	7420
24	875	1630	1860	3300	3350	3200	4400	8810	21800	3500	6600	7400
25	828	1660	2080	3400	3190	3230	3820	8110	22300	3820	6630	7310
26	797	1600	2040	3200	3110	3510	3990	7440	22400	4130	6530	7930
27	775	1620	1940	3100	3080	3770	4060	7110	21700	4740	6780	8340
28	755	1700	1400	3300	3090	3860	4000	7240	21200	5560	6790	8120
29	773	1670	1000	3300	---	4120	3980	7650	22100	6330	6660	8230
30	760	1700	980	3200	---	5040	3920	8080	22900	6730	7050	8890
31	733	---	1100	3100	---	6500	---	8500	---	6920	7080	---
TOTAL	35248	37636	48750	96300	101520	112840	139760	238120	549570	390280	190190	203560
MEAN	1137	1255	1573	3106	3626	3640	4659	7681	18320	12590	6135	6785
MAX	2040	1700	2080	3600	8370	6500	6200	9660	23700	23800	7100	8890
MIN	733	663	980	1500	2800	2880	3820	4460	9240	3500	5390	5660
AC-FT	69910	74650	96700	191000	201400	223800	277200	472300	1090000	774100	377200	403800
CAL YR 1982 TOTAL	516256	MEAN	1414	MAX	7110	MIN	233	AC-FT	1024000			
WTR YR 1983 TOTAL	2143774	MEAN	5873	MAX	23800	MIN	663	AC-FT	4252000			

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1965 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1981.

WATER TEMPERATURES: November 1977 to September 1980.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,100 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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARD- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS AS CAC03 (00900)
OCT											
25...	1545	--	870	8.5	15.0	--	--	--	--	--	280
NOV											
16...	1600	1350	--	7.5	5.0	740	17	12.6	1600	420	260
JAN											
13...	1600	3590	940	8.3	.5	725	12	13.6	280	K77	290
MAR											
08...	1500	3550	1000	8.3	4.5	720	14	12.8	K110	680	320
MAY											
03...	1800	6580	750	7.9	14.5	715	40	12.0	3800	16000	220
JUL											
27...	1100	4760	900	8.5	26.0	730	70	7.8	260	6300	270
SEP											
21...	1515	7720	860	8.4	15.0	740	31	10.0	K150	780	260

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- LITY LAB 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											
25...	81	75	23	82	2.2	13	201	210	33	.60	26
NOV											
16...	63	70	21	76	2.1	11	199	190	28	.50	27
JAN											
13...	92	77	24	83	2.2	11	200	240	33	.50	26
MAR											
08...	116	86	26	79	2.0	12	207	230	32	.60	22
MAY											
03...	70	60	18	55	1.7	11	155	170	24	.50	14
JUL											
27...	64	68	23	82	2.3	11	202	220	29	.70	22
SEP											
21...	56	67	23	82	2.3	9.5	206	220	26	.60	22

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT										
25...	--	583	.79	--	1.3	--	--	--	--	--
NOV										
16...	560	544	.76	2040	1.2	.090	1.70	.160	.090	.090
JAN										
13...	624	615	.85	6050	1.2	.280	1.60	.160	.120	.090
MAR										
08...	633	613	.86	6070	1.9	.120	1.90	.210	.170	.130
MAY										
03...	436	447	.59	7750	1.6	.130	2.40	.330	.220	.170
JUL										
27...	585	578	.80	7520	<.10	.070	3.40	.330	.090	.060
SEP										
21...	467	574	.64	9730	<.10	.060	1.50	.170	.020	.020

PLATTE RIVER BASIN

06774000 PLATTE RIVER NEAR DUNCAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CORAL, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 16...	1600	20	4	0	0	<1	<1	<0	2	0	<1
MAR 08...	1500	30	4	110	0	<1	<1	<0	5	20	<1
MAY 03...	1800	100	4	110	<0	<1	<1	<0	6	80	1
JUL 27...	1100	20	4	0	<0	<1	<1	<0	6	10	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (01890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 16...	40	5	<.0	<10	4	2	<1	650	<6.0	0
MAR 08...	40	10	<.0	<10	<1	2	<1	750	<6.0	20
MAY 03...	30	14	<.0	<10	3	2	<1	530	<6.0	40
JUL 27...	40	2	<.0	<10	1	2	<1	690	10	20

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV 16...	1600	1350	5.0	196	714	--	--
MAR 08...	1500	3550	4.5	1060	10200	--	--
MAY 03...	1800	6580	14.5	296	5260	16	17
JUL 27...	1100	4760	26.0	346	4450	--	--
SEP 21...	1515	7720	15.0	846	17600	--	--

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)
NOV 16...	--	69	74	94	100	--
MAR 08...	--	3	3	11	27	84
MAY 03...	19	28	35	66	99	100
JUL 27...	--	72	75	91	100	--
SEP 21...	--	22	24	31	55	65

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 upstream from Dismal River.

DRAINAGE AREA.--1,850 mi², approximately, of which about 80 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,607.14 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 12, 1946, nonrecording gage, and Sept. 12, 1946, to Sept. 30, 1962, water-stage recorder at site 0.2 mi upstream at datum 0.03 ft higher.

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

AVERAGE DISCHARGE.--38 years, 401 ft³/s, 290,500 acre-ft/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 883 ft³/s May 12, gage height, 2.13 ft; maximum gage height, 3.51 ft Dec. 26, bakwater from ice; minimum daily discharge, 338 ft³/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	471	414	454	370	442	445	542	542	470	526	424	397
2	420	439	471	380	469	440	490	547	470	512	411	391
3	394	411	460	370	440	450	509	505	450	500	405	388
4	391	403	449	380	439	455	495	548	455	487	399	409
5	400	409	457	400	407	560	495	590	465	459	398	416
6	433	394	447	420	439	543	482	596	445	449	403	402
7	403	396	430	470	420	505	476	583	455	440	393	398
8	430	396	425	520	412	470	492	516	455	431	395	397
9	420	406	425	580	427	430	488	515	445	431	394	395
10	351	389	400	515	426	475	484	509	435	423	388	404
11	338	457	410	480	426	460	492	638	435	423	389	398
12	342	474	420	462	436	480	530	711	500	415	395	382
13	351	441	426	464	443	506	521	600	655	415	393	388
14	365	430	430	472	451	489	451	589	493	408	403	406
15	365	410	425	469	460	495	424	591	459	409	393	409
16	365	407	438	466	465	482	441	568	460	512	392	402
17	370	412	453	492	465	479	455	600	583	468	395	413
18	375	413	460	503	465	472	463	660	498	450	396	409
19	400	428	433	458	470	463	489	559	583	441	392	408
20	363	438	427	489	480	464	495	602	589	427	391	415
21	370	441	417	469	440	438	494	636	489	419	387	392
22	375	442	416	433	440	437	491	615	465	429	382	391
23	385	471	417	453	450	470	478	563	451	508	489	401
24	395	448	410	460	460	475	468	533	438	449	440	414
25	408	418	380	458	450	485	471	516	437	426	411	419
26	405	413	350	440	440	506	478	505	443	414	419	416
27	414	423	360	439	440	474	479	495	724	464	416	414
28	424	429	370	437	440	459	480	490	757	448	414	423
29	411	445	360	438	---	473	474	480	649	436	407	422
30	401	439	350	455	---	493	469	475	571	434	403	422
31	405	---	380	443	---	502	---	475	---	427	400	---
TOTAL	12140	12736	12956	14085	12442	14775	14496	17352	15224	13880	12517	12141
MEAN	392	425	418	454	444	477	483	560	507	448	404	405
MAX	471	474	471	580	480	560	542	711	757	526	489	423
MIN	338	389	350	370	407	430	424	475	435	408	382	382
AC-FT	24080	25260	25700	27940	24680	29310	28750	34420	30200	27530	24830	24080
CAL YR 1982	TOTAL	153827	MEAN	421	MAX	586	MIN	330	AC-FT	305100		
WTR YR 1983	TOTAL	164744	MEAN	451	MAX	757	MIN	338	AC-FT	326800		

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 Mar. 31, 1952; minimum daily, 21 tons Jan. 23, 1952.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 30.5°C July 21, 22; minimum, 0.5°C on many days during winter period.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.5	9.5	13.0	9.5	8.0	4.5	.5	.5	3.0	1.5	10.5	5.5
2	14.5	10.0	10.5	4.5	5.5	3.5	.5	.5	1.5	.5	11.5	6.5
3	16.0	10.0	5.5	3.5	5.5	2.0	.5	.5	.5	.5	13.0	8.0
4	16.5	11.5	4.5	1.5	6.0	3.0	.5	.5	.5	.5	12.0	10.5
5	17.0	12.0	5.0	1.5	5.5	3.5	.5	.5	.5	.5	10.5	8.0
6	14.0	9.5	8.0	3.5	4.5	3.0	.5	.5	.5	.5	8.0	4.5
7	15.0	9.0	9.0	5.5	3.5	1.0	.5	.5	2.0	.5	4.5	1.5
8	13.5	9.0	7.0	5.0	1.5	.5	.5	.5	5.0	1.0	4.5	.5
9	9.0	6.0	4.5	4.0	.5	.5	.5	.5	4.5	2.0	6.0	.5
10	8.5	7.0	7.0	4.0	1.0	.5	2.0	.5	4.0	2.0	8.5	1.0
11	12.0	7.0	6.5	2.0	.5	.5	2.0	1.0	7.0	2.0	10.0	3.0
12	13.5	9.5	3.0	.5	1.0	.5	4.5	.5	7.0	3.5	11.0	5.0
13	13.5	9.5	3.0	.5	3.5	1.0	5.0	2.0	8.5	4.0	12.0	5.5
14	15.5	9.0	1.5	.5	3.0	1.0	4.5	1.0	8.0	6.0	9.5	6.0
15	16.0	11.5	3.0	.5	3.5	1.0	1.0	.5	9.0	5.5	5.5	4.5
16	15.5	11.0	4.5	.5	3.0	.5	3.0	.5	8.0	4.0	4.5	1.0
17	17.0	11.5	5.5	1.5	4.5	1.5	2.0	.5	6.5	5.0	5.0	1.5
18	15.5	13.0	5.0	3.0	4.5	3.0	.5	.5	9.5	4.0	4.5	2.0
19	13.0	6.0	6.5	5.0	3.5	1.0	.5	.5	10.5	6.0	6.0	1.5
20	10.5	4.5	7.0	4.5	4.0	1.0	.5	.5	6.5	2.0	4.5	.5
21	11.5	6.0	6.0	4.5	4.5	1.5	2.0	.5	8.0	2.0	6.0	.5
22	13.0	8.0	5.0	.5	6.0	3.5	5.0	2.0	10.0	4.5	6.5	1.0
23	15.0	10.0	1.0	.0	5.5	3.5	5.0	2.0	9.5	5.0	5.5	3.0
24	14.5	10.5	1.5	1.0	5.0	.5	5.0	4.0	7.0	4.5	4.0	3.0
25	15.0	11.5	4.0	1.0	.5	.5	4.0	1.0	4.5	2.0	3.5	2.0
26	13.5	10.0	4.0	1.5	.5	.5	1.5	1.0	4.5	2.0	2.0	.0
27	14.0	10.0	3.5	1.0	.5	.5	2.0	.5	8.5	4.5	4.5	.5
28	11.0	8.0	5.0	3.5	.5	.5	4.0	2.0	9.0	5.0	4.5	2.0
29	8.5	5.5	6.0	3.0	.5	.5	4.5	3.5	---	---	11.0	3.0
30	10.5	6.0	8.0	4.5	.5	.5	3.5	1.5	---	---	11.5	5.5
31	10.5	9.0	---	---	.5	.5	3.5	1.5	---	---	11.5	8.5
MONTH	17.0	4.5	13.0	.0	8.0	.5	5.0	.5	10.5	.5	13.0	.0

06775500 MIDDLE LOUP RIVER AT DUNNING, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

DRAINAGE AREA.--960 mi², approximately, of which about 30 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,800.13 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--17 years, 193 ft³/s, 139,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s Aug. 23, 1983, gage height, 3.83 ft; minimum daily discharge, 146 ft³/s Dec. 26, 30, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft³/s Aug. 23, gage height, 3.83 ft; minimum daily, 146 ft³/s Dec. 26, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	205	215	154	191	205	224	248	193	228	209	182
2	205	205	218	156	184	202	196	241	193	224	204	181
3	193	190	208	156	170	208	196	234	198	215	204	182
4	187	184	215	156	169	212	193	235	202	196	195	190
5	187	193	224	169	164	255	196	216	205	196	195	188
6	190	196	205	182	157	234	202	220	199	196	200	182
7	184	199	215	191	154	212	199	206	187	189	203	186
8	202	205	190	189	178	215	202	201	184	187	197	185
9	202	196	190	192	188	184	205	202	184	192	190	188
10	193	208	199	181	192	199	208	202	184	192	190	187
11	181	231	193	190	193	202	208	251	184	190	187	187
12	178	212	190	178	191	202	218	265	215	193	185	184
13	178	184	199	185	197	205	199	230	270	188	188	180
14	172	190	203	181	201	208	178	213	215	192	188	184
15	181	193	202	180	202	205	193	210	196	189	195	192
16	184	196	199	167	202	199	197	212	193	251	192	191
17	184	205	190	172	202	205	202	240	221	222	189	190
18	187	215	205	184	199	196	199	248	193	212	187	193
19	190	224	193	180	202	199	205	224	196	212	184	191
20	175	221	181	180	196	193	205	237	199	196	183	176
21	181	218	193	187	196	190	202	225	199	188	179	174
22	184	218	215	183	205	196	197	215	199	194	184	182
23	184	205	201	193	205	196	196	205	199	254	463	183
24	187	205	217	197	199	193	202	208	190	219	208	184
25	184	196	169	186	196	205	202	205	193	197	200	192
26	189	205	146	179	190	212	202	199	202	199	193	201
27	202	199	170	183	196	202	196	202	323	253	190	194
28	193	215	168	191	199	202	195	205	277	266	180	195
29	190	212	148	192	---	202	195	202	234	213	179	187
30	196	221	146	200	---	208	195	196	228	219	185	192
31	196	---	152	189	---	205	---	193	---	215	181	---
TOTAL	5854	6146	5959	5603	5318	6351	6007	6790	6255	6477	6207	5603
MEAN	189	205	192	181	190	205	200	219	209	209	200	187
MAX	215	231	224	200	205	255	224	265	323	266	463	201
MIN	172	184	146	154	154	184	178	193	184	187	179	174
AC-FT	11610	12190	11820	11110	10550	12600	11910	13470	12410	12850	12310	11110
CAL YR 1982	TOTAL	72558	MEAN 199	MAX 244	MIN 146	AC-FT	143900					
WTR YR 1983	TOTAL	72570	MEAN 199	MAX 463	MIN 146	AC-FT	143900					

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMH/IS) (000095)	PH (STAND- ARD UNITS) (000400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (000025)	TUR- BID- ITY (NTU) (000076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCT FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)
NOV 24...	1000	206	169	7.5	3.0	690	11	11.3	K19	74	72
FEB 16...	1030	197	170	7.6	7.5	684	17	10.7	K18	150	69
MAY 12...	1020	313	169	7.5	11.0	683	140	9.2	820	2800	70
AUG 09...	1445	192	180	7.9	24.5	686	15	7.3	140	280	71

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- LITY 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)
NOV 24...	0	23	3.4	6.5	.3	5.1	85	8.0	.9	.30	55
FEB 16...	0	22	3.3	6.6	.4	4.8	84	7.3	1.3	.30	54
MAY 12...	0	22	3.5	6.6	.4	4.9	80	8.4	1.1	.30	52
AUG 09...	0	23	3.4	6.9	.4	5.1	86	7.4	.9	.30	56

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 24...	150	154	.20	83.4	.50	.100	.70	.180	.150	.110
FEB 16...	149	150	.20	79.3	.51	<.060	.70	.220	.150	.130
MAY 12...	148	148	.20	125	.43	.070	1.70	.410	.160	.140
AUG 09...	152	155	.21	78.8	.36	.070	.90	.230	.160	.150

PLATTE RIVER BASIN

06775900 DISMAL RIVER NEAR THEDFORD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	CORAL, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 24...	1000	30	6	0	<0	<1	<1	<0	1	20	10
MAY 12...	1020	200	5	0	<0	<1	<1	<0	2	80	2

DATE	TIME	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SF) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 24...	20	20	4	<.0	<10	<1	1	<1	110	8.0	10
MAY 12...	20	20	8	<.0	<10	<1	1	<1	110	9.0	10

DATE	TIME	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 NATURAL DIS- SOLVED (UG/L AS U) (22703)
NOV 24...	1000	1.2	<3.9	1.8	4.3	2.1	4.1	2.0	.05	1.7

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LOCATION.--Lat 41°49'23", long 100°06'05", in sec.4, T.21 N., R.24 W., Blaine County, Hydrologic Unit 10210002, on right bank 100 ft downstream from bridge on State Highway 2 at southeast corner of Dunning and 1 mi upstream from mouth.

PERIOD OF RECORD.--March to June 1932, September 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,606.3 ft National Geodetic Vertical Datum of 1929. Mar. 1 to June 30, 1932, nonrecording gage at site 0.2 mi upstream at datum 0.5 ft lower. Sept. 13, 1945, to Apr. 19, 1956, nonrecording gage on bridge 100 ft upstream at present datum.

AVERAGE DISCHARGE.--38 years (1945-83), 323 ft³/s, 234,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,290 ft³/s June 13, 1983, gage height, 2.40 ft; maximum gage height observed, 5.21 ft Jan. 19, 1947, backwater from ice; minimum daily discharge, 100 ft³/s Jan. 25, 1950, Jan. 9, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,290 ft³/s June 13, gage height, 2.40 ft; maximum gage height, about 2.75 ft Dec. 26, from partially estimated gage-height graph, backwater from ice; minimum daily discharge, 260 ft³/s Dec. 30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	355	305	325	290	338	331	382	390	351	413	351	330
2	323	296	337	280	319	330	357	405	355	393	333	329
3	317	276	318	290	306	338	359	394	360	368	330	324
4	320	284	320	280	315	354	343	389	368	355	330	338
5	326	276	323	290	305	446	346	374	369	355	326	340
6	333	294	312	310	296	409	356	380	356	340	323	323
7	323	293	297	330	302	374	355	393	355	320	326	312
8	363	299	293	350	314	344	366	343	357	314	320	314
9	370	302	292	370	320	333	364	336	361	323	317	314
10	317	297	278	350	329	333	352	335	353	320	314	315
11	302	372	284	330	323	333	370	474	355	323	311	304
12	314	319	304	310	332	340	385	584	495	317	311	299
13	314	305	310	310	333	355	377	490	672	323	317	299
14	314	299	322	320	335	353	352	417	459	317	317	298
15	317	297	312	310	346	348	338	389	427	317	326	314
16	320	303	314	310	338	337	372	366	381	389	320	301
17	330	311	316	320	338	335	405	429	518	378	317	303
18	326	313	315	331	333	336	383	597	459	370	320	298
19	326	335	317	349	346	343	372	558	512	351	308	297
20	292	330	319	355	337	324	372	485	444	337	308	287
21	311	322	333	327	318	315	368	437	405	333	311	280
22	317	312	337	331	335	321	368	409	379	370	314	289
23	323	300	351	355	351	332	348	378	364	470	385	292
24	330	298	326	365	335	335	346	371	357	401	575	295
25	338	302	300	356	315	351	347	373	351	351	359	302
26	297	301	270	333	316	359	361	368	360	351	348	308
27	301	309	280	328	322	348	341	371	529	433	344	296
28	292	321	280	332	331	342	332	364	581	417	333	272
29	279	321	270	337	---	360	332	354	499	374	333	276
30	291	327	260	341	---	394	340	347	444	348	330	283
31	301	---	280	336	---	425	---	344	---	348	330	---
TOTAL	9882	9219	9495	10126	9128	10878	10789	12644	12576	11119	10387	9132
MEAN	319	307	306	327	326	351	360	408	419	359	335	304
MAX	370	372	351	370	351	446	405	597	672	470	575	340
MIN	279	276	260	280	296	315	332	335	351	314	308	272
AC-FT	19600	18290	18830	20080	18110	21580	21400	25080	24940	22050	20600	18110
CAL YR 1982	TOTAL	118664	MEAN	325	MAX	511	MIN	260	AC-FT	235400		

PLATTE RIVER BASIN

06779000 MIDDLE LOUP RIVER AT ARCADIA, NE

LOCATION.--Lat 41°25'20", long 99°08'10", in sec.26, T.17 N., R.16 W., Valley County, Hydrologic Unit 10210003, on left bank 80 ft downstream from bridge on State Highway 70 at southwest edge of Arcadia.

DRAINAGE AREA.--5,040 mi², approximately, of which about 820 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR NE-72: Drainage area. WDR NE-82-1: 1981(M).

GAGE.--Water-stage recorder. Datum of gage is 2,146.30 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 23, 1938, nonrecording gage at bridge just upstream at datum 1.23 ft lower.

REMARKS.--Records poor. Middle Loup Public Power and Irrigation District began diversion above station Mar. 30, 1938. Farwell Irrigation District canal began diversion from river in November 1962 at point 8 mi above station.

AVERAGE DISCHARGE.--21 years (1962-83), 667 ft³/s, 483,200 acre-ft/yr since diversion to Farwell Irrigation District canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 18,500 ft³/s June 22, 1947, gage height, 6.24 ft; maximum discharge computed, 9,700 ft³/s May 27, 1945, gage height, 5.12 ft; maximum gage height, 6.41 ft Mar. 27, 1960, backwater from ice; minimum daily discharge, 6.0 ft³/s July 23, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,700 ft³/s June 27, gage height, 4.67 ft; minimum daily discharge, 95 ft³/s July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	1060	1080	900	1050	1050	1890	1240	684	478	341	239
2	1100	1040	1100	800	980	1280	1860	1660	850	471	318	204
3	1080	1200	1140	1050	950	1110	1500	832	880	512	292	201
4	1150	1200	977	1200	1000	1070	1550	642	760	515	248	218
5	1330	1080	1080	1300	740	1710	1630	692	910	450	190	177
6	1410	1060	1140	1500	600	2340	1630	817	1550	428	197	224
7	1020	1030	1030	1400	640	1850	1400	1200	1620	311	190	211
8	1030	1030	950	1350	740	1690	1400	656	760	319	178	217
9	1830	1100	900	1300	800	1460	1630	552	1310	299	144	290
10	1670	1260	850	1200	850	1390	1550	552	1630	202	128	209
11	1180	1760	750	1150	950	1340	1360	619	440	260	124	256
12	1160	1840	700	1110	1100	1290	1600	1590	670	221	119	262
13	1270	1330	800	1300	1200	1260	1990	1110	1740	146	127	294
14	1410	1180	900	1150	1300	1160	1450	736	1960	135	148	297
15	1450	1080	1100	1000	1400	1290	1260	539	1640	95	183	342
16	1370	1200	1200	1100	1500	1240	1260	655	1070	116	166	348
17	1480	1140	1300	950	2000	1220	1380	909	1010	252	137	384
18	1420	1080	1500	1000	2500	1220	1470	1790	2020	317	115	367
19	1690	1060	1800	1000	1800	1240	1290	1630	1800	238	187	376
20	1760	994	1700	950	1700	1400	1310	960	1980	174	170	399
21	1200	875	1600	900	1600	1600	1100	892	1700	153	182	454
22	1180	909	1400	850	1560	1330	1140	817	975	136	190	445
23	1080	909	1200	900	1360	1220	960	774	580	138	518	366
24	994	802	800	1000	1730	1180	718	802	488	542	453	383
25	1010	926	440	950	1500	1240	680	943	476	305	732	421
26	1220	1140	340	850	1440	1840	506	1080	472	192	467	431
27	1240	1260	240	800	1320	1760	550	1160	4140	368	336	413
28	1500	1360	350	900	1100	1710	630	1220	2340	418	351	416
29	1400	1330	450	1100	---	1790	618	1140	1780	432	312	429
30	1360	1260	600	1200	---	1790	655	960	551	395	278	442
31	1080	---	800	1100	---	1760	---	753	---	363	267	---
TOTAL	40294	34495	30217	33260	35410	44830	37967	29922	38786	9381	7788	9715
MEAN	1300	1150	975	1073	1265	1446	1266	965	1293	303	251	324
MAX	1830	1840	1800	1500	2500	2340	1990	1790	4140	542	732	454
MIN	994	802	240	800	600	1050	506	539	440	95	115	177
AC-FT	79920	68420	59940	65970	70240	88920	75310	59350	76930	18610	15450	19270
CAL YR 1982	TOTAL	300152	MEAN 822	MAX 2550	MIN 49	AC-FT 595400						
WTR YR 1983	TOTAL	352065	MEAN 965	MAX 4140	MIN 95	AC-FT 698300						

PLATTE RIVER BASIN

06779000 MIDDLE LOUP RIVER AT ARCADIA, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD---Water years 1977-83.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
OCT 27...	1425	1030	228	8.0	12.0	83	0	27	3.9	7.4	.4
MAY 31...	1440	832	238	7.9	18.0	88	0	28	4.5	8.5	.4
AUG 02...	1335	300	--	8.4	28.5	87	0	28	4.1	7.6	.4
SEP 27...	1345	410	202	7.6	21.0	81	0	26	3.9	7.4	.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) (70301)	SOLIDS, DIS- SOLVED PER AC-FT) (70303)	SOLIDS, DIS- SOLVED PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT 27...	6.2	98	8.0	1.5	.30	56	169	.23	470	.62
MAY 31...	6.1	107	9.0	1.5	.30	55	177	.24	398	.40
AUG 02...	6.4	103	8.4	1.7	.30	57	175	.24	142	.30
SEP 27...	5.6	95	7.9	1.3	.30	57	166	.23	184	.49

PLATTE RIVER BASIN

06783500 MUD CREEK NEAR SWEETWATER, NE

LOCATION.--Lat 41°02'15", long 98°59'35", in NE1/4SE1/4 sec.3, T.12 N., R.15 W., Buffalo County, Hydrologic Unit 10210005, on right bank 12 ft downstream from bridge on State Highway 2, 0.9 mi southeast of Sweetwater, and 11.6 miles upstream from mouth.

DRAINAGE AREA.--707 mi², of which 655 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 2,013.69 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--37 years, 38.8 ft³/s, 28,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 27,000 ft³/s June 22, 1947, gage height, 23.20 ft; maximum discharge computed, 5,600 ft³/s June 24, 1968, gage height, 20.07 ft; no flow at times in 1955-56.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1929, that of June 22, 1947, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 831 ft³/s July 1 at 1330, gage height, 13.09 ft, no other peak above base of 550 ft³/s; minimum daily, 7.8 ft³/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	16	26	18	20	29	36	32	29	793	29	14
2	16	17	23	17	21	29	40	39	30	378	24	14
3	15	17	22	18	20	28	38	72	30	141	17	16
4	16	16	21	20	19	28	35	82	30	89	15	14
5	19	16	21	22	20	31	34	50	31	63	17	13
6	17	16	20	23	18	34	31	47	33	53	16	13
7	13	17	21	21	21	34	31	47	39	45	17	13
8	16	17	24	20	20	36	31	48	36	40	18	10
9	29	18	25	21	19	32	31	44	30	35	20	7.8
10	74	19	20	21	20	29	30	55	28	33	18	9.8
11	59	21	20	22	21	27	30	48	27	30	14	10
12	30	30	25	23	23	27	30	40	27	29	13	11
13	19	40	27	22	27	26	32	37	30	27	18	11
14	15	32	27	19	35	26	33	37	30	26	18	11
15	13	27	27	18	45	27	40	38	30	26	16	12
16	13	25	24	19	60	27	37	35	33	24	20	11
17	14	27	24	18	74	26	36	38	34	25	17	12
18	14	23	24	19	70	26	40	59	33	25	14	12
19	14	22	24	20	69	26	39	67	31	26	11	13
20	14	21	21	20	67	26	36	65	52	23	16	13
21	15	21	23	19	60	28	34	59	37	19	15	12
22	16	21	24	18	54	25	32	48	30	18	17	11
23	18	19	24	19	37	25	31	43	28	16	56	11
24	17	18	24	20	33	25	31	40	27	14	26	12
25	16	20	21	19	31	26	32	37	26	19	32	12
26	16	20	18	18	31	28	31	35	25	20	17	13
27	16	19	15	19	30	34	29	35	33	21	15	12
28	16	20	13	21	30	32	28	33	206	91	13	12
29	16	23	14	22	---	32	28	32	266	75	13	15
30	16	27	15	21	---	31	28	31	570	58	16	15
31	17	---	16	19	---	34	---	30	---	34	16	---
TOTAL	613	645	673	616	995	894	994	1403	1891	2316	584	365.6
MEAN	19.8	21.5	21.7	19.9	35.5	28.8	33.1	45.3	63.0	74.7	18.8	12.2
MAX	74	40	27	23	74	36	40	82	570	793	56	16
MIN	3	16	13	17	18	25	28	30	25	14	11	7.8
AC-FT	1220	1280	1330	1220	1970	1770	1970	2780	3750	4590	1160	725
CAL YR 1982	TOTAL	11003.69	MEAN	30.1	MAX	867	MIN	.49	AC-FT	21830		
WTR YR 1983	TOTAL	11989.60	MEAN	32.8	MAX	793	MIN	7.8	AC-FT	23780		

PLATTE RIVER BASIN

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06783500 MUD CREEK NEAR SWEETWATER, NE--Continued

WATER QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- ANCE (UMHUS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PFR 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
28...	1420	16	645	8.1	10.5	8.4	25	310	2600	300	95
NOV											
22...	1050	21	638	8.2	3.0	9.7	20	72	4300	290	90
DEC											
22...	1440	24	635	8.0	.5	12.7	<10	94	520	290	91
JAN											
20...	1320	20	707	7.3	.5	8.8	33	420	980	320	100
FEB											
24...	1020	33	569	8.2	4.0	10.3	23	K100	1000	290	91
MAR											
18...	1310	26	663	8.2	2.5	12.1	21	69	120	310	99
APR											
20...	1300	36	695	8.4	11.0	11.6	47	K17	400	310	95
MAY											
12...	1335	40	701	8.1	17.5	7.5	53	K620	2500	320	97
JUN											
09...	1320	30	697	7.3	20.0	6.6	49	1700	760	300	93
JUL											
07...	1320	44	707	8.2	22.5	6.3	58	4600	4400	310	96
AUG											
03...	1140	17	557	8.3	24.0	6.2	47	3700	12000	250	79
SEP											
01...	1130	14	636	7.8	23.0	6.7	39	2100	6200	290	92

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, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
28...	16	24	13	77	.60	.190	1.5	1.70	2.3	.740	6.4
NOV											
22...	15	25	9.9	24	1.3	.240	1.3	1.50	2.8	.550	5.0
DEC											
22...	15	21	12	33	1.1	.180	.72	.90	2.0	.460	3.9
JAN											
20...	16	24	12	24	1.4	.540	.76	1.30	2.7	.590	3.8
FEB											
24...	16	25	21	102	1.4	.380	1.3	1.70	3.1	.810	7.3
MAR											
18...	16	25	10	38	1.0	.180	1.0	1.20	2.2	.620	6.6
APR											
20...	18	33	17	73	1.0	.090	3.3	3.40	4.4	.890	9.1
MAY											
12...	18	33	14	281	1.7	--	--	--	--	1.40	11
JUN											
09...	16	47	15	243	1.6	.120	2.7	2.80	4.4	1.20	14
JUL											
07...	17	39	13	308	2.4	.130	2.7	2.80	5.2	1.50	17
AUG											
03...	13	24	8.4	264	2.2	.080	2.6	2.70	4.9	1.20	16
SEP											
01...	15	27	13	202	1.2	.100	1.7	1.80	3.0	.950	9.0

PLATTE RIVER BASIN

06783500 MUD CREEK NEAR SWEETWATER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LINTY 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)
NOV 22...	1050	0	15	.4	12	303	.20	46	395	.54
FEB 24...	1020	0	17	.5	14	297	.20	43	405	.55
MAY 12...	1335	0	19	.5	21	318	.30	42	435	.59
AUG 03...	1140	0	13	.4	19	253	.30	43	351	.48

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 22...	22.4	1.3	.480	7	100	0	<1	<10	0	1000
FEB 24...	36.1	1.5	.680	--	--	0	--	--	--	--
MAY 12...	47.0	1.4	.910	11	300	0	1	10	10	6500
AUG 03...	16.1	2.2	.860	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 22...	980	20	0	110	44	66	.0	2	<0	20
FEB 24...	--	20	--	--	--	110	--	--	--	--
MAY 12...	6500	10	0	450	410	39	40	2	<0	40
AUG 03...	--	20	--	--	--	9	--	--	--	--

PLATTE RIVER BASIN

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06784000 SOUTH LOUP RIVER AT ST. MICHAEL, NE

LOCATION.--Lat 41°01'53", long 98°44'25", in NW1/4NW1/4 sec.12, T.12 N., R.13 W., Buffalo County, Hydrologic Unit 10210004, 5 ft downstream and 30 ft shoreward from right downstream corner of county highway bridge, 0.6 mi northeast of St. Michael, and 3.4 mi upstream from Sweet Creek.

DRAINAGE AREA.--2,350 mi², approximately, of which about 1,610 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,921.26 ft National Geodetic Vertical Datum of 1929. Prior to June 22, 1947, water-stage recorder, and June 25 to Sept. 30, 1947, nonrecording gage, at present site at datum 2.00 ft higher. Oct. 1, 1947, to July 3, 1958, nonrecording gage at present site and datum. July 4, 1958, to Sept. 7, 1960, water-stage recorder at site 600 ft upstream at present datum. Sept. 8, 1960, to June 24, 1968, water-stage recorder at site 100 ft upstream at present datum. June 25 to Nov. 21, 1968, nonrecording gage at present site and datum. Nov. 22, 1968, to May 19, 1981, water-stage recorder at site 40 ft upstream at present datum. May 20 to July 16, 1981, water-stage recorder at site 70 ft upstream at present datum.

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

AVERAGE DISCHARGE.--40 years, 237 ft³/s, 171,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, about 50,000 ft³/s June 22, 1947, gage height, 12.0 ft, present datum, from graph based on gage readings; maximum discharge computed, 27,500 ft³/s June 24, 1968, gage height, 11.00 ft; no flow Aug. 5-8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,600 ft³/s June 27, gage height, 5.63 ft; minimum daily discharge, 50 ft³/s Dec. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	177	180	200	180	253	329	261	201	993	159	123
2	171	173	187	190	190	248	326	465	206	712	135	115
3	174	173	182	220	180	246	305	338	211	455	115	109
4	173	166	181	240	190	252	293	374	205	348	99	109
5	163	166	181	260	170	296	306	338	215	279	96	99
6	157	162	181	290	160	324	315	301	209	240	105	95
7	155	166	190	270	170	335	305	327	220	214	108	91
8	180	162	198	260	180	310	278	338	238	204	108	91
9	216	166	212	240	170	302	255	338	246	190	104	84
10	350	173	221	230	180	270	255	318	198	178	100	80
11	250	203	160	240	200	272	227	291	198	164	94	79
12	190	235	135	250	240	262	269	268	190	152	87	79
13	180	281	180	260	280	254	292	232	306	150	84	86
14	200	276	200	230	330	250	354	250	306	142	93	91
15	220	266	240	200	380	292	349	221	226	135	97	98
16	208	250	265	210	420	272	336	212	276	130	91	101
17	190	245	260	190	470	262	307	303	367	132	87	106
18	190	240	260	200	435	255	299	655	528	136	75	103
19	220	226	275	200	420	249	298	452	367	138	66	101
20	240	221	255	185	307	248	289	420	390	132	64	94
21	240	216	225	180	284	237	283	463	390	115	72	94
22	220	212	210	170	265	240	285	359	296	107	71	96
23	194	208	195	180	284	232	276	326	235	103	528	100
24	170	185	195	190	294	222	261	319	212	105	501	102
25	150	177	95	180	293	231	240	310	194	104	268	103
26	155	177	60	170	282	292	216	321	198	105	196	106
27	160	173	50	160	275	350	212	311	746	126	158	106
28	162	181	80	170	260	337	216	273	513	128	158	104
29	159	212	100	190	---	351	203	244	745	257	141	110
30	166	190	140	200	---	355	208	225	900	253	131	116
31	169	---	170	190	---	341	---	208	---	228	126	---
TOTAL	5921	6058	5663	6545	7489	8640	8387	10061	9732	6855	4317	2971
MEAN	191	202	183	211	267	279	280	325	324	221	139	99.0
MAX	350	281	275	290	470	355	354	655	900	993	528	123
MIN	149	162	50	160	160	222	203	208	190	103	64	79
AC-FT	11740	12020	11230	12980	14850	17140	16640	19960	19300	13600	8560	5890
CAL YR 1982	TOTAL	75086	MEAN 206	MAX 1830	MIN 50	AC-FT 148900						
WTR YR 1983	TOTAL	82639	MEAN 226	MAX 993	MIN 50	AC-FT 163900						

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 June 22, 1947; minimum daily, 6.1 tons Dec. 30, 31, 1951.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)						
DATE	TIME											
OCT												
28...	1120	166	427	8.2	11.0	10.0						
NOV												
30...	1110	199	421	8.0	1.0	13.6						
DEC												
22...	1100	219	421	8.1	.5	13.0						
JAN												
20...	1010	182	484	7.4	.5	10.2						
FEB												
16...	1520	415	385	7.8	.5	12.0						
MAR												
18...	1000	251	460	8.0	2.0	12.2						
APR												
20...	0940	274	447	8.3	9.0	10.2						
MAY												
12...	1020	277	458	8.2	16.0	8.7						
JUN												
09...	1005	256	434	8.2	21.0	8.4						
JUL												
07...	0855	217	467	8.7	21.5	8.8						
AUG												
03...	0900	118	387	8.7	25.0	8.0						
SEP												
01...	0925	123	381	7.8	23.5	8.2						
DATE	TIME	COLOR (PLAT- INUM- COBALT UNITS) (00080)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE AS (MG/L CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINEITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	
FEB												
16...	1520	15	170	0	54	8.4	9.9	.3	7.7	178	18	
JUL												
07...	0855	30	210	0	64	11	14	.4	13	223	26	
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												
16...	4.5	.20	40	250	.34	280	.90	.200	30	39	40	
JUL												
07...	6.9	.30	46	315	.43	185	.26	.380	50	10	3	

06784200 SHERMAN RESERVOIR NEAR LOUP CITY, NE

LOCATION.--Lat 41°18'10", long 98°52'45", in SW1/4NW1/4 sec.1, T.15 N., R.14 W., Sherman County, Hydrologic Unit 10210003, in control house of outlet works of Sherman Dam, 5 mi northeast of Loup City.

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 between elevations 2,118.5 ft, sill of canal outlet works, and 2,162.3 ft, crest of spillway. Dead and inactive storage, 3,839 acre-ft below elevation 2,118.5 ft. Figures given herein represent total contents. Water used for irrigation of Parwell Unit of Bureau of Reclamation.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 70,230 acre-ft June 22, 1975, elevation, 2,162.7 ft; minimum observed since appreciable storage was attained, 9,450 acre-ft Aug. 2, 1980, elevation, 2,127.7 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 69,650 acre-ft June 29 to July 2, elevation, 2,162.5 ft; minimum observed, 42,590 acre-ft Sept. 9-13, elevation, 2,151.6 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept.	30	2,157.6	56,420	-
Oct.	31	2,157.3	55,670	-750
Nov.	30	2,156.7	54,180	-1,490
Dec.	31	2,156.4	53,450	-730
CAL YR 1982		-	-	+2,630
Jan.	31	2,156.0	52,480	-970
Feb.	28	2,155.7	51,770	-710
Mar.	31	2,155.6	51,530	-240
Apr.	30	2,156.5	53,700	+2,170
May	31	2,161.7	67,370	+13,670
June	30	2,162.5	69,650	+2,280
July	31	2,158.0	57,430	-12,220
Aug.	31	2,153.2	46,030	-11,400
Sept.	30	2,156.2	52,970	+6,940
WTR YR 1983		-	-	-3,450

PLATTE RIVER BASIN

06784200 SHERMAN RESERVOIR NEAR LOUP CITY, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977-83.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPF- CIFIC CON- DUCT- ANCE (UMHDS) (00095)	PH (STAND- ARD 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)
OCT 27...	1515	220	8.4	12.0	84	0	27	4.1	7.6	.4
MAY 31...	1535	234	8.3	17.0	88	0	28	4.4	7.7	.4
AUG 02...	1440	243	8.8	28.0	90	0	29	4.3	7.9	.4
SEP 27...	1505	225	8.3	18.5	87	0	28	4.2	8.0	.4

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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, 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)
OCT 27...	6.5	105	8.0	1.5	.40	43	161	.22	<.10
MAY 31...	6.2	107	7.7	1.4	.30	37	157	.21	<.10
AUG 02...	6.6	110	8.2	2.1	.30	38	162	.22	<.10
SEP 27...	6.2	105	8.3	1.5	.30	47	166	.23	.18

06784800 TURKEY CREEK NEAR DANNEBROG, NE

LOCATION.--Lat 41°09'24", long 98°33'22", in SW1/4NW1/4 sec.26, T.14 N., R.11 W., Howard County, Hydrologic Unit 10210003, on left bank 25 ft downstream from bridge on State Highway 11, 2.8 mi north of Dannebrog, and 10 mi upstream from mouth.

DRAINAGE AREA.--66.2 mi².

PERIOD OF RECORD.--May 1966 to September 1970, October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,870.35 ft 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.

AVERAGE DISCHARGE.--5 years (1979-83), 17.1 ft³/s, 12,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft³/s June 14, 1967, gage height, 19.21 ft; no flow May 17-20, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,180 ft³/s June 29, gage height, 16.41 ft; minimum daily, 7.0 ft³/s Dec. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	9.5	10	8.6	9.4	17	34	40	14	35	24	21
2	25	9.4	13	10	10	16	26	47	15	29	24	24
3	12	9.4	9.5	9.3	10	16	20	25	15	26	25	27
4	9.2	9.2	8.8	9.2	9.6	20	19	18	13	23	27	34
5	9.1	9.4	9.0	9.3	10	47	19	17	48	22	30	35
6	9.0	9.6	8.8	9.5	9.6	42	24	19	24	21	35	28
7	9.2	9.8	8.5	9.9	9.8	25	18	19	17	20	36	27
8	10	9.5	8.1	10	10	19	17	16	16	20	34	27
9	64	9.9	7.9	12	9.9	16	17	14	15	18	33	22
10	55	10	8.8	14	9.8	16	16	14	14	18	30	23
11	12	16	8.6	13	9.9	15	16	14	15	18	27	21
12	9.2	17	8.4	12	11	16	20	17	16	19	28	23
13	9.0	9.5	8.7	13	12	15	33	17	183	21	28	19
14	8.8	9.5	8.9	13	21	15	42	17	103	22	29	20
15	8.8	9.2	8.3	12	43	33	35	15	26	24	30	23
16	8.8	9.4	8.0	12	71	26	30	14	88	27	28	19
17	9.0	9.5	8.4	11	57	19	32	38	88	29	28	15
18	9.1	9.5	9.6	10	34	19	29	71	76	33	28	13
19	9.1	10	9.1	10	41	18	23	35	57	29	26	11
20	9.6	10	8.8	10	34	16	20	23	27	25	28	9.3
21	9.2	9.2	9.1	10	21	15	15	20	24	27	28	8.6
22	9.2	9.0	9.5	10	20	14	15	19	21	29	27	7.5
23	9.2	8.7	9.7	10	22	15	14	17	20	30	87	7.6
24	9.2	8.2	9.4	10	21	15	13	17	19	29	64	7.8
25	9.2	8.7	8.4	10	17	15	13	16	19	32	30	7.8
26	9.2	8.8	7.8	9.6	16	20	12	15	19	31	21	7.6
27	9.4	8.4	7.6	9.5	18	16	12	15	155	52	18	7.6
28	9.4	9.1	7.0	10	18	22	14	15	470	54	18	7.6
29	9.4	9.4	7.2	10	---	32	14	14	960	35	18	8.1
30	9.4	9.4	7.4	10	---	45	15	14	92	27	17	8.0
31	9.4	---	8.0	9.8	---	52	---	13	---	25	18	---
TOTAL	412.1	294.2	270.3	326.7	585.0	687	627	665	2669	850	924	519.5
MEAN	13.3	9.81	8.72	10.5	20.9	22.2	20.9	21.5	89.0	27.4	29.8	17.3
MAX	64	17	13	14	71	52	42	71	960	54	87	35
MIN	8.8	8.2	7.0	8.6	9.4	14	12	13	13	18	17	7.5
AC-FT	817	584	536	648	1160	1360	1240	1320	5290	1690	1830	1030

CAL YR 1982 TOTAL 8333.1 MEAN 22.8 MAX 706 MIN 5.0 AC-FT 16530
WTR YR 1983 TOTAL 8829.8 MEAN 24.2 MAX 960 MIN 7.0 AC-FT 17510

PLATTE RIVER BASIN

06785000 MIDDLE LOUP RIVER AT ST. PAUL, NE

LOCATION.--Lat 41°12'13", long 98°26'46", in SE1/4NW1/4NE1/4 sec.10, T.14 N., R.10 W., Howard County, Hydrologic Unit 10210003, on left bank at St. Paul, 20 ft upstream from bridge on U.S. Highway 281 and 6 mi upstream from confluence with North Loup River.

DRAINAGE AREA.--8,090 mi², approximately, of which about 3,130 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1036: 1943. WSP 1390: 1896, 1903, 1928(M), 1944. WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,776.61 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to June 5, 1957. June 5, 1957, to Mar. 16, 1978, water-stage recorder on left bank 430 ft upstream at same datum. Mar. 17 to May 31, 1978, nonrecording gage on railroad bridge 30 ft upstream at same datum.

REMARKS.--Records poor. Diversions above station for irrigation.

AVERAGE DISCHARGE.--76 years, 1,187 ft³/s, 860,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft³/s June 23, 1947, gage height, 12.69 ft, site then in use, present datum, from rating curve extended above 55,000 ft³/s; minimum daily since 1929, 23 ft³/s Aug. 9, 10, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,580 ft³/s June 28, gage height, 4.41 ft from floodmark; maximum gage height, 4.58 ft Jan. 4, backwater from ice; minimum daily discharge, 282 ft³/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1770	1250	1330	1200	1350	1310	1700	1500	787	1040	868	458
2	2480	1310	1290	1100	1400	1050	2550	1930	740	989	680	438
3	1990	1280	1260	1300	1320	1710	2250	1950	702	914	603	408
4	1570	1430	1380	1500	1450	2050	1900	1270	817	898	547	373
5	1380	1400	1310	1600	1250	2150	2200	1240	1460	833	493	364
6	1690	1340	1150	1800	1100	2950	2050	1430	974	714	474	391
7	2090	1400	1310	1750	1140	3000	2000	1430	974	722	438	364
8	1810	1280	1250	1600	1200	2350	1900	1340	1030	744	430	405
9	2780	1310	1080	1550	1160	2400	1700	1140	1400	608	418	368
10	2560	1440	1020	1500	1200	2200	1850	1080	1790	651	392	353
11	1600	1910	1020	1550	1300	1600	1350	1250	1490	540	346	395
12	1250	2150	937	1650	1400	1400	1750	1500	1310	478	322	357
13	1190	1940	1000	1700	1500	1350	2300	2320	2450	543	326	404
14	1290	1530	1120	1500	1600	1290	2400	1630	2950	475	339	426
15	1310	1440	1400	1300	1680	1650	1750	1520	1580	414	353	495
16	1280	1510	1490	1400	2000	1600	1650	1350	2140	414	352	538
17	1250	1500	1430	1250	2400	2250	1550	1890	1860	395	349	545
18	1370	1420	1200	1320	3000	2000	1600	2800	1580	457	332	501
19	1340	1400	1200	1300	2500	1650	1800	2500	1320	667	296	498
20	1520	1260	1560	1250	2100	1530	2550	2040	1190	630	282	450
21	1340	1340	1620	1200	1670	1500	2550	1680	1340	491	327	478
22	1180	1230	1690	1160	1650	1350	2050	1200	1250	439	327	477
23	1200	1380	1760	1200	1620	1350	2000	1010	1530	436	491	575
24	1200	1200	1760	1300	1940	1600	1300	1140	1880	447	1690	512
25	1100	1050	1300	1250	1850	1750	1120	1070	1600	494	1050	454
26	1250	1020	500	1160	1700	2300	1130	1010	1570	864	786	478
27	1250	1180	350	1100	1540	2150	1060	1160	3650	719	856	525
28	1250	1400	540	1200	1710	1750	1020	1010	5210	1010	650	508
29	1490	1370	700	1350	---	1850	1020	993	4910	995	575	576
30	1460	1250	900	1500	---	1950	951	956	2380	1100	543	573
31	1310	---	1100	1400	---	1550	---	841	---	1010	479	---
TOTAL	47550	41920	36957	42940	45730	56590	53001	45180	53864	21131	16414	13687
MEAN	1534	1397	1192	1385	1633	1825	1767	1457	1795	682	529	456
MAX	2780	2150	1760	1800	3000	3000	2550	2800	5210	1100	1690	576
MIN	1100	1020	350	1100	1100	1050	951	841	702	395	282	353
AC-FT	94320	83150	73300	85170	90710	112200	105100	89610	106800	41910	32560	27150
CAL YR 1982 TOTAL	436335			MEAN 1195	MAX 4890	MIN 190	AC-FT 865500					
WTR YR 1983 TOTAL	474964			MEAN 1301	MAX 5210	MIN 282	AC-FT 942100					

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DFG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT						
25...	1440	1240	295	8.0	--	9.2
29...	1220	1400	298	8.0	15.0	--
NOV						
24...	1350	1190	328	7.8	.5	13.0
DEC						
20...	1500	1350	285	7.6	1.0	13.2
JAN						
18...	1325	1380	333	7.7	.5	12.8
FEB						
15...	1130	1710	275	7.6	.5	12.4
MAR						
14...	1440	1290	320	8.0	10.0	10.2
APR						
11...	1410	1290	325	8.0	12.5	9.6
MAY						
10...	1310	1080	373	8.2	18.5	9.0
JUN						
02...	0820	1050	357	8.4	13.0	--
07...	1325	904	334	8.1	23.5	8.4
JUL						
08...	1335	718	363	8.9	28.5	8.9
AUG						
03...	1700	610	354	8.7	31.5	--
04...	1130	533	348	8.8	28.0	8.6
SEP						
02...	1140	456	365	7.8	26.5	8.0
29...	1225	520	325	8.3	19.5	--

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)
OCT											
29...	1220	--	120	0	39	6.5	9.9	.4	7.8	138	14
FEB											
15...	1130	10	120	0	37	5.8	8.4	.4	6.5	126	12
JUN											
02...	0820	--	140	0	44	7.6	12	.5	8.2	156	16
JUL											
08...	1335	15	160	0	50	8.3	13	.5	9.8	175	19
AUG											
03...	1700	--	140	0	45	7.5	11	.4	9.8	159	16
SEP											
29...	1225	--	140	0	43	7.7	12	.5	8.5	153	16

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)
OCT											
29...	2.8	.30	53	216	.29	817	1.2	--	--	--	--
FEB											
15...	2.8	.30	45	193	.26	893	.76	.180	20	23	12
JUN											
02...	3.5	.30	49	234	.32	664	1.1	--	--	--	--
JUL											
08...	4.4	.30	50	260	.35	504	.69	.190	40	22	4
AUG											
03...	3.9	.30	48	237	.32	390	.58	--	--	--	--
SEP											
29...	3.6	.30	50	233	.32	327	1.1	--	--	--	--

PLATTE RIVER BASIN

06786000 NORTH LOUP RIVER AT TAYLOR, NE

LOCATION.--Lat 41°46'37", long 99°22'45", in NE1/4SE1/4 sec.22, T.21 N., R.18 W., Loup County, Hydrologic Unit 10210006, on left bank 64 ft downstream from bridge on U.S. Highway 183 and 0.4 mi north of Taylor.

DRAINAGE AREA.--2,280 mi², approximately, of which about 180 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1936 to current year.

REVISED RECORDS.--WSP 856: 1937. WSP 1310: 1939(M). WSP 1730: 1956-57(M). WSP 1918: 1952. WDR NE-72: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 2,248.21 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 28, 1938, nonrecording gage at same site and datum. Sept. 28, 1938, to July 16, 1958, water-stage recorder at site 450 ft upstream at same datum.

REMARKS.--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 above station. Several smaller diversions above station for irrigation.

AVERAGE DISCHARGE.--46 years (1937-83), 462 ft³/s, 334,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,210 ft³/s June 27, 1983, gage height, 5.94 ft; maximum gage height, 9.5 ft Feb. 25, 1957, ice jam, from floodmarks; minimum daily discharge, 45 ft³/s July 26, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,210 ft³/s June 27, gage height, 5.94 ft; minimum daily, 145 ft³/s Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	530	654	649	450	500	718	910	839	562	1160	528	343
2	580	695	626	500	350	718	760	1140	589	1190	502	313
3	494	652	616	560	220	707	686	1020	618	1220	396	261
4	485	589	597	560	270	718	656	960	618	922	305	231
5	485	572	553	500	400	1050	656	960	618	738	324	257
6	528	596	538	560	480	1190	636	862	598	707	324	278
7	536	619	503	520	540	850	646	972	589	728	336	291
8	627	615	485	540	580	718	676	874	589	686	312	297
9	782	684	430	560	622	598	646	749	570	580	299	305
10	696	703	448	580	560	598	636	696	562	502	293	328
11	696	841	452	594	600	608	636	770	553	448	276	355
12	544	849	420	660	728	598	707	1220	562	390	276	366
13	536	716	476	700	729	676	770	1090	935	342	305	380
14	536	598	531	720	770	696	636	782	1020	281	330	404
15	570	611	556	640	885	636	553	782	618	232	376	481
16	589	664	557	660	935	636	760	816	608	376	390	478
17	618	690	533	720	874	636	760	850	850	570	356	498
18	627	696	451	740	850	618	760	1120	1010	618	318	466
19	646	695	404	700	839	627	760	1130	972	528	287	514
20	618	719	398	680	827	618	760	1010	1230	440	270	518
21	609	682	404	580	696	532	728	985	804	383	276	506
22	602	665	417	620	728	564	707	850	696	356	356	525
23	603	606	424	660	760	616	707	749	659	462	665	523
24	618	549	398	700	707	645	686	718	536	485	646	542
25	647	596	145	660	676	598	696	676	536	362	540	563
26	649	623	210	600	608	646	686	672	598	324	413	571
27	660	599	240	640	636	636	676	666	2030	518	367	589
28	648	610	290	680	718	676	686	632	2490	528	343	634
29	603	638	330	740	---	718	696	577	1710	470	332	635
30	617	642	370	700	---	782	686	555	1340	440	337	660
31	646	---	400	620	---	898	---	553	---	455	346	---
TOTAL	18625	19668	13851	19344	18088	21525	20964	26275	25670	17441	11424	13112
MEAN	601	656	447	624	646	694	699	848	856	563	369	437
MAX	782	849	649	740	935	1190	910	1220	2490	1220	665	660
MIN	485	549	145	450	220	532	553	553	536	232	270	231
AC-FT	36940	39010	27470	38370	35880	42690	41580	52120	50920	34590	22660	26010
CAL YR 1982	TOTAL	176680	MEAN 484	MAX 1140	MIN 117	AC-FT 350400						
WTR YR 1983	TOTAL	225987	MEAN 619	MAX 2490	MIN 145	AC-FT 448200						

PLATTE RIVER BASIN

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06787000 CALANUS RIVER NEAR HARROP, NE

LOCATION.--Lat 41°56'48", long 99°23'10" in NW1/4SE1/4 sec.22, T.23 N., R.18 W., Loup County, Hydrologic Unit 10210008, on right bank 44 ft upstream from bridge on U.S. Highway 183, 12.2 mi north of Taylor.

DRAINAGE AREA.--983 mi², most of which does not contribute directly to surface runoff.

PERIOD OF RECORD.--March to July 1932. August 1931 to February 1932, July 1932 to June 1939, 1955-64 and 1977, gage heights or discharge measurements only. June 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,260 ft from topographic map. Prior to June 5, 1978, staff gage or reference point at same site at datum 1.0 ft higher.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--5 years, 236 ft³/s, 171,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft³/s May 4, 1964, gage height, 4.80 ft, from floodmark; minimum daily discharge, 90 ft³/s Jan. 7, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 801 ft³/s June 30, gage height, 3.36 ft (observed, may have been higher during day); minimum daily, 130 ft³/s Dec. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	255	230	232	241	235	297	422	309	245	690	245	236
2	284	247	238	240	234	295	416	316	247	552	236	231
3	251	242	232	238	210	288	380	319	243	457	229	225
4	242	228	231	237	220	291	336	340	236	384	227	225
5	228	223	232	239	244	379	314	335	231	324	231	236
6	246	228	229	244	246	481	311	309	227	283	231	240
7	244	232	224	258	241	481	316	285	229	259	227	227
8	263	229	218	273	263	399	309	267	227	245	225	225
9	332	236	213	276	259	334	303	262	225	236	221	225
10	306	247	217	254	238	309	301	267	223	229	215	223
11	296	288	212	255	235	289	290	260	221	221	215	225
12	298	321	210	250	237	284	301	301	227	219	213	223
13	271	284	222	264	256	280	314	327	296	217	217	223
14	255	287	221	255	268	273	290	330	340	215	219	240
15	247	274	217	244	288	273	309	332	332	209	217	259
16	242	260	213	243	323	270	316	319	335	233	217	244
17	238	254	218	238	372	267	327	298	342	249	213	236
18	238	254	223	227	401	267	327	340	415	264	211	227
19	247	264	222	223	414	267	322	360	491	262	207	227
20	253	268	223	232	399	267	306	366	522	238	206	225
21	244	265	222	241	356	267	288	363	504	227	207	225
22	241	256	224	239	370	265	280	348	431	223	227	227
23	240	239	229	236	371	262	275	309	363	236	368	228
24	241	228	230	236	360	262	267	288	311	247	322	233
25	243	231	151	236	348	263	262	270	285	238	322	234
26	239	227	137	231	325	283	257	262	270	230	309	237
27	233	224	130	232	312	282	252	275	407	245	290	231
28	233	225	170	238	297	277	257	255	642	257	264	227
29	225	228	196	235	---	295	254	245	740	249	254	228
30	225	230	212	232	---	333	254	245	792	238	245	239
31	229	---	234	236	---	397	---	245	---	245	240	---
TOTAL	7829	7449	6582	7523	8322	9477	9156	9347	10599	8621	7470	6931
MEAN	253	248	212	243	297	306	305	302	353	278	241	231
MAX	332	321	238	276	414	481	422	366	792	690	368	259
MIN	225	223	130	223	210	262	252	245	221	209	206	223
AC-FT	15530	14780	13060	14920	16510	18800	18160	18540	21020	17100	14820	13750
CAL YR 1982	TOTAL	85577	MEAN 234	MAX 462	MIN 130	AC-FT 169700						
WTR YR 1983	TOTAL	99306	MEAN 272	MAX 792	MIN 130	AC-FT 197000						

PLATTE RIVER BASIN

06787500 CALAMUS RIVER NEAR BURWELL, NE

LOCATION.--Lat 41°48'35", long 99°10'56", in NW1/4NW1/4 sec.9, T.21 N., R.16 W., Garfield County, Hydrologic Unit 10210008, on left bank 210 ft downstream from highway bridge, 1.5 mi upstream from mouth, and 3 mi northwest of Burwell.

DRAINAGE AREA.--1,060 mi², approximately, of which about 110 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1918: 1958. WDR NE-72: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,156.48 ft National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Apr. 20, 1945, nonrecording gage at site 210 ft upstream at present datum. Apr. 21, 1945, to Jan. 28, 1964, water-stage recorder at site 210 ft downstream at present datum. Jan. 29, 1964, to Oct. 4, 1977, water-stage recorder at site 40 ft downstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years, 302 ft³/s, 218,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s May 4, 1964, gage height, 4.35 ft; maximum gage height, 5.90 ft Jan. 26, 1967, backwater from ice; minimum daily discharge, 54 ft³/s Dec. 5, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 867 ft³/s July 1, gage height, 4.70 ft; maximum gage height, 4.74 ft Dec. 31, backwater from ice; minimum daily discharge, 250 ft³/s Dec. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	328	307	353	360	332	427	578	392	326	812	301	331
2	371	309	353	360	331	429	524	482	321	703	297	326
3	343	311	353	350	293	434	484	507	326	582	288	321
4	330	307	349	355	309	444	438	524	321	485	283	316
5	330	299	346	360	341	543	420	516	321	408	283	321
6	332	299	351	370	384	644	414	464	316	367	297	321
7	336	304	338	413	398	619	408	411	321	341	292	321
8	346	298	328	393	368	550	402	390	321	326	292	321
9	428	296	340	406	371	448	396	379	321	316	288	316
10	399	315	321	363	345	415	384	373	316	301	283	311
11	381	360	316	353	331	429	384	387	321	288	270	306
12	384	388	324	351	342	423	396	424	330	279	270	311
13	380	381	322	356	365	423	414	447	357	275	270	311
14	351	370	316	358	385	410	384	435	396	270	274	326
15	332	370	316	342	403	399	415	450	396	266	279	341
16	335	365	314	343	443	383	458	448	396	316	283	330
17	332	366	316	326	489	381	493	445	420	316	283	326
18	322	371	324	325	558	377	501	520	432	321	283	326
19	324	399	322	320	573	379	478	550	513	331	283	321
20	342	400	331	330	581	375	445	550	558	311	283	316
21	342	405	331	340	535	369	420	543	550	292	279	316
22	346	387	324	332	516	373	389	520	513	283	288	311
23	343	357	329	339	554	390	371	471	445	297	478	326
24	336	344	332	348	522	399	357	432	390	311	402	330
25	340	344	305	348	520	419	354	392	367	301	373	330
26	337	329	263	348	482	418	344	380	357	292	362	330
27	334	337	250	367	452	388	338	387	426	341	351	330
28	322	340	270	361	441	409	338	367	582	321	341	330
29	315	336	290	353	---	442	331	336	741	326	341	321
30	312	341	320	353	---	489	332	330	812	306	336	320
31	311	---	345	341	---	573	---	326	---	301	336	---
TOTAL	10664	10335	9992	10964	11964	13601	12390	13578	12512	10985	9569	9663
MEAN	344	345	322	354	427	439	413	438	417	354	309	322
MAX	428	405	353	413	581	644	578	550	812	812	478	341
MIN	311	296	250	320	293	369	331	326	316	266	270	306
AC-FT	21150	20500	19820	21750	23730	26980	24580	26930	24820	21790	18980	19170
CAL YR 1982	TOTAL	120293	MEAN	330	MAX	695	MIN	180	AC-FT	238600		
WTR YR 1983	TOTAL	136217	MEAN	373	MAX	812	MIN	250	AC-FT	270200		

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LOCATION.--Lat 41°36'27", long 98°55'17", in SW1/4NW1/4 sec.22, T.19 N., R.14 W., Valley County, Hydrologic Unit 10210007, on right bank 150 ft downstream from bridge on State Highway 70 at Ord.

PERIOD OF RECORD.--November 1936 to September 1938 (published as "near Ord"), June 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,012.14 ft National Geodetic Vertical Datum of 1929.
Nov. 25, 1936, to Sept. 30, 1938, nonrecording gage at site 2 mi 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s June 7, 1962, gage height, 5.52 ft; maximum gage height, 6.56 ft Jan. 16, 1981, ice jam; minimum daily discharge, 100 ft³/s Jan. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,860 ft³/s Aug. 23, gage height, 5.27 ft; minimum daily discharge, 400 ft³/s Dec. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	1040	1020	700	840	1210	1440	1370	935	2450	957	790
2	1160	1060	1040	900	860	1240	1470	1750	946	2190	979	762
3	1120	1050	1020	1100	820	1250	1480	1640	935	1960	935	717
4	1060	1010	1030	1100	800	1270	1260	1510	946	1750	850	690
5	1010	939	1040	1050	700	1790	1220	1540	1030	1510	771	690
6	1070	929	1010	1140	920	1820	1230	1390	1040	1320	780	708
7	979	976	992	1060	1000	1790	1260	1180	1000	1230	780	708
8	979	990	965	1000	1060	1600	1200	1260	968	1150	753	717
9	1240	986	880	1060	1100	1370	1170	1060	1000	1030	708	708
10	1260	1040	960	1000	1170	1300	1150	968	968	957	699	697
11	1160	1330	925	1060	1200	1240	1100	902	946	924	682	706
12	1010	1150	919	1190	1250	1180	1190	1170	968	850	656	732
13	990	1010	999	1250	1300	1160	1300	1550	1120	744	656	740
14	990	940	1090	1300	1360	1160	1180	1350	1780	682	664	778
15	968	948	1110	1160	1360	1210	1100	1260	1500	597	708	941
16	1000	935	1090	1200	1500	1180	1120	1140	1220	708	708	930
17	1000	1020	1130	1100	1460	1160	1200	1240	1300	870	717	862
18	1010	1080	1090	1000	1470	1160	1260	1440	1570	979	690	847
19	1100	1100	1030	900	1490	1160	1220	1580	1720	979	656	831
20	1090	1070	1020	920	1510	1110	1240	1470	2150	870	639	835
21	1070	1090	1010	960	1480	1030	1220	1430	1920	762	648	873
22	1020	1080	1020	900	1440	857	1130	1400	1640	735	673	882
23	1040	996	1050	980	1440	935	1090	1290	1500	744	2780	894
24	1060	919	1080	1040	1430	1070	1060	1160	1330	753	1530	913
25	1060	970	808	940	1400	1140	1060	1080	1160	891	1200	935
26	1090	1010	640	860	1320	1160	1060	1020	1200	744	968	946
27	1080	989	600	820	1280	1110	1080	1020	2070	935	708	946
28	1080	949	400	960	1230	1120	1060	1030	3860	1020	850	935
29	1090	970	450	1040	---	1220	1010	979	3240	1080	850	946
30	1090	1000	500	980	---	1400	1020	935	2720	977	820	1060
31	1060	---	600	920	---	1480	---	926	---	947	800	---
TOTAL	32996	30576	28518	31590	34190	38882	35580	39040	44682	33338	26815	24719
MEAN	1064	1019	920	1019	1221	1254	1186	1259	1489	1075	865	824
MAX	1260	1330	1130	1300	1510	1820	1480	1750	3860	2450	2780	1060
MIN	968	919	400	700	700	857	1010	902	935	597	639	690
AC-PT	65450	60650	56570	62660	67820	77120	70570	77440	88630	66130	53190	49030
CAL YR 1982	TOTAL	341946	MEAN	937	MAX	2440	MIN	367	AC-PT	678200		
WTR YR 1983	TOTAL	400926	MEAN	1098	MAX	3860	MIN	400	AC-PT	795200		

PLATTE RIVER BASIN

06788988 MIRA CREEK NEAR NORTH LOUP, NE

LOCATION.--Lat 41°30'09", long 98°47'47", in NW1/4SE1/4 sec.27, T.18 N., R.13 W., Valley County, Hydrologic Unit 10210007, on left bank near county road 1.4 mi northwest of North Loup.

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

GAGE.--Water-stage recorder. Datum of gage is 1,964.41 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,460 ft³/s Aug. 5, 1981, gage height, 10.56 ft, from floodmark, from rating curve extended above 200 ft³/s on basis of indirect measurement of peak flow; no flow at times in 1980-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,010 ft³/s June 28, gage height, 8.56 ft; minimum daily, 0.07 ft³/s Aug. 18.

REVISIONS.--The maximum discharge for the water year 1982 has been revised to 181 ft³/s May 30, 1982, gage height, 3.47 ft, superseding figure published in the report for 1982.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	.36	.54	.41	.54	1.1	1.1	4.8	.31	6.6	.67	.13
2	.36	.37	.63	.56	.54	.97	1.0	7.5	.66	4.8	.85	.12
3	.21	.32	.55	.54	.50	1.2	.90	3.6	.34	3.6	.97	.12
4	.16	.31	.49	.50	.45	1.5	.84	2.5	.30	1.4	.98	.11
5	.14	.31	.48	.48	.44	4.8	1.3	1.9	.40	1.3	.42	.09
6	.13	.35	.43	.49	.44	3.3	1.3	1.9	.37	1.1	.27	.29
7	.13	.38	.38	.47	.47	1.6	1.2	1.4	.29	.92	.42	.53
8	.22	.36	.35	.47	.47	1.4	1.1	.99	.24	.99	.36	.41
9	.89	.36	.32	.57	.50	1.4	1.0	.57	.26	.99	.32	.62
10	1.2	.75	.32	.91	.49	1.2	1.1	.52	.21	.76	.35	.32
11	1.1	1.4	.31	1.0	.50	1.1	1.0	.73	.23	.59	.33	.23
12	.50	2.5	.29	1.2	.64	1.0	1.6	.83	.24	.57	.32	.30
13	.35	2.1	.35	1.4	.93	.94	3.0	.73	.47	.52	.34	.35
14	.25	1.3	.35	1.4	.95	.73	1.7	.50	.46	.47	.28	.24
15	.17	.90	.33	1.1	1.0	1.0	2.3	.58	.95	.49	.24	.27
16	.16	.71	.28	.97	2.5	1.2	3.6	1.4	.64	.98	.28	.20
17	.17	.66	.33	.81	3.9	1.0	3.6	.75	.35	.88	.22	.16
18	.24	.62	.42	.74	2.3	.93	3.6	1.7	.56	.82	.07	.17
19	.26	.63	.41	.70	2.3	.90	3.3	3.3	.41	1.3	.12	.19
20	.35	.63	.39	.69	1.4	.78	3.0	3.3	.32	2.5	.25	.18
21	.33	.54	.41	.68	1.3	.79	2.8	1.4	.28	1.4	.18	.12
22	.42	.47	.42	.73	1.3	.79	2.8	.80	.23	.94	.16	.09
23	1.0	.39	.42	.74	1.3	.76	2.8	1.2	.21	.72	.31	.09
24	.57	.38	.45	.66	1.3	.76	2.8	.73	.18	1.4	.30	.09
25	.40	.38	.24	.64	1.1	.74	2.8	.53	.17	1.1	.20	.10
26	.32	.38	.53	.62	.97	.88	3.3	.71	.14	.71	.40	.12
27	.30	.34	.50	.59	1.1	.89	2.3	.43	12	7.9	.41	.12
28	.30	.36	.21	.59	1.2	.86	1.7	.23	609	5.8	.53	.13
29	.26	.47	.15	.59	---	1.0	1.7	.23	170	1.7	.33	.14
30	.33	.51	.12	.57	---	1.4	1.9	.25	13	1.0	.21	.15
31	.38	---	.20	.54	---	1.2	---	.32	---	.75	.15	---
TOTAL	12.03	19.54	11.60	22.36	30.83	38.12	62.44	46.33	813.22	55.00	11.24	6.18
MEAN	.39	.65	.37	.72	1.10	1.23	2.08	1.49	27.1	1.77	.36	.21
MAX	1.2	2.5	.63	1.4	3.9	4.8	3.6	7.5	609	7.9	.98	.62
MIN	.13	.31	.12	.41	.44	.73	.84	.23	.14	.47	.07	.09
AC-FT	24	39	23	44	61	76	124	92	1610	109	22	12
CAL YR 1982	TOTAL	677.06	MEAN 1.85	MAX 110	MIN .03	AC-FT 1340						
WTR YR 1983	TOTAL	1128.89	MEAN 3.09	MAX 609	MIN .07	AC-FT 2240						

PLATTE RIVER BASIN

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06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE

LOCATION.--Lat 41°15'48", long 98°26'56", in NW1/4NW1/4NE1/4 sec. 22, T.15 N., R.10 W., Howard County, Hydrologic Unit 10210007, on right bank 310 ft downstream from bridge on U.S. Highway 281, 3 mi north of St. Paul, and 4 mi upstream from confluence with Middle Loup River.

DRAINAGE AREA.--4,290 mi², approximately, of which about 1,240 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1915, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 976: 1942. WSP 1390: 1896. WDR NE-74: Drainage area. WDR NE-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,759.29 ft, adjusted, 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.--76 years, 371 ft³/s, 703,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft³/s, estimated, June 6, 1896, gage height, 14.9 ft, from floodmark, datum then in use; minimum daily since 1931, 85 ft³/s Aug. 8, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,540 ft³/s June 28, gage height, 5.40 ft; maximum gage height, 5.88 ft Feb. 16, backwater from ice; minimum daily discharge, 426 ft³/s Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1030	1090	900	1100	1310	1790	1300	1130	3540	941	777
2	1300	1090	1160	1000	1160	1350	1660	1590	1140	3380	913	714
3	1310	1190	1190	1100	1080	1430	1530	1450	1160	3180	899	678
4	1160	1160	1190	1150	660	1490	1490	1520	1090	2720	803	655
5	1060	1060	1190	1170	960	1730	1410	1510	1130	2300	702	599
6	1090	986	1130	1350	1100	2140	1390	1650	1070	1660	655	588
7	1160	971	1180	1250	1200	2060	1370	1540	1060	1300	632	599
8	1110	986	1080	1200	1250	1730	1330	1360	1000	1030	610	610
9	1640	1050	1030	1300	1300	1330	1300	1310	986	986	610	632
10	1490	1050	971	1200	1350	1110	1280	1120	1000	913	598	644
11	1390	1310	941	1300	1400	1050	1180	1070	1020	884	577	655
12	1260	1620	816	1400	1400	1050	1280	1130	1060	843	556	690
13	1090	1230	843	1500	1450	1080	1430	1660	1230	752	546	714
14	1060	1210	1020	1550	1500	1090	1350	1920	1280	644	567	729
15	1080	1180	1270	1450	1650	1240	1230	1600	1550	567	556	884
16	1060	1140	1150	1400	1800	1190	1230	1440	1330	546	546	941
17	1090	1050	1070	1300	1600	1060	1260	1560	1260	621	546	857
18	1130	1140	1100	1250	1730	1140	1260	1910	1450	803	546	830
19	1190	1190	1170	1160	2300	1190	1210	2110	1470	777	515	790
20	1280	1280	960	1100	2050	1180	1140	2040	1470	790	496	803
21	1110	1240	1060	1160	1840	1080	1130	1840	1860	777	486	764
22	1030	1210	1000	1100	1520	1020	1160	1820	1620	690	486	803
23	986	1240	971	1160	1560	1060	1110	1700	1350	655	1590	803
24	971	1130	1130	1200	1700	1080	1080	1560	1180	678	1860	857
25	956	1050	1000	1100	1550	1030	1050	1470	1000	714	1410	871
26	1020	1140	480	1060	1390	1280	1020	1290	898	777	1230	884
27	1020	1030	472	1000	1300	1210	1060	1190	1260	777	1050	898
28	1030	1080	520	1140	1300	1140	1080	1250	4120	971	986	884
29	1020	1030	426	1250	---	1140	1080	1200	5260	956	898	884
30	1030	971	500	1200	---	1190	1060	1170	3520	1020	843	871
31	1030	---	700	1140	---	1430	---	1150	---	956	790	---
TOTAL	35333	34044	29810	37540	40200	39610	37950	46430	45954	37207	24433	22908
MEAN	1140	1135	962	1211	1436	1278	1265	1498	1532	1200	788	764
MAX	1640	1620	1270	1550	2300	2140	1790	2110	5260	3540	1860	941
MIN	956	971	426	900	660	1020	1020	1070	898	546	486	588
AC-FT	70080	67530	59130	74460	79740	78570	75270	92090	91150	73800	48460	45440
CAL YR 1982	TOTAL	382871	MEAN	1049	MAX	3260	MIN	263	AC-FT	759400		
WTR YR 1983	TOTAL	431419	MEAN	1182	MAX	5260	MIN	426	AC-FT	855700		

PLATTE RIVER BASIN

06790500 NORTH LOUP RIVER NEAR ST. PAUL, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-53, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1974 to September 1978.

WATER TEMPERATURES: July 1974 to September 1978.

SUSPENDED SEDIMENT DISCHARGE: April 1946 to June 1953.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 426 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 June 22, 1947; minimum daily, 20 tons Aug. 3, 1946, Feb. 22, 1953.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

		DATE	TIME	STRE- AM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)				
		OCT										
		25...	1030	947	243	7.6	11.0	10.2				
		NOV										
		24...	1020	1080	255	7.8	.5	14.3				
		DEC										
		20...	1140	1020	234	7.4	.5	13.4				
		FEB										
		03...	1025	1140	222	7.3	.5	11.7				
		22...	1040	1560	246	7.7	5.0	11.5				
		MAR										
		14...	1130	1100	252	7.8	8.0	10.3				
		APR										
		11...	1120	1170	272	7.8	10.0	10.6				
		MAY										
		10...	0925	1150	252	8.0	14.5	9.5				
		JUN										
		07...	1050	997	243	8.2	20.5	9.3				
		JUL										
		08...	0840	1050	238	8.8	23.0	8.9				
		24...	0900	778	224	8.5	27.0	7.8				
		SEP										
		02...	0910	700	229	7.6	24.0	8.3				
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- LITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	
FEB												
22...	1040	20	100	0	32	5.3	8.3	.4	7.0	113	11	
JUL												
08...	0840	35	100	0	32	5.2	9.2	.4	6.5	122	11	
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												
22...	2.5	.30	45	179	.24	755	.78	.160	20	65	8	
JUL												
08...	2.1	.40	48	188	.26	532	<.10	.090	30	24	3	

FLATTE RIVER BASIN

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06791500 CEDAR RIVER NEAR SPALDING, NE

LOCATION.--Lat 41°42'41", long 98°26'48", in NE1/4NE1/4NE1/4 sec.15, T.20 N., R.10 W., Greeley County, Hydrologic Unit 10210010, on left bank 15 ft downstream from bridge on county road, 0.4 mi upstream from small tributary, and 4.7 mi northwest of Spalding.

DRAINAGE AREA.--762 sq mi, approximately, of which about 50 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1944 to September 1953, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR NE-73: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,896.24 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 4, 1961, at two sites 6.5 mi upstream at different datum.

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

AVERAGE DISCHARGE.--35 years, 156 ft³/s, 113,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s June 23, 1947, gage height, 7.50 ft, site and datum then in use, from rating curve extended above 640 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 30 ft³/s Jan. 30, 1946.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 12	0730	304	4.03	Apr. 20	1200	682	4.51
Nov. 13	0400	377	4.14	May 5	0630	1010	5.01
a	----	711	64.84	May 23	0230	598	4.96
Mar. 9	0830	604	4.63	June 20	0300	384	4.11
Mar. 28	0630	369	4.01	June 29	1200	384	4.07
Apr. 2	1430	*1230	*5.23	July 3	1100	373	4.04

a Sometime during period Feb. 17-28.

b From floodmark.

Minimum daily discharge, 113 ft³/s Aug. 19, Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	164	178	150	180	318	447	315	154	242	181	119
2	236	163	179	160	190	236	990	413	159	269	161	119
3	216	161	180	170	200	288	882	540	161	331	152	118
4	187	159	178	180	210	278	613	525	157	304	146	118
5	172	158	182	190	190	328	456	929	163	254	140	119
6	168	163	179	210	170	368	400	744	163	227	140	120
7	202	163	160	220	180	340	355	598	163	199	140	119
8	213	157	164	210	210	362	199	476	157	177	138	119
9	213	162	162	220	220	521	301	348	157	161	135	115
10	222	181	155	225	225	404	314	197	152	143	131	113
11	198	259	145	235	230	317	321	272	148	146	126	114
12	242	301	150	240	230	262	308	230	142	145	124	117
13	125	345	150	240	240	251	291	218	199	138	127	120
14	151	285	167	219	246	233	291	202	197	125	133	134
15	151	273	165	220	256	188	272	218	172	118	131	155
16	149	263	166	209	271	223	269	215	161	133	115	150
17	148	237	166	206	320	217	272	224	166	154	116	143
18	152	235	169	200	420	210	298	260	212	152	116	137
19	167	225	169	190	520	203	388	295	249	142	113	134
20	187	227	169	190	640	203	598	324	316	133	114	129
21	198	216	169	200	410	200	505	380	227	122	116	128
22	202	208	169	210	430	201	384	471	149	120	118	131
23	183	209	171	218	470	204	301	540	172	120	129	133
24	165	198	168	218	400	213	252	421	156	125	128	136
25	166	191	165	215	350	218	227	285	148	135	129	141
26	159	176	150	200	370	272	217	242	146	129	127	142
27	157	163	140	190	340	308	172	199	174	172	124	141
28	163	164	140	205	354	324	218	154	199	167	123	141
29	161	174	130	210	---	218	218	172	321	196	124	148
30	160	175	120	200	---	254	215	161	218	210	122	144
31	162	---	130	190	---	355	---	157	---	210	122	---
TOTAL	5567	6155	4985	6340	8472	8517	10974	10725	5458	5399	4041	3897
MEAN	180	205	161	205	303	275	366	346	182	174	130	130
MAX	242	345	182	240	640	521	990	929	321	331	181	155
MIN	125	157	120	150	170	188	172	154	142	118	113	113
AC-FT	11040	12210	9890	12580	16800	16890	21770	21270	10830	10710	8020	7730

CAL YR 1982 TOTAL 69212 MEAN 190 MAX 935 MIN 100 AC-FT 137300
WTR YR 1983 TOTAL 80530 MEAN 221 MAX 990 MIN 113 AC-FT 159700

PLATTE RIVER BASIN

06792000 CEDAR RIVER NEAR FULLERTON, NE

LOCATION (REVISED).--Lat 41°23'45", long 98°00'15", in SE1/4SE1/4 sec.33, T.17 N., R.6 W., Nance County, Hydrologic Unit 10210010, on left bank upstream from highway bridge, 3 mi northwest of Fullerton and 7.2 mi, upstream from mouth.

DRAINAGE AREA.--1,220 mi², approximately, of which about 480 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to June 1932, October 1940 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1390: 1932, 1941, 1943. WSP 1710: 1951(P), 1952(M), 1953, 1955 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,638.39 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 5, 1942, nonrecording gage, Nov. 5, 1942, to June 23, 1947, water-stage recorder, June 24, 1947, to Apr. 6, 1948, nonrecording gage, Apr. 7, 1948, to Apr. 15, 1971, water-stage recorder, all on downstream side of bridge pier at datum 2.00 ft higher, and Apr. 16, 1971, to Aug. 26, 1980, on downstream side of bridge pier at present datum.

REMARKS.--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.--43 years (1940-83), 242 ft³/s, 175,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,700 ft³/s Aug. 13, 1966, gage height, 16.90 ft, present datum, from high point on surge, from rating curve extended above 6,600 ft³/s on basis of flow-over-highway-embankment and contracted-opening measurement of peak flow; minimum daily, 30 ft³/s July 18, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 20	0530	*2300	a6.79	June 17	2300	1940	4.63
May 6	2130	1790	4.72	June 28	2000	1550	4.15

a Backwater from ice.

Minimum daily discharge, 102 ft³/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	201	208	180	270	452	579	423	319	528	277	118
2	318	203	211	200	290	355	674	533	283	369	248	127
3	308	203	208	210	300	343	1070	464	297	373	209	102
4	275	201	202	210	270	385	966	496	295	406	193	119
5	244	196	197	210	290	448	839	606	312	418	183	129
6	230	200	195	220	290	457	766	969	322	373	164	129
7	205	202	186	240	250	468	644	744	318	328	165	126
8	247	203	192	250	270	438	568	579	279	364	160	130
9	444	204	203	220	280	468	428	503	303	274	148	122
10	421	208	173	290	290	440	523	467	334	237	147	130
11	305	340	170	300	300	430	485	366	305	212	137	128
12	314	386	160	300	320	441	504	498	314	209	114	133
13	301	299	160	310	340	430	513	457	426	198	139	142
14	267	350	210	320	360	395	490	438	560	162	165	147
15	226	326	225	310	400	475	449	398	448	158	161	183
16	216	320	213	300	450	398	427	387	390	156	153	187
17	216	312	200	290	540	406	405	433	594	203	130	188
18	209	302	180	290	800	405	410	483	811	251	125	163
19	217	302	170	300	1100	399	412	419	630	240	118	169
20	220	297	170	310	1200	390	442	449	699	226	113	173
21	219	288	160	320	491	395	554	486	547	199	119	169
22	223	283	150	310	560	394	485	539	426	151	114	176
23	246	275	140	300	606	390	433	574	349	127	142	176
24	214	275	130	310	539	394	380	616	313	127	157	183
25	202	246	150	310	500	398	339	587	333	148	153	195
26	240	238	170	290	488	447	324	500	294	131	141	193
27	215	232	190	270	506	502	333	452	335	197	132	191
28	204	235	140	300	482	490	288	392	608	324	128	193
29	201	226	130	290	---	515	351	284	1020	238	133	201
30	198	208	150	290	---	497	349	293	724	262	121	207
31	198	---	170	280	---	558	---	288	---	259	103	---
TOTAL	7765	7761	5513	8530	12782	13403	15430	15123	13188	7848	4692	4729
MEAN	250	259	178	275	457	432	514	488	440	253	151	158
MAX	444	386	225	320	1200	558	1070	969	1020	528	277	207
MIN	198	196	130	180	250	343	288	284	279	127	103	102
AC-FT	15400	15390	10940	16920	25350	26580	30610	30000	26160	15570	9310	9380

CAL YR 1982 TOTAL 99776 MEAN 273 MAX 1300 MIN 76 AC-FT 197900
WTR YR 1983 TOTAL 116764 MEAN 320 MAX 1200 MIN 102 AC-FT 231600

06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-59, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1974 to September 1983.

WATER TEMPERATURES: July 1974 to September 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 550 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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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 AS CA) (00915)
OCT									
22...	1315	231	--	7.7	8.0	20	130	0	42
NOV									
17...	0915	323	265	8.3	2.5	40	100	0	32
DEC									
15...	1155	240	--	8.2	.0	<1	130	0	42
JAN									
12...	1030	302	310	--	.0	10	130	0	41
FEB									
09...	1040	271	290	7.6	.0	<1	130	0	41
MAR									
09...	1000	454	320	7.9	.5	40	120	0	38
APR									
06...	1030	805	255	7.9	4.0	35	110	0	33
MAY									
05...	1200	564	258	8.1	13.5	20	110	0	35
JUN									
01...	1445	323	310	8.4	14.0	15	140	0	43
JUL									
28...	1300	357	300	8.3	27.5	35	120	0	38
AUG									
24...	1600	134	267	8.1	31.5	30	120	0	37
SEP									
22...	1115	180	287	8.0	12.0	<1	120	0	38

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 AS (MG/L SI02) (00955)
OCT									
22...	6.8	8.1	.3	7.7	145	10	2.2	.30	41
NOV									
17...	5.8	8.1	.4	7.4	121	10	3.1	.20	34
DEC									
15...	6.9	9.1	.4	7.4	147	<5.0	2.9	.20	45
JAN									
12...	7.0	8.4	.3	6.8	141	10	2.8	.30	42
FEB									
09...	6.7	8.5	.3	6.4	144	10	2.4	.30	45
MAR									
09...	6.9	11	.4	7.0	136	11	3.6	.30	34
APR									
06...	6.2	13	.6	6.4	124	10	4.3	.20	27
MAY									
05...	6.5	9.5	.4	7.5	127	14	3.6	.20	29
JUN									
01...	7.7	11	.4	6.6	157	12	3.0	.20	35
JUL									
28...	6.3	7.3	.3	7.0	134	12	2.1	.30	36
AUG									
24...	6.3	7.9	.3	6.7	128	9.9	2.0	.30	40
SEP									
22...	6.3	8.3	.3	6.3	134	11	2.1	.20	40

PLATTE RIVER BASIN

06792000 CEDAR RIVER NEAR FULLERTON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DTS- 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, DTS- 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...	205	.28	128	.43	.330	.170	20.0	21	12
NOV									
17...	173	.24	151	.47	.290	.140	20.0	63	14
DEC									
15...	216	.29	140	.61	.390	.210	30.0	33	24
JAN									
12...	203	.28	165	.50	.250	.210	40.0	59	25
FEB									
09...	207	.28	151	.66	.250	.190	20.0	49	26
MAR									
09...	194	.26	237	.38	.300	.210	20.0	100	19
APR									
06...	175	.24	380	.26	.250	.100	20.0	100	15
MAY									
05...	182	.25	276	.39	.280	.210	20.0	70	11
JUN									
01...	213	.29	186	.17	.240	.170	20.0	60	14
JUL									
28...	189	.26	183	.71	.400	.250	30.0	55	18
AUG									
24...	187	.25	67.6	<.10	.340	.160	30.0	24	7
SEP									
22...	193	.26	93.6	.37	.260	.180	30.0	16	13

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 upstream from gaging station and 5.5 mi southwest of Genoa.

PERIOD OF RECORD.--Water year 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1972 to September 1981.

WATER TEMPERATURES: October 1972 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 479 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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCC FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS AS CAC03 (00900)
NOV 17...	1100	2770	275	8.4	.5	730	4.5	13.2	1600	9000	120
JAN 12...	1100	2610	305	7.1	.0	728	8.2	14.2	600	3000	120
MAR 09...	1200	2300	300	8.1	1.0	725	50	13.6	830	3000	120
MAY 04...	1500	1860	300	8.1	16.5	720	45	10.7	4400	3100	130
JUL 27...	1630	1750	275	8.9	31.0	725	21	8.8	1400	3800	120
SEP 21...	1130	1650	265	8.4	10.5	740	24	11.1	K120	K520	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 LAH (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)
NOV 17...	0	39	6.0	9.1	.4	7.2	130	14	3.3	.30	48
JAN 12...	0	38	6.3	9.2	.4	7.0	131	11	3.2	.30	49
MAR 09...	0	37	6.2	9.8	.4	6.8	132	12	3.7	.30	44
MAY 04...	0	39	6.9	9.8	.4	8.1	137	13	3.2	.30	39
JUL 27...	0	37	6.2	9.8	.4	8.2	135	14	2.9	.30	41
SEP 21...	0	35	6.0	8.4	.4	6.4	128	10	2.3	.30	48

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHOPHOSPHATE, DIS- SOLVED (MG/L AS P) (00671)
NOV 17...	119	206	.16	890	.76	.130	1.80	.300	.170	.170
JAN 12...	222	203	.30	1560	.65	.220	.60	.200	.190	.160
MAR 09...	200	200	.27	1240	.62	.180	1.40	.340	.220	.160
MAY 04...	199	203	.27	999	.56	.120	1.50	.300	.200	.180
JUL 27...	199	201	.27	940	<.10	.040	1.90	.340	.100	.090
SEP 21...	196	194	.27	873	.31	.070	1.20	.250	.130	.110

PLATTE RIVER BASIN

06792499 LOUP RIVER POWER CANAL AT DIVERSION NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BF) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 17...	1100	40	6	130	0	<1	<1	<0	3	40	<1
MAR 09...	1200	200	6	120	<0	9	<1	<0	9	110	<1
MAY 04...	1500	60	6	130	<0	<1	<1	<0	1	40	4
JUL 27...	1630	50	9	110	<0	<1	<1	<0	3	20	<1

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	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, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 17...	20	27	<.0	<10	2	1	<1	200	<6.0	30
MAR 09...	20	16	.0	<10	<1	1	<1	190	8.0	20
MAY 04...	20	22	<.0	<10	19	2	<1	210	9.0	0
JUL 27...	10	13	<.0	<10	8	1	<1	200	13	0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
JAN 12...	1100	2610	.0	686	4830	17	37	89	100

06792500 LOUP RIVER POWER CANAL NEAR GENOA, NE

LOCATION.--Lat 41°25'03", long 97°47'37", in NE1/4NE1/4 sec.32, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, at skimming weir on downstream end of settling basin on left bank, 2 mi downstream from point of diversion and 3.5 mi southwest of Genoa.

PERIOD OF RECORD.--December 1936 to current year.

GAGE.--Water-stage recorder and concrete weir. Datum of gage is 1,566.26 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1956, at datum 3.0 feet higher.

REMARKS.--Records good. Canal diverts from Loup River in sec.6, T.16 N., R.4 W.; water is used in powerplants near Monroe and Columbus and is returned to Platte River 1.5 mi downstream from Loup River. Diversion began Dec. 2, 1936.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,410 ft³/s Apr. 27, 1944; no flow Aug. 16, 24-27, 30, 31, 1966, flood damage to canal being repaired.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,930 ft³/s Oct. 20, June 14; minimum daily, 14 ft³/s Dec. 11-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2190	2420	2110	742	2350	2780	1670	1880	1980	2600	1900	1360
2	2720	2490	2360	981	2350	2580	1620	2130	2060	2380	1770	1310
3	2740	2790	2550	1370	2170	2460	1670	2030	1990	2250	1600	1250
4	2630	2720	2780	1950	2140	2400	1550	1910	1900	2220	1480	1200
5	2380	2680	2670	2100	1990	2560	1480	1830	1880	2050	1420	1180
6	2250	2570	2570	2190	1810	2730	1450	1840	2150	1990	1310	1170
7	2630	2360	2020	2240	1780	2780	1360	1940	2190	1860	1320	1170
8	2640	2330	218	2410	2070	2590	1290	1790	2240	1640	1220	1110
9	2780	2470	24	2300	2340	2380	1210	1700	2220	1540	1130	1140
10	2850	2560	20	2430	2440	2270	1230	1510	2170	1470	1070	1130
11	2860	2620	14	2400	2380	2080	1150	1470	2220	1460	955	1130
12	2840	2500	14	2610	2370	2000	1220	1570	2350	1430	903	1220
13	2780	486	14	2550	2360	1910	1410	1720	2810	1400	895	1190
14	2680	54	16	2590	2400	1880	1410	1930	2930	1320	955	1340
15	2330	535	37	2130	2360	1960	1370	1840	2890	1210	972	1470
16	2390	1470	57	2400	2130	2090	1190	1720	2600	1160	937	1640
17	2320	2380	70	2360	1840	2030	1120	1780	2700	1120	920	1730
18	2570	2420	110	2200	1320	1890	1160	2060	2710	1210	878	1640
19	2810	2500	143	2220	1400	1870	1100	2130	2730	1360	836	1590
20	2930	2680	474	2070	1760	1800	1060	2040	2770	1500	812	1680
21	2880	2650	561	2170	1810	1800	1350	1880	2570	1440	853	1640
22	2640	2700	663	2090	1910	1680	1210	1730	2510	1200	870	1690
23	2500	836	938	2070	2210	1610	1590	1730	2280	1080	1110	1640
24	2400	35	907	2390	2740	1550	1580	1700	2210	1050	2100	1710
25	2340	19	112	2430	2920	1560	1540	1710	2150	1100	2360	1680
26	2290	32	36	2380	2920	1620	1530	1760	2040	1120	2120	1610
27	2460	24	22	2540	2890	752	1560	1810	2020	1590	2000	1610
28	2410	43	54	2420	2800	1630	1670	1840	2800	1770	1980	1760
29	2690	362	153	2440	---	1660	1610	1910	2700	1930	1800	1860
30	2650	1020	330	2460	---	1740	1760	1950	2810	1900	1630	1820
31	2440	---	510	2380	---	1710	---	1950	---	1940	1500	---
TOTAL	80020	50756	22557	68013	61960	62352	42120	56790	71580	49290	41606	43670
MEAN	2581	1692	728	2194	2213	2011	1404	1832	2386	1590	1342	1456
MAX	2930	2790	2780	2610	2920	2780	1760	2130	2930	2600	2360	1860
MIN	2190	19	14	742	1320	752	1060	1470	1880	1050	812	1110
AC-FT	158700	100700	44740	134900	122900	123700	83550	112600	142000	97770	82530	86620
CAL YR 1982	TOTAL	668936	MEAN	1833	MAX	2930	MIN	14	AC-FT	1327000		
WTR YR 1983	TOTAL	650714	MEAN	1783	MAX	2930	MIN	14	AC-FT	1291000		

PLATTE RIVER BASIN

06793000 LOUP RIVER NEAR GENOA, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°25'05", long 97°43'25", in SW1/4NE1/4 sec.25, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on right bank 12 ft downstream from bridge on State Highway 39, 2 mi south of Genoa, 3 mi upstream from Beaver Creek, and 6 mi downstream from diversion dam of Loup River Public Power District.

DRAINAGE AREA.--14,400 mi², approximately, of which about 5,650 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to June 1932, October 1943 to current year (October 1953 to April 1955, monthly discharge only).

REVISED RECORDS.--WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,540.13 ft National Geodetic Vertical Datum of 1929, Aug. 17, 1928, to June 30, 1932, nonrecording gage at present site at datum 1.49 ft higher. Oct. 1, 1943, to Sept. 16, 1974, (Apr. 26 to Dec. 22, 1949, wire-weight gage only), at present site and datum. Sept. 17, 1974, to Nov. 21, 1977, at site 300 ft upstream at present datum.

REMARKS.--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 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 Aug. 13, 1966, gage height, 13.93 ft, from rating curve extended above 42,000 ft³/s on basis of indirect measurement of peak flow; no flow at times during 1956, 1959, 1961, 1963, 1970, 1973, 1974, 1975, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft³/s June 29, gage height, 7.95 ft; maximum gage height, 9.35 ft Feb. 17, backwater from ice; minimum daily discharge, 1.3 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	* MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	27	680	270	760	658	4200	1730	428	2850	59	20
2	265	26	155	280	740	549	4150	3270	370	1980	40	16
3	490	29	255	300	600	463	4330	3660	265	1410	31	15
4	195	52	62	340	450	606	3430	2340	252	1460	30	13
5	43	76	102	520	350	1210	3020	1830	329	1490	28	14
6	32	24	96	800	290	1930	3150	2000	552	870	31	13
7	52	20	263	1000	260	2390	2980	2660	287	505	27	10
8	110	20	2610	1100	240	1690	3240	1270	287	399	24	9.0
9	215	20	2280	1180	250	1540	2500	1080	232	308	29	6.9
10	1110	39	1860	1200	260	1370	2980	764	225	243	29	5.8
11	584	401	1640	1200	320	1220	2980	683	225	196	28	5.0
12	290	1390	1920	1200	450	911	2460	703	274	149	28	4.5
13	74	3060	1780	1200	700	1020	3730	1090	561	99	22	4.0
14	54	2850	1490	1120	1200	1170	4550	2000	2070	71	25	6.9
15	21	2140	2020	1000	2100	1930	4210	1100	2000	58	27	13
16	24	1280	2330	1000	4500	2200	3680	797	818	76	27	6.6
17	25	157	1970	1020	6000	1860	3200	886	1270	51	27	4.8
18	28	197	1810	1100	7000	1800	2730	2010	3690	71	24	3.4
19	53	212	1850	1020	7200	1600	2890	3520	2080	44	23	3.2
20	205	129	1590	900	6000	1380	2490	2720	1470	37	27	9.6
21	292	121	1600	800	3940	1270	1970	2030	897	33	29	4.5
22	96	122	2050	740	2840	1410	2010	1920	1270	32	29	3.8
23	57	1720	1300	740	1610	1440	1620	1750	940	31	39	3.4
24	46	2500	1440	860	896	1470	1320	1480	664	30	813	3.2
25	43	2570	2760	770	895	1650	1040	1420	496	27	1450	2.8
26	39	2280	1670	720	726	3140	917	1240	390	24	310	2.0
27	38	2350	812	560	629	5090	1150	1250	345	70	149	1.5
28	53	2690	760	680	667	2890	1220	917	5550	58	97	1.3
29	44	2320	640	760	---	3030	1340	821	9640	70	61	15
30	37	1500	430	880	---	3310	1180	666	4910	74	38	10
31	28	---	320	800	---	4320	---	662	---	76	25	---
TOTAL	4663	30322	40545	26060	51873	56517	80667	50269	42787	12892	3626	231.2
MEAN	150	1011	1308	841	1853	1823	2689	1622	1426	416	117	7.71
MAX	1110	3060	2760	1200	7200	5090	4550	3660	9640	2850	1450	20
MIN	20	20	62	270	240	463	917	662	225	24	22	1.3
AC-FT	9250	60140	80420	51690	102900	112100	160000	99710	84870	25570	7190	459

CAL YR 1982 TOTAL 255500.0 MEAN 700 MAX 12300 MIN 12 AC-FT 506800
WTR YR 1983 TOTAL 400452.2 MEAN 1097 MAX 9640 MIN 1.3 AC-FT 794300

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)
DEC 15...	1430	2100	--	8.0	.5	740	22	15.3	K240	250	130
MAR 09...	1430	1570	290	8.1	2.0	725	60	12.0	580	2100	120
MAY 04...	1100	2360	290	8.1	13.0	720	45	10.8	5100	5300	130

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)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
DEC 15...	0	41	6.3	9.6	.4	7.4	138	12	3.2	.30	54
MAR 09...	0	37	6.2	9.5	.4	6.6	129	12	3.2	.30	44
MAY 04...	0	39	6.9	10	.4	8.3	137	13	3.4	.30	42

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTH0, DIS- SOLVED (MG/L AS P) (00671)
DEC 15...	221	218	.30	1250	.95	.170	1.30	.260	.210	.180
MAR 09...	194	197	.26	822	.66	.130	1.50	.310	.190	.160
MAY 04...	204	206	.28	1300	.64	.090	2.20	.320	.210	.190

DATE	TIME	ALUM- INIUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CORALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PR) (01049)
DEC 15...	1430	30	8	130	0	4	<1	<0	13	30	1
MAR 09...	1430	200	6	120	<0	6	<1	<0	3	70	<1
MAY 04...	1100	70	6	120	<0	<1	<1	<0	2	40	3

PLATTE RIVER BASIN

06793000 LOUP RIVER NEAR GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DTS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DTS- SOLVED (UG/L AS MO) (01060)	NICKEL, DTS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DTS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DTS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DTS- SOLVED (UG/L AS V) (01085)	ZINC, DTS- SOLVED (UG/L AS ZN) (01090)
DEC 15...	20	37	.0	<10	1	1	<1	200	8.0	70
MAR 09...	20	9	<.0	<10	<1	1	<1	190	8.0	10
MAY 04...	20	5	.0	<10	2	2	<1	210	9.0	0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)
DEC 15...	1430	2100	.5	1730	9810	8	32	92	100
MAR 09...	1430	1570	2.0	401	1700	44	59	96	100
MAY 04...	1100	2360	13.0	1030	6560	33	47	96	100

06793500 BEAVER CREEK AT LORETTO, NE

LOCATION.--Lat 41°45'50", long 98°04'50", in NE1/4SE1/4 sec.26, T.21 N., R.7 W., Boone County, Hydrologic Unit 10210009, on left bank 5 ft downstream from county road bridge, at the west edge of Loretto.

DRAINAGE AREA.--311 mi², of which about 100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1944 to September 1953, October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,785.95 ft National Geodetic Vertical Datum of 1929. Prior to May 15, 1945, staff gage at bridge 25 ft upstream, May 15, 1945, to Aug. 16, 1946, water-stage recorder at site 85 ft upstream, Aug. 17, 1946, to Sept. 30, 1953, at site 5 ft downstream, all at same datum.

REMARKS.--Records fair except those for winter period, which are poor. There are diversions for irrigation above station during the summer period.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--13 years (water years 1945-53, 1980-83), 79.0 ft³/s, 57,190 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,570 ft³/s June 2, 1950, gage height, 11.74 ft; minimum daily, 12 ft³/s July 8, Aug. 8, 9, 1980.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 25	1000	585	5.81	May 4	0830	521	5.87
Apr. 2	0300	*763	6.72	June 27	1830	590	6.05

Minimum daily discharge, 31 ft³/s Aug. 19-20, Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	63	80	68	70	278	568	124	59	244	44	34
2	109	58	104	72	65	239	701	374	60	158	44	34
3	132	56	96	74	55	215	513	486	59	126	43	32
4	129	54	88	76	70	196	353	494	56	106	44	31
5	124	60	78	76	73	227	219	410	54	91	41	33
6	119	61	75	78	72	312	184	293	56	82	42	33
7	121	56	70	79	73	321	182	206	56	74	49	33
8	135	55	66	80	72	282	174	157	53	68	43	34
9	229	55	61	81	71	238	157	128	51	62	40	35
10	155	69	57	82	73	148	147	110	51	56	39	33
11	111	113	53	84	74	129	140	97	50	51	38	33
12	84	182	49	87	78	123	140	93	51	50	35	33
13	69	168	60	90	80	116	217	94	120	50	37	35
14	73	141	58	95	90	103	190	80	185	47	40	36
15	72	115	56	92	100	105	157	78	97	45	40	42
16	68	92	55	89	120	143	174	77	76	46	40	43
17	78	82	57	85	140	119	253	73	73	49	39	42
18	72	83	61	78	190	108	269	115	129	51	33	39
19	64	91	60	82	300	102	222	155	195	50	31	36
20	68	100	57	84	490	97	163	163	164	48	31	35
21	77	96	57	82	414	88	129	143	124	42	33	35
22	79	92	57	79	440	79	121	141	105	40	35	36
23	79	83	57	76	472	83	103	122	102	38	40	38
24	77	75	61	80	526	86	90	103	102	40	46	39
25	79	72	65	76	575	85	83	85	98	42	45	39
26	79	68	60	72	528	91	79	81	91	40	43	40
27	81	67	55	70	386	85	76	74	334	53	38	40
28	71	72	50	75	331	78	78	67	326	54	45	40
29	66	70	54	75	---	82	75	62	331	50	38	44
30	63	70	59	74	---	142	76	61	331	50	36	44
31	65	---	65	72	---	327	---	59	---	49	33	---
TOTAL	2907	2519	1981	2463	6028	4827	6033	4805	3639	2052	1225	1101
MEAN	93.8	84.0	63.9	79.5	215	156	201	155	121	66.2	39.5	36.7
MAX	229	182	104	95	575	327	701	494	334	244	49	44
MIN	63	54	49	68	55	78	75	59	50	38	31	31
AC-FT	5770	5000	3930	4890	11960	9570	11970	9530	7220	4070	2430	2180
CAL YR 1982	TOTAL	33353	MEAN	91.4	MAX	803	MIN	33	AC-FT	66160		
WTR YR 1983	TOTAL	39580	MEAN	108	MAX	701	MIN	31	AC-FT	78510		

PLATTE RIVER BASIN

06794000 BEAVER CREEK AT GENOA, NE

LOCATION.--Lat 41°26'32", long 97°44'11", in NE1/4SE1/4 sec.14, T.17 N., R.4 W., Nance County, Hydrologic Unit 10210009, on left bank in city park at southwest corner of Genoa, 0.2 mi downstream from Union Pacific Railroad bridge, 0.2 mi upstream from bridge on State Highway 39, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--647 mi², of which about 410 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1310: 1942(M). WDR NE-73: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,542.13 ft National Geodetic Vertical Datum of 1929. October 1940 to Nov. 5, 1942, nonrecording gage and Nov. 6, 1942, to Nov. 1, 1955, water-stage recorder, at site 0.4 mi upstream at datum 4.62 ft higher.

REMARKS.--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.--43 years, 124 ft³/s, 89,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s July 19, 1950, gage height, 18.70 ft, site and datum then in use, from rating curve extended above 8,500 ft³/s; minimum daily, 0.41 ft³/s July 25, 1974.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	1845	1200	7.96	June 20	0545	1380	8.84
Nov. 12	1030	1550	9.00	June 28	0600	1580	9.32
June 18	0030	*3410	13.43	June 29	0130	2610	11.93

Minimum daily discharge, 43 ft³/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	93	106	108	94	450	523	330	118	377	91	47
2	369	92	115	110	90	380	733	521	118	308	88	49
3	319	89	134	110	82	320	804	434	118	247	81	47
4	204	89	139	110	96	290	623	541	115	217	97	48
5	142	89	121	110	100	320	407	560	115	186	93	48
6	124	89	111	112	94	350	288	482	113	164	79	49
7	113	91	105	114	96	360	239	372	112	147	128	47
8	121	90	101	114	100	370	235	286	111	133	87	43
9	715	91	98	114	106	335	224	245	111	123	79	45
10	591	94	95	112	106	282	215	214	101	116	68	47
11	241	339	90	110	108	203	204	198	106	110	62	46
12	160	1070	92	108	108	171	210	194	119	105	57	48
13	126	354	92	112	110	168	231	189	206	103	57	49
14	124	283	96	114	120	164	281	178	294	102	58	54
15	124	239	102	112	140	266	276	161	282	99	61	61
16	121	212	96	110	160	246	249	153	180	95	62	63
17	116	169	100	102	200	238	292	158	642	90	61	65
18	100	148	100	96	250	207	359	194	1250	86	58	62
19	94	144	102	100	400	182	354	200	577	90	52	60
20	94	143	102	110	700	173	343	235	904	90	50	58
21	117	149	100	106	597	167	284	244	282	93	55	57
22	107	141	98	100	457	154	245	230	220	89	52	59
23	106	126	98	106	518	143	220	220	200	73	53	60
24	106	115	100	108	600	144	201	204	184	72	55	61
25	105	112	100	108	680	151	193	180	179	72	65	61
26	105	113	100	100	660	164	181	160	185	73	61	62
27	100	102	90	92	600	167	169	146	271	94	60	63
28	98	111	74	94	520	164	158	136	1360	234	57	62
29	94	108	80	102	---	153	151	126	1920	113	56	71
30	93	106	90	104	---	168	143	119	501	98	54	76
31	93	---	100	100	---	273	---	118	---	94	52	---
TOTAL	5245	5191	3127	3308	7892	7323	9035	7728	10994	4093	2089	1668
MEAN	169	173	101	107	282	236	301	249	366	132	67.4	55.6
MAX	715	1070	139	114	700	450	804	560	1920	377	128	76
MIN	93	89	74	92	82	143	143	118	101	72	50	43
AC-FT	10400	10300	6200	6560	15650	14530	17920	15330	21810	8120	4140	3310
CAL YR 1982	TOTAL	79349	MEAN	217	MAX	3960	MIN	47	AC-FT	157400		
WTR YR 1983	TOTAL	67693	MEAN	185	MAX	1920	MIN	43	AC-FT	134300		

PLATTE RIVER BASIN

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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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCTI- VANCE (UMHUS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 21...	1800	109	373	7.9	9.0	11.0	24	9300	14000	180	55
NOV 17...	1420	168	350	8.3	3.0	14.0	54	K8000	K30000	140	43
DEC 15...	1320	103	--	7.9	.5	17.3	24	K21	5500	180	55
JAN 12...	1600	108	410	--	.0	13.3	29	1700	5300	160	52
FEB 09...	1645	105	375	7.6	.0	11.3	32	1700	2400	170	52
MAR 09...	1630	334	360	7.8	4.0	12.4	90	970	K42000	160	50
APR 05...	1430	397	305	7.4	4.0	12.6	66	K1400	50000	120	36
MAY 04...	1330	553	245	7.8	15.0	9.6	110	21000	K52000	100	32
JUN 01...	0930	118	445	8.2	13.0	9.8	23	430	540	200	61
JUL 26...	1530	78	470	8.1	28.5	6.9	55	5000	8200	200	63
AUG 24...	1100	55	428	8.2	24.0	8.8	38	830	4200	210	64
SEP 21...	1000	57	400	8.1	9.0	11.0	22	730	4300	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, 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)	CARRON, TOTAL (MG/L AS C) (00680)
OCT 21...	9.3	12	3.6	148	.90	.210	2.2	2.40	3.3	.500	--
NOV 17...	7.9	15	6.6	189	.84	.330	3.0	3.30	4.1	.480	14
DEC 15...	9.2	11	4.5	63	1.0	.430	1.4	1.80	2.8	.410	5.4
JAN 12...	8.5	14	4.8	72	1.2	.140	.56	.70	1.9	.190	5.4
FEB 09...	8.8	14	4.3	113	.91	.220	1.1	1.30	2.2	.400	5.2
MAR 09...	7.4	15	10	74	.50	.280	3.8	4.10	4.6	.840	27
APR 05...	7.0	13	--	388	.60	.360	3.3	3.70	4.3	.590	21
MAY 04...	5.4	17	3.5	744	.50	.480	3.7	4.20	4.7	.830	36
JUN 01...	11	17	5.1	105	.90	<.060	--	1.00	1.9	.460	6.2
JUL 26...	11	18	5.1	416	1.1	.110	2.8	2.90	4.0	.820	13
AUG 24...	11	16	4.2	117	.40	.080	1.4	1.50	1.9	.530	7.2
SEP 21...	10	15	3.5	104	.80	.060	.84	.90	1.7	.530	4.6

PLATTE RIVER BASIN

06794000 BEAVER CREEK AT GENOA, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 17...	1420	0	10	.4	13	159	.20	31	222	.30
FEB 09...	1645	0	11	.4	6.7	184	.30	44	252	.34
MAY 04...	1330	0	9.3	.4	7.7	111	.30	23	165	.22
AUG 24...	1100	0	11	.3	8.2	213	.40	36	279	.38

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHPO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 17...	101	.84	.200	6	200	0	6	<10	20	6800
FEB 09...	71.3	.91	.260	--	--	0	--	--	--	--
MAY 04...	246	.47	.260	8	300	0	1	20	40	25000
AUG 24...	41.4	.39	.340	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 17...	6700	80	0	210	180	26	.0	1	<0	50
FEB 09...	--	30	--	--	--	54	--	--	--	--
MAY 04...	25000	160	20	740	730	12	.5	1	<0	140
AUG 24...	--	160	--	--	--	9	--	--	--	--

PLATTE RIVER BASIN

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06795500 SHELL CREEK NEAR COLUMBUS, NE

LOCATION.--Lat 41°31'33", long 97°16'55", in NE1/4NW1/4 sec.23, T.18 N., R.1 E., Platte County, Hydrologic Unit 10200201, on right bank 80 ft upstream from county road bridge, 1 mi upstream from Loseke Creek, and 7 mi northeast of Columbus.

DRAINAGE AREA.--270 mi², approximately.

PERIOD OF RECORD.--August 1947 to September 1975, October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,435 ft.

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

AVERAGE DISCHARGE.--34 years, 42.4 ft³/s, 30,720 acre-ft/yr; median of yearly mean discharges, 34 ft³/s, 24,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,970 ft³/s June 3, 1950, gage height, 21.38 ft; maximum gage height, 22.11 ft May 20, 1982, backwater from log jam; minimum daily discharge, 0.4 ft³/s July 27, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1947, reached a stage of 21.7 ft, from floodmark, discharge, 4,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	1730	836	11.05	June 18	1100	838	9.98
Nov. 12	1130	802	10.25	June 29	1830	1080	11.28
June 14	1000	*1460	13.71				

Minimum daily discharge, 6.6 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	17	23	18	27	65	386	54	23	115	22	14
2	113	19	27	20	27	56	197	270	24	77	18	13
3	113	17	32	23	27	50	116	168	24	60	19	13
4	60	17	29	24	26	57	93	81	23	49	18	11
5	38	17	25	26	26	100	80	49	23	40	19	11
6	29	17	24	28	26	107	78	41	23	37	19	12
7	25	17	23	30	26	63	77	45	23	36	439	9.0
8	55	17	21	30	27	36	69	52	22	34	199	9.9
9	565	18	19	32	27	24	62	34	20	33	63	6.8
10	595	18	18	31	27	22	64	30	19	31	34	6.6
11	112	53	17	30	28	21	63	29	19	30	24	9.5
12	48	730	16	29	29	21	57	30	23	29	20	7.0
13	38	246	16	29	30	20	160	31	146	29	19	6.7
14	31	67	15	28	35	20	164	32	1020	27	19	7.0
15	27	60	14	28	42	60	103	33	193	26	17	8.4
16	24	58	13	28	58	122	135	30	103	26	17	9.6
17	22	56	14	28	90	58	130	31	92	29	18	9.4
18	20	37	14	28	240	41	105	48	640	34	16	9.1
19	19	28	15	27	480	36	71	66	375	37	13	8.6
20	23	32	17	27	580	31	59	59	412	34	11	9.0
21	74	34	18	27	390	28	51	43	158	21	15	8.5
22	43	31	18	27	110	24	47	36	99	21	12	8.1
23	29	28	19	27	100	23	44	32	78	22	12	7.8
24	22	22	20	27	80	23	40	29	67	22	15	7.8
25	19	23	19	27	60	24	37	27	58	21	16	8.1
26	17	23	18	28	50	25	34	26	49	20	14	8.3
27	18	24	19	28	50	24	33	26	46	28	13	8.3
28	19	24	18	28	75	22	32	25	481	177	12	7.4
29	18	23	17	28	---	33	32	24	989	76	13	8.5
30	19	23	15	28	---	47	31	23	344	35	12	15
31	18	---	16	28	---	180	---	23	---	24	13	---
TOTAL	2314	1796	589	847	2793	1463	2650	1527	5616	1280	1171	278.4
MEAN	74.6	59.9	19.0	27.3	99.8	47.2	88.3	49.3	187	41.3	37.8	9.28
MAX	595	730	32	32	580	180	386	270	1020	177	439	15
MIN	17	17	13	18	26	20	31	23	19	20	11	6.6
AC-FT	4590	3560	1170	1680	5540	2900	5260	3030	11140	2540	2320	552
CAL YR 1982	TOTAL	38158.1	MEAN	105	MAX	4590	MIN	6.0	AC-FT	75690		
WTR YR 1983	TOTAL	22324.4	MEAN	61.2	MAX	1020	MIN	6.6	AC-FT	44280		

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 upstream from bridge on State Highway 79, 1 mi south of North Bend, and 5 mi downstream from Shell Creek.

DRAINAGE AREA.--77,100 mi², approximately, of which about 63,300 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,262.32 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 12, 1951, nonrecording gage and Sept. 12, 1951, to Sept. 30, 1970, water-stage recorder, at present site at datum 2.00 ft higher.

REMARKS.--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.--34 years, 4,186 ft³/s, 3,033,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 112,000 ft³/s Mar. 29, 1960, gage height, 10.04 ft, present datum; maximum gage height, 15.55 ft Mar. 19, 1978, ice jam; minimum daily discharge, 36 ft³/s July 29, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59,500 ft³/s June 18, gage height, 8.97 ft; maximum gage height, 9.49 ft Feb. 18, backwater from ice; minimum daily, 2,300 ft³/s Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4250	4000	6370	2400	4800	7270	16200	6790	12500	32000	9760	9050
2	4710	3890	5820	2600	4700	8280	13100	11600	12200	29800	9820	7830
3	6060	3720	5870	3000	4600	7690	12000	13500	12600	28400	9400	7420
4	5910	3660	5910	3200	4500	6820	11700	12900	11200	27200	9110	6630
5	6020	3970	6460	3500	4600	8080	10200	11900	11400	25600	8760	7150
6	4470	3770	6310	4000	4700	10600	10100	12400	13700	24700	8590	6650
7	4660	4050	5520	4600	4600	12100	9700	14800	14500	23700	7800	6960
8	5250	3450	5200	5400	4600	10900	9330	14000	13700	22800	8370	6380
9	7750	3380	5500	6000	4700	9620	7880	15000	14400	23200	7800	7220
10	7600	3670	5000	6200	4800	8710	8420	12800	13900	22500	7340	6480
11	8150	4700	4700	6600	5200	8320	8750	11900	15900	20900	6910	7340
12	5800	6730	3500	6400	5800	7680	7900	11300	18100	19500	6260	7160
13	4730	7820	3300	6800	6200	7050	9720	11400	23400	18400	7200	7720
14	4560	6060	3200	6800	6800	8310	11100	13200	32300	16400	6400	7750
15	4570	5480	3400	6600	8000	9600	11000	13400	29500	15100	7340	9220
16	4050	6060	3500	6800	8800	11900	10600	12300	30000	13500	7440	8700
17	4000	5850	3600	6400	10000	10800	9840	11500	29300	13000	7200	8770
18	4330	5290	3800	6200	12000	9860	10100	12100	51700	12400	7310	7960
19	4310	6450	4000	6400	15000	9070	9970	14900	47600	10600	7020	8710
20	4110	6320	4000	6400	20700	8190	8770	17300	48100	9460	5900	9790
21	4780	5660	4300	6000	14000	8400	7690	15400	37200	8160	6640	9020
22	4250	6030	4400	6000	11300	7480	8840	14300	29800	7390	6300	8490
23	3910	6170	4500	6000	11100	7420	7730	13800	28900	5910	6580	9200
24	3730	5550	4700	6200	10200	7280	7780	13000	27000	5000	9810	8770
25	3640	5800	4800	6200	9660	7670	7090	11400	26700	5320	8250	9400
26	3820	5680	4600	5800	8470	8210	5620	11300	25800	5520	10800	8990
27	4040	5540	4000	5400	9370	9620	7770	10500	26700	6240	10200	10800
28	3950	5890	3400	5800	8430	9890	5000	10700	26900	7250	8740	9840
29	4120	5930	3000	5600	---	11200	6060	10500	37400	9820	8750	10300
30	3740	5610	2400	5400	---	10300	6020	10500	37900	9580	8640	12600
31	4240	---	2300	5200	---	15100	---	11900	---	9520	8220	---
TOTAL	149510	156180	137360	169900	227630	283420	275980	388290	760300	487870	248660	252300
MEAN	4823	5206	4431	5481	8130	9143	9199	12530	25340	15740	8021	8410
MAX	8150	7820	6460	6800	20700	15100	16200	17300	51700	32000	10800	12600
MIN	3640	3380	2300	2400	4500	6820	5000	6790	11200	5000	5900	6380
AC-FT	296600	309800	272500	337000	451500	562200	547400	770200	1508000	967700	493200	500400
CAL YR 1982	TOTAL	1844898	MEAN	5055	MAX	21100	MIN	958	AC-FT	3659000		
WTR YR 1983	TOTAL	3537400	MEAN	9692	MAX	51700	MIN	2300	AC-FT	7016000		

PLATTE RIVER BASIN

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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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000661)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVFL) (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											
26...	1130	4670	438	8.3	10.0	10.6	17	K300	K600	170	49
NOV											
16...	1000	5910	480	7.7	.0	13.5	38	K20000	K34000	160	47
DEC											
14...	1550	3180	560	8.2	1.0	18.9	33	1200	1700	200	58
JAN											
11...	1520	6730	535	7.8	.0	16.5	19	1100	560	200	57
FEB											
08...	1345	4630	750	8.0	.0	14.9	22	K26	K63	250	70
MAR											
08...	1200	11400	650	8.1	1.5	12.0	50	1400	K61000	230	66
APR											
05...	1100	9800	460	7.8	3.5	10.8	64	K7100	70000	160	45
MAY											
03...	1330	12900	690	8.0	10.0	10.8	65	K15000	K76000	230	61
JUN											
01...	1300	11500	802	8.5	17.0	10.2	30	K100	460	270	70
JUL											
26...	1200	7040	700	8.6	26.0	8.5	50	K120	960	220	61
AUG											
29...	1630	9530	690	8.0	29.0	8.0	52	K530	1100	200	55
SEP											
20...	1230	9660	630	8.3	15.0	10.0	39	2000	19000	190	49

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, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
26...	11	62	11	124	1.0	.130	1.6	1.70	2.7	.300	5.8
NOV											
16...	11	69	14	163	1.1	.190	2.1	2.30	3.4	.370	9.0
DEC											
14...	14	86	14	34	1.2	.100	1.0	1.10	2.3	.250	4.4
JAN											
11...	14	99	14	40	.90	.500	1.4	1.90	2.8	.400	3.7
FEB											
08...	19	160	21	28	1.4	.080	1.0	1.10	2.5	.190	3.4
MAR											
08...	16	120	17	258	1.2	.250	2.6	2.80	4.0	.420	--
APR											
05...	12	69	11	280	1.3	.320	3.0	3.30	4.6	.620	17
MAY											
03...	20	170	26	196	.92	.260	3.8	4.10	5.0	.550	25
JUN											
01...	22	210	27	76	<.10	<.060	--	1.60	--	.170	8.7
JUL											
26...	17	150	21	125	<.10	.050	2.2	2.20	--	.160	13
AUG											
29...	16	140	20	143	<.10	.050	1.8	1.80	--	.260	13
SEP											
20...	16	130	16	106	<.10	.070	1.4	1.50	--	.230	11

PLATTE RIVER BASIN

06796000 PLATTE RIVER AT NORTH BEND, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SURP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITTY 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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 16...	1000	7	29	1.0	8.8	156	.30	37	310	.42
FEB 08...	1345	63	54	1.5	9.3	190	.50	38	486	.66
MAY 03...	1330	83	56	1.6	9.6	152	.50	20	454	.62
AUG 29...	1630	25	57	1.8	10	179	.60	28	434	.59

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 16...	4940	1.1	.170	6	100	0	1	<10	10	6500
FEB 08...	6070	1.4	.170	--	--	0	--	--	--	--
MAY 03...	15800	.92	.140	7	100	100	1	10	40	14000
AUG 29...	11200	<.10	.070	--	--	100	--	--	--	--

DATE	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)	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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 16...	6500	20	0	230	220	6	.0	2	<0	50
FEB 08...	--	10	--	--	--	12	--	--	--	--
MAY 03...	14000	50	20	420	410	6	.0	2	<0	90
AUG 29...	--	30	--	--	--	6	--	--	--	--

PLATTE RIVER BASIN

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06796973 ELKHORN RIVER NEAR ATKINSON, NE

LOCATION.--Lat 42°29'12", long 98°54'42", in SW1/4NW1/4 sec.13, T.29 N., R.14 W, Holt County, Hydrologic Unit 10220001, on left bank 10 ft downstream from county road bridge, 4.0 mi southeast of Atkinson.

PERIOD OF RECORD.--October 1982 to September 1983.

GAGE.--Water-stage recorder. Altitude of gage is 2,042 ft from topographic map.

REMARKS.--Records good except those for winter period, 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, 2,120 ft³/s Mar. 31, gage height, 8.02 ft; minimum daily discharge, 5.8 ft³/s Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	25	57	14	42	265	1330	264	94	985	80	23
2	11	24	62	25	41	231	916	1120	91	872	80	24
3	12	23	64	40	38	209	729	1460	85	739	82	22
4	11	24	62	50	42	187	589	970	81	639	82	22
5	11	25	59	56	45	267	497	725	74	556	77	23
6	12	25	58	60	47	612	478	571	71	455	72	24
7	13	25	56	62	45	754	486	478	68	347	68	22
8	13	24	53	66	44	465	452	358	66	274	64	22
9	17	25	45	70	44	527	401	272	64	221	58	23
10	18	28	43	73	43	341	350	206	62	185	54	23
11	17	32	46	68	42	343	302	176	60	151	49	22
12	17	50	46	66	40	347	289	176	61	128	46	22
13	19	84	47	66	39	322	341	188	75	110	48	22
14	20	90	48	64	43	256	226	188	81	96	47	22
15	20	66	45	64	108	221	274	173	84	84	45	25
16	20	57	45	58	288	195	665	158	84	98	45	25
17	21	56	42	54	552	178	850	157	90	158	42	24
18	20	57	43	50	790	172	658	202	107	209	40	23
19	20	66	42	54	911	210	522	310	129	283	37	23
20	22	83	43	56	860	203	423	399	140	267	36	22
21	22	93	44	58	598	185	343	425	138	228	33	22
22	24	91	45	60	620	187	289	380	126	180	32	23
23	25	70	47	56	648	238	251	308	112	149	32	23
24	25	68	45	60	601	274	213	254	98	136	31	23
25	27	72	42	58	484	322	184	215	89	126	31	24
26	24	62	35	54	369	318	160	185	80	110	30	24
27	27	59	25	56	333	200	137	166	92	110	29	24
28	25	55	16	58	300	169	131	144	212	97	27	24
29	25	52	10	51	---	314	130	126	447	96	26	24
30	25	54	5.8	45	---	896	120	112	805	87	25	24
31	25	---	8.2	44	---	1860	---	101	---	83	24	---
TOTAL	597.3	1565	1329.0	1716	8057	11268	12736	10967	3866	8259	1472	693
MEAN	19.3	52.2	42.9	55.4	288	363	425	354	129	266	47.5	23.1
MAX	27	93	64	73	911	1860	1330	1460	805	985	82	25
MIN	9.3	23	5.8	14	38	169	120	101	60	83	24	22
AC-FT	1180	3100	2640	3400	15980	22350	25260	21750	7670	15380	2920	1370
WTR YR 1983	TOTAL	62525.3	MEAN	171	MAX	1860	MIN	5.8	AC-FT	124000		

PLATTE RIVER BASIN

06796973 ELKHORN RIVER NEAR ATKINSON, NE--continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1983.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCTI- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
07...	1520	13	216	8.7	18.5	14.6	27	210	480	92	30
NOV											
04...	0945	25	223	7.6	1.5	13.6	25	9000	1100	84	27
DEC											
02...	1215	62	215	7.4	6.0	5.7	38	2900	3100	78	24
JAN											
27...	1515	57	279	7.3	1.0	11.6	33	420	620	120	39
FEB											
24...	0915	621	228	7.5	4.0	10.9	37	190	2000	100	33
MAR											
23...	1505	236	304	7.6	4.5	11.8	46	K39	120	120	40
APR											
19...	1615	505	303	7.9	9.0	11.8	43	130	360	120	38
MAY											
19...	1250	312	312	7.7	10.5	9.3	47	1600	1300	120	39
JUN											
22...	1520	125	275	7.8	28.5	7.3	57	1600	520	110	35
JUL											
12...	1735	125	324	7.7	27.5	6.6	55	1100	1100	150	46
AUG											
16...	1600	44	255	7.8	31.0	7.4	23	K2700	760	100	33
SEP											
07...	1555	22	233	8.0	25.0	8.6	19	740	210	90	29

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

DATE	MAGNE- SIUM, DTS- 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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
07...	4.2	10	4.3	1	1.4	.100	.90	1.00	2.4	.200	4.1
NOV											
04...	4.0	10	3.6	2	2.0	.240	.56	.80	2.8	.610	5.1
DEC											
02...	4.3	10	3.6	3	1.0	.160	2.2	2.40	3.4	.180	11
JAN											
27...	5.4	15	3.8	11	.10	.070	.43	.50	.60	.020	10
FEB											
24...	4.8	14	3.6	13	.12	.230	1.8	2.00	2.1	.120	15
MAR											
23...	5.9	13	5.0	11	.50	.160	1.2	1.40	1.9	.100	15
APR											
19...	6.1	16	10	3	.10	.090	1.7	1.80	1.9	.080	11
MAY											
19...	6.5	16	4.5	<1	.40	.120	1.8	1.90	2.3	.140	.8
JUN											
22...	5.7	10	3.0	23	.50	.120	2.8	2.90	3.4	.300	22
JUL											
12...	7.7	10	3.2	14	.90	.190	1.8	2.00	2.9	.220	28
AUG											
16...	4.9	12	3.2	26	2.1	.100	1.5	1.60	3.7	.260	7.0
SEP											
07...	4.3	11	3.9	16	2.5	.120	.88	1.00	3.5	.280	3.6

06796973 ELKHORN RIVER NEAR ATKINSON, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 04...	0945	0	9.7	.5	6.2	98	.30	42	162	.22
FER 24...	0915	0	12	.5	6.4	122	.30	23	170	.23
MAY 19...	1250	0	17	.7	7.1	157	.50	29	214	.29
AUG 16...	1600	0	11	.5	6.6	115	.40	44	184	.25

DATE	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 TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BURDN, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 04...	10.9	2.0	.210	6	100	0	1	10	0	140
FER 24...	286	.12	.090	--	--	0	--	--	--	--
MAY 19...	180	.40	.110	5	<100	0	<1	<10	0	260
AUG 16...	21.9	2.1	.240	--	--	0	--	--	--	--

DATE	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) (01044)	IRON, DIS- SOLVED (UG/L AS FF) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 04...	--	40	0	10	--	5	.0	1	0	10
FER 24...	--	60	--	--	--	2	--	--	--	--
MAY 19...	190	70	0	20	10	9	<.0	1	<0	20
AUG 16...	--	30	--	--	--	1	--	--	--	--

PLATTE RIVER BASIN

06796978 HOLT CREEK NEAR EMMET, NE

LOCATION.--Lat 42°25'19", long 98°51'46", in SE1/4SW1/4 sec.5, T.28 N., R.13 W., Holt County, Hydrologic Unit 10220001, on left bank 12 ft downstream from bridge on county road, 4 mi southwest of Emmet.

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

GAGE.--Water-stage recorder. Datum of gage is 2,070.12 ft National Geodetic Vertical Datum of 1929. (Levels by Nebraska Natural Resources Commission.)

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

AVERAGE DISCHARGE.--5 years, 26.0 ft³/s, 18,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 562 ft³/s May 29, 1982, gage height, 6.90 ft; maximum gage height, 7.61 ft Feb. 28, 1979, backwater from ice; minimum daily discharge, 0.10 ft³/s Jan. 24, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 474 ft³/s Mar. 31, gage height, 5.96 ft; maximum gage height, 6.05 ft Feb. 18, backwater from ice; minimum daily discharge, 1.2 ft³/s Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	13	25	8.0	21	110	422	129	34	156	15	4.3
2	8.3	13	26	16	17	93	271	298	33	143	14	4.0
3	6.8	12	25	18	16	81	179	341	31	134	13	3.8
4	6.1	11	25	21	18	71	137	261	29	112	12	3.9
5	5.8	14	25	22	20	124	123	156	27	87	13	4.5
6	6.1	12	24	23	20	229	128	112	26	71	13	4.7
7	6.1	11	23	23	19	267	136	94	25	56	12	4.5
8	6.9	11	23	23	18	170	137	79	24	47	12	4.2
9	12	12	23	23	18	106	124	71	23	41	11	4.2
10	12	17	21	23	17	98	110	65	22	35	9.1	4.1
11	13	29	23	23	16	110	100	61	21	30	8.5	4.5
12	11	32	23	22	20	113	107	66	21	27	7.4	4.5
13	10	33	21	22	30	99	121	66	28	24	8.0	4.8
14	9.3	32	19	21	60	85	79	63	26	20	8.0	5.4
15	8.9	30	19	21	100	75	136	60	23	16	7.3	7.4
16	8.9	29	19	19	150	68	250	60	21	20	6.8	6.4
17	11	29	20	17	200	63	350	61	35	24	6.6	6.1
18	12	40	19	15	298	72	280	89	47	30	6.3	5.1
19	13	51	19	16	300	81	210	116	43	26	5.5	5.0
20	15	56	19	18	280	85	150	130	43	22	5.3	5.5
21	15	56	19	19	210	80	114	132	47	17	5.2	5.6
22	17	52	19	19	279	80	104	115	55	15	5.1	6.0
23	17	38	18	20	261	85	94	91	55	16	5.2	6.0
24	17	40	18	20	267	93	83	78	50	15	5.3	6.0
25	16	34	17	21	228	109	75	66	43	14	5.5	5.6
26	15	30	11	22	155	111	69	58	39	12	5.0	5.3
27	15	27	5.0	22	133	47	63	54	57	19	5.0	5.0
28	15	25	3.0	23	119	56	62	48	158	19	4.8	5.0
29	14	24	2.2	22	---	102	60	43	188	19	4.5	5.2
30	13	23	1.2	21	---	291	61	39	170	17	4.2	6.2
31	13	---	3.0	21	---	449	---	37	---	16	4.3	---
TOTAL	357.1	836	557.4	624.0	3290	3703	4335	3139	1444	1300	247.9	152.8
MEAN	11.5	27.9	18.0	20.1	118	119	145	101	48.1	41.9	8.00	5.09
MAX	17	56	26	23	300	449	422	341	188	156	15	7.4
MIN	5.8	11	1.2	8.0	16	47	60	37	21	12	4.2	3.8
AC-FT	708	1660	1110	1240	6530	7340	8600	6230	2860	2580	492	303
CAL YR 1982	TOTAL	12227.3	MEAN	33.5	MAX	494	MIN	1.2	AC-FT	24250		
WTR YR 1983	TOTAL	19986.2	MEAN	54.8	MAX	449	MIN	1.2	AC-FT	39640		

PLATTE RIVER BASIN

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06797500 ELKHORN RIVER AT EWING, NE

LOCATION.--Lat 42°16'03"N, long 98°20'11"W, in NW1/4SW1/4 sec.35, T.27 N., R.9 W., Holt County, Hydrologic Unit 10220001, on right bank 800 ft (revised) downstream from bridge on State Highway L-45B, 0.8 mi north of Ewing, and 1.5 mi upstream from South Fork Elkhorn River.

DRAINAGE AREA.--1,400 mi², approximately, of which about 740 mi² contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 1,836.24 ft, National Geodetic Vertical Datum of 1929, levels by Nebraska Department of Roads. Prior to Oct. 22, 1952, at site 300 ft upstream at same datum.

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

AVERAGE DISCHARGE.--36 years, 170 ft³/s, 123,200 acre-ft/yr; median of yearly mean discharges, 116 ft³/s, 84,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s June 10, 1962, gage height, 10.60 ft; minimum daily, 5.2 ft³/s Sept. 6, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 11.32 ft June 23, 24, 1947, from floodmark at site 300 ft upstream, discharge, 6,600 ft³/s.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 22	0030	2980	8.83	Apr. 19	0800	1860	7.68
Mar. 8	1900	1590	7.31	May 4	2200	3130	8.74
Mar. 26	2030	687	5.76	May 21	1100	1040	6.30
Apr. 2	0100	*3670	9.31	July 5	0630	1290	6.95

Minimum daily discharge, 31 ft³/s Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	88	166	110	165	1040	3090	411	207	777	159	41
2	43	88	166	120	165	935	3380	1620	191	961	155	38
3	45	85	160	130	150	809	2700	2350	179	1100	148	36
4	49	85	154	135	140	706	2000	3030	164	1230	141	35
5	49	85	154	140	155	871	1610	2840	157	1240	139	37
6	61	80	148	145	140	1310	1440	2400	152	1100	136	37
7	61	83	144	150	135	1480	1290	1900	145	912	132	36
8	60	82	136	155	140	1450	1230	1440	139	736	124	37
9	77	83	104	160	140	1240	1160	1090	130	541	111	35
10	83	97	92	165	150	1080	1050	814	126	406	104	33
11	82	144	90	155	150	924	903	637	124	319	96	32
12	82	248	100	140	160	856	811	532	126	263	89	31
13	80	243	110	145	170	809	925	500	134	236	91	31
14	79	218	115	150	190	730	854	445	148	200	86	32
15	77	208	110	150	220	721	716	403	162	176	83	37
16	75	208	104	150	270	628	1020	389	159	171	77	38
17	75	216	110	140	350	526	1350	344	164	157	73	39
18	73	230	120	145	450	493	1660	464	215	181	70	38
19	75	325	120	150	640	467	1800	840	246	222	64	36
20	83	330	125	155	900	466	1480	985	258	244	60	35
21	89	299	120	150	1600	475	1160	1020	258	277	55	36
22	91	282	120	140	2700	463	918	1010	255	306	53	39
23	92	250	125	140	2210	465	758	946	255	304	52	40
24	92	216	120	150	2020	502	584	835	249	261	51	40
25	91	190	110	155	1740	566	476	655	243	235	50	42
26	89	179	105	150	1540	656	429	512	226	215	49	41
27	88	168	115	145	1370	652	392	414	232	215	47	39
28	88	166	115	150	1180	493	350	347	330	207	46	35
29	88	175	94	160	---	490	320	291	508	196	44	35
30	88	168	96	165	---	861	310	249	646	181	43	35
31	89	---	94	165	---	1740	---	226	---	174	42	---
TOTAL	2333	5319	3742	4560	19340	24904	36166	29939	6528	13743	2670	1096
MEAN	75.3	177	121	147	691	803	1206	966	218	443	86.1	36.5
MAX	92	330	166	165	2700	1740	3380	3030	646	1240	159	42
MIN	39	80	90	110	135	463	310	226	124	157	42	31
AC-FT	4630	10550	7420	9040	38360	49400	71740	59380	12950	27260	5300	2170

CAL YR 1982 TOTAL 80368 MEAN 220 MAX 3420 MIN 25 AC-FT 159400
WTR YR 1983 TOTAL 150340 MEAN 412 MAX 3380 MIN 31 AC-FT 298200

PLATTE RIVER BASIN

06798000 SOUTH FORK ELKHORN RIVER NEAR EWING, NE

LOCATION.--Lat 42°14'29", long 98°23'53", in SE1/4NE1/4 sec.7, T.26 N., R.9 W., Holt County, Hydrologic Unit 10220001, on right bank 17 ft downstream from bridge on county highway, 2.9 mi southwest of intersection with U.S. Highway 275 in Ewing and 5.5 mi upstream from mouth.

DRAINAGE AREA.--314 mi², approximately, of which about 190 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1947 to September 1953, August 1960 to September 1972, October 1977 to current year. Prior to October 1977 station published as "at Ewing" at sites 4.5 mi downstream at different datum.

GAGE.--Water-stage recorder. Altitude of gage is 1,880 ft 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.

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--24 years (water years 1948-53, 1961-72, 1978-83) 66.2 ft³/s, 49,930 acre-ft/yr; median of yearly mean discharges, 51 ft³/s, 36,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft³/s Apr. 1, 1983, gage height, 4.77 ft; maximum gage height, 6.12 ft Mar. 7, 1949, backwater from ice, site then in use; minimum daily discharge, 11 ft³/s Jan. 15, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1947, reached a stage of 7.22 ft, from floodmarks at site and datum then in use; discharge, about 3,400 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 25	2200	274	2.06	Apr. 1	0600	*1860	4.77
Feb. 20	0630	1210	3.87	Apr. 13	2000	287	1.78
Mar. 7	1000	713	3.10	Apr. 18	1000	829	2.86
Mar. 8	2200	401	2.32	May 3	1300	1670	4.59
Mar. 26	0900	218	1.59	May 20	1100	305	2.17

Minimum daily discharge, 27 ft³/s Aug. 18-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	36	64	51	59	228	1750	194	41	171	39	29
2	44	36	64	52	55	218	1240	892	47	183	39	29
3	39	36	64	53	51	203	776	1620	47	141	39	29
4	37	42	60	56	50	194	515	1260	51	93	37	29
5	42	46	56	58	49	254	410	640	49	84	39	31
6	54	44	56	60	47	506	357	312	49	73	37	32
7	44	41	56	61	52	666	354	197	46	54	36	31
8	47	39	54	62	54	439	393	150	37	47	36	31
9	54	42	53	63	56	259	354	144	39	46	36	31
10	42	49	51	64	57	215	267	125	42	46	36	31
11	41	109	53	65	59	197	206	102	46	41	36	31
12	37	86	56	67	64	189	191	88	46	42	32	29
13	37	98	49	68	66	183	244	86	56	44	39	31
14	37	107	44	65	71	161	177	84	60	44	29	29
15	34	100	44	58	84	141	186	88	64	46	29	34
16	32	82	47	57	93	122	475	105	66	44	32	29
17	34	75	42	56	105	114	751	95	88	44	28	29
18	29	82	44	54	154	109	795	75	88	42	27	29
19	36	95	46	56	610	112	660	126	66	41	27	32
20	37	109	47	59	1010	122	500	277	62	41	27	31
21	39	117	49	62	732	112	397	280	66	41	27	32
22	41	107	53	60	872	107	277	209	60	42	28	34
23	44	86	56	57	697	120	197	130	51	49	29	36
24	41	66	60	59	650	150	144	86	44	39	32	37
25	44	66	182	56	465	197	127	58	44	39	32	36
26	44	58	231	55	342	209	122	68	62	37	32	36
27	41	54	158	56	274	130	114	64	127	54	29	37
28	39	53	112	59	253	114	122	53	102	49	32	36
29	39	49	79	62	---	135	120	47	107	46	32	36
30	39	53	51	62	---	294	122	41	147	44	28	37
31	37	---	50	60	---	1100	---	39	---	39	29	---
TOTAL	1250	2063	2131	1833	7131	7300	12343	7735	1900	1846	1010	964
MEAN	40.3	68.8	68.7	59.1	255	235	411	250	63.3	59.5	32.6	32.1
MAX	54	117	231	68	1010	1100	1750	1620	147	183	39	37
MIN	29	36	42	51	47	107	114	39	37	37	27	29
AC-FT	2480	4090	4230	3640	14140	14480	24480	15340	3770	3660	2000	1910
CAL YR 1982	TOTAL	28943	MEAN	79.3	MAX	724	MIN	29	AC-FT	57410		
WTR YR 1983	TOTAL	47506	MEAN	130	MAX	1750	MIN	27	AC-FT	94230		

PLATTE RIVER BASIN

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06798300 CLEARWATER CREEK NR CLEARWATER, NE

LOCATION.--Lat 42°08'20", long 98°12'10", in SW1/4NW1/4 sec.13, T.25 N., R.8 W., Antelope County, Hydrologic Unit 10220001, on left bank at downstream side of county road bridge, 0.5 mi west and 2 mi south of Clearwater, and about 3 mi upstream from mouth.

DRAINAGE AREA.--210 mi², approximately, of which about 130 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--July 1961 to September 1964, October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,810 ft from topographic map. Prior to Sept. 7, 1961, wire-weight gage at same site and datum.

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

COOPERATION.--Records were furnished by Nebraska Department of Water Resources.

AVERAGE DISCHARGE.--9 years (water years 1962-64, 1978-83), 38.4 ft³/s, 27,800 acre-ft per year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 770 ft³/s Mar. 31, 1983, gage height, 8.09 ft from rating curve extended above 538 ft³/s; maximum gage height, 9.00 ft Aug. 5, 1981; minimum daily discharge, 4.4 ft³/s Aug. 8, 1980.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 3	2200	225	6.05	Apr. 17	1100	272	5.98
Feb. 24	1800	586	7.41	May 3	0100	601	7.47
Mar. 7	0200	336	6.32	May 19	2000	174	5.38
Mar. 31	2000	*770	8.09	June 20	1100	266	5.95
Apr. 13	2100	197	5.53	June 29	2300	232	5.75

Minimum daily discharge, 12 ft³/s Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	35	41	31	43	217	627	105	36	188	21	16
2	53	36	52	38	35	194	414	387	36	155	18	15
3	34	37	52	44	30	166	310	520	38	118	19	15
4	29	36	46	47	32	152	245	381	36	86	19	13
5	25	35	45	49	33	184	206	288	34	67	16	14
6	24	34	44	49	34	279	197	225	34	50	18	13
7	26	34	43	51	34	316	198	176	33	49	21	14
8	29	35	39	50	37	217	177	146	33	36	18	14
9	58	38	35	50	36	139	152	120	32	30	17	15
10	41	54	35	54	36	132	138	97	30	28	16	14
11	35	99	30	52	45	134	128	90	30	26	15	16
12	33	186	35	50	55	127	134	82	31	25	15	16
13	30	205	38	48	60	118	177	75	54	25	16	16
14	28	151	34	44	60	107	157	64	65	22	18	17
15	27	98	34	41	63	116	113	58	48	21	18	19
16	24	84	36	44	75	112	201	52	41	21	17	19
17	25	78	34	43	92	104	268	50	42	26	16	19
18	24	78	32	43	135	97	219	97	94	27	15	19
19	25	83	32	45	220	99	162	150	194	25	14	19
20	32	89	32	43	318	92	129	158	253	24	13	20
21	35	90	32	40	310	84	110	127	180	19	13	20
22	36	76	32	43	310	81	102	105	140	19	12	20
23	35	64	33	45	434	85	96	88	113	20	15	20
24	34	57	38	43	520	90	86	75	91	20	16	20
25	35	49	38	41	428	92	73	65	86	21	16	21
26	35	42	74	40	303	93	65	56	78	19	16	21
27	35	39	60	36	263	69	56	49	145	24	16	20
28	35	38	35	38	252	65	55	44	183	25	17	20
29	36	38	25	41	---	68	54	41	212	23	17	23
30	36	38	25	40	---	120	55	36	225	22	16	24
31	37	---	28	42	---	453	---	36	---	22	16	---
TOTAL	1035	2056	1189	1365	4293	4402	5104	4043	2647	1283	510	532
MEAN	33.4	68.5	38.4	44.0	153	142	170	130	88.2	41.4	16.5	17.7
MAX	58	205	74	54	520	453	627	520	253	188	21	24
MIN	24	34	25	31	30	65	54	36	30	19	12	13
AC-FT	2050	4080	2360	2710	8520	8730	10120	8020	5250	2540	1010	1060
CAL YR 1982	TOTAL	18211	MEAN 49.9	MAX 328	MIN 11	AC-FT	36120					
WTR YR 1983	TOTAL	28459	MEAN 78.0	MAX 627	MIN 12	AC-FT	56450					

PLATTE RIVER BASIN

06798500 ELKHORN RIVER AT NELIGH, NE

LOCATION.--Lat 42°07'20", long 98°01'40", in SE1/4NE1/4 sec.20, T.25 N., R.6 W., Antelope County, Hydrologic Unit 10220001, on right bank 30 ft downstream from bridge on old State Highway 14 at Neligh.

DRAINAGE AREA.--2,200 mi², approximately, of which about 1,200 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to September 1958, August 1960 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1006: 1935, 1942. WSP 1390: 1931-32, 1937(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,714.00 ft (revised) National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1933, nonrecording gage at site 10 ft downstream at present datum. Apr. 16, 1933, to Jan. 23, 1939, nonrecording gage at bridge 30 ft upstream at present datum. Jan. 24, 1939, to Oct. 9, 1958, and Aug. 8, 1960, to Sept. 8, 1970, water-stage recorder at site 20 ft upstream at present datum.

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

AVERAGE DISCHARGE.--51 years, 287 ft³/s, 207,900 acre-ft/yr; median of yearly mean discharges, 233 ft³/s, 168,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,000 ft³/s June 23, 1947, gage height, 12.53 ft, from main channel rating curve extended above 4,900 ft³/s and field estimate of flow through break in highway fill; minimum daily, 12 ft³/s July 2, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1960, reached a stage of 12.24 ft, from floodmark, discharge, 12,300 ft³/s.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 22	1800	5180	8.78	May 4	1500	5320	9.01
Mar. 7	1800	3230	7.31	May 21	0700	1830	5.79
Mar. 27	0300	1340	5.16	June 20	1800	1040	4.61
Apr. 2	0900	*6950	9.93	June 28	0400	1680	5.99
Apr. 19	0800	2860	7.04				

Minimum daily discharge, 79 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	183	415	163	352	1660	5510	788	402	1140	264	104
2	242	189	381	188	348	1440	6680	2760	395	1190	256	103
3	189	183	377	200	338	1260	5290	4470	374	1280	239	93
4	156	170	343	230	342	1150	3620	5260	363	1310	222	90
5	148	174	321	260	318	1520	2740	4630	337	1340	206	90
6	150	178	311	290	310	2240	2360	3370	318	1260	225	95
7	156	181	307	335	310	3080	2080	2420	309	1090	228	90
8	228	176	263	355	320	2830	1930	1740	302	940	217	90
9	358	187	213	372	330	2060	1800	1370	290	800	187	84
10	270	314	183	360	342	1690	1610	1020	267	646	166	79
11	208	479	172	340	350	1400	1380	862	258	537	150	83
12	189	740	183	335	370	1240	1360	755	258	449	139	83
13	181	600	247	330	380	1200	1650	707	357	374	148	88
14	172	565	270	350	400	1120	1470	673	467	331	171	97
15	172	500	252	365	408	1240	1240	625	374	296	148	114
16	165	440	226	350	430	1120	1770	617	357	278	143	116
17	165	425	242	335	480	998	2440	621	360	281	135	116
18	165	460	268	315	600	957	2920	824	575	318	122	114
19	181	505	257	290	1100	946	2980	1250	851	318	118	114
20	234	560	270	275	3670	940	2400	1730	946	340	110	112
21	240	595	260	305	4860	917	1800	1860	810	343	108	112
22	252	580	278	328	4860	895	1420	1720	659	354	106	114
23	252	450	281	332	4690	946	1140	1490	559	423	106	118
24	245	402	328	338	4180	992	968	1220	475	413	112	122
25	242	380	214	340	3690	1110	856	1010	416	367	126	126
26	224	350	134	340	3970	1250	775	840	392	312	118	114
27	213	355	120	340	2290	1170	721	715	534	343	120	99
28	198	370	100	342	1950	957	673	625	1470	374	120	91
29	185	380	95	342	---	934	673	550	1150	331	118	108
30	183	395	98	348	---	1370	664	474	1150	302	120	120
31	183	---	135	358	---	2810	---	427	---	290	114	---
TOTAL	6311	11466	7544	9751	41988	43442	62920	47423	15775	18370	4862	3079
MEAN	204	382	243	315	1500	1401	2097	1530	526	593	157	103
MAX	358	740	415	372	4860	3080	6680	5260	1470	1340	264	126
MIN	148	170	95	163	310	895	664	427	258	278	106	79
AC-FT	12520	22740	14960	19340	83280	86170	124800	94060	31290	36440	9640	6110

CAL YR 1982 TOTAL 154067 MEAN 422 MAX 4570 MIN 87 AC-FT 305600
WTR YR 1983 TOTAL 272931 MEAN 748 MAX 6680 MIN 79 AC-FT 541400

06799000 ELKHORN RIVER AT NORFOLK, NE

LOCATION.--Lat 42°00'14", long 97°25'31", in SW1/4SW1/4 sec.34, T.24 N., R.1 W., Madison County, Hydrologic Unit 10220001, on left bank 200 ft downstream from U.S. Highway 81 bridge, 1 mile south of intersection of U.S. Highways 81 and 275, and 3.6 mi upstream from North Fork Elkhorn River.

DRAINAGE AREA.--2,790 mi², approximately, of which about 1,790 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1896 to November 1903 (no winter records), October 1945 to current year. Gage height records collected at site 200 ft upstream from May 10, 1941 to Sept. 26, 1945 are contained in reports of U.S. Weather Bureau. Published as "near Norfolk" from October 1957 to September 1977.

REVISED RECORDS.--WSP 1390: 1898-1900. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,504.95 ft National Geodetic Vertical Datum of 1929. See WSP 1918 for history of changes prior to Aug. 30, 1958. Aug. 30, 1958, to July 27, 1978, water-stage recorder at site 3.2 mi upstream at datum 17.88 ft higher.

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

AVERAGE DISCHARGE.--38 years, 494 ft³/s, 357,900 acre-ft/yr; median of yearly mean discharges, 407 ft³/s, 295,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s June 14, 1967, gage height, 8.52 ft, site and datum then in use; maximum gage height observed, 13.63 ft Mar. 11, 1949, at site 200 ft upstream at present datum, backwater from ice; minimum daily discharge, 33 ft³/s Aug. 3, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 13, 1944, reached a stage of 11.8 ft, at site 200 ft upstream at present datum, discharge, 14,300 ft³/s.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 23	0145	5660	5.68	Apr. 19	1130	3280	3.98
Mar. 8	1345	3380	4.41	May 5	1415	5540	5.20
Apr. 3	0245	7770	6.16	June 18	0345	4540	4.63
Apr. 13	0415	3150	3.91	June 27	2300	*8460	a6.50

a From partially estimated gage-height trace.

Minimum daily discharge, 70 ft³/s Dec. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	392	498	230	540	2330	4180	1020	730	1540	446	169
2	387	391	562	300	500	2110	6230	2340	679	1370	419	168
3	428	390	551	400	470	1910	7430	3360	679	1490	387	161
4	354	371	546	500	460	1730	5530	4680	680	1440	381	157
5	298	352	542	560	440	2050	3840	5320	645	1370	359	161
6	278	360	523	560	430	2440	3180	4120	592	1380	351	155
7	271	367	514	540	430	2950	2640	2810	551	1370	346	153
8	335	364	521	540	480	3220	2380	1930	506	1380	357	159
9	1120	372	526	520	490	2670	2210	1470	462	1440	334	158
10	734	420	505	500	480	2090	2130	1130	426	1210	293	157
11	475	684	455	500	490	1870	1820	959	417	990	264	157
12	411	1100	401	520	500	1650	2050	985	412	799	245	157
13	380	770	510	540	520	1520	2610	968	759	639	236	161
14	363	653	551	600	520	1430	2070	857	1340	567	240	166
15	349	621	571	760	560	1800	1860	828	1130	503	248	172
16	336	562	493	760	620	1660	1760	867	995	470	238	184
17	329	492	486	740	720	1400	2170	969	1520	459	228	189
18	321	467	507	740	840	1250	2810	1100	2880	477	211	186
19	338	519	452	740	1200	1180	3200	1270	958	471	195	182
20	375	604	427	720	2200	1180	3040	1580	1060	451	189	176
21	437	640	402	740	4010	1230	2280	1760	1320	447	189	174
22	448	614	414	780	4500	1220	1700	1650	1180	463	186	231
23	459	594	428	760	5480	1280	1310	1420	1020	480	189	168
24	447	505	441	740	5320	1320	1040	1150	972	517	189	164
25	448	461	513	760	5250	1330	969	1050	855	556	199	176
26	437	433	463	780	4160	1520	948	1010	809	526	209	176
27	434	402	344	780	3340	1680	959	955	4150	547	206	166
28	423	434	70	760	2750	1470	990	1040	5140	568	194	159
29	418	451	100	720	---	1370	914	1020	3360	553	189	181
30	418	469	160	680	---	1580	807	922	1800	512	185	191
31	415	---	200	560	---	2840	---	809	---	477	176	---
TOTAL	12948	15254	13676	19330	47700	55280	75057	51349	38027	25462	8078	5114
MEAN	418	508	441	624	1704	1783	2502	1656	1268	821	261	170
MAX	1120	1100	571	780	5480	3220	7430	5320	5140	1540	446	231
MIN	271	352	70	230	430	1180	807	809	412	447	176	153
AC-FT	25680	30260	27130	38340	94610	109600	148900	101900	75430	50500	16020	10140
CAL YR 1982	TOTAL	214771	MEAN	588	MAX	4390	MIN	70	AC-FT	426000		
WTR YR 1983	TOTAL	367275	MEAN	1006	MAX	7430	MIN	70	AC-FT	728500		

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000611)	SPF- CIFIC CON- DUCT- ANCE (UMHUS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 26...	1630	350	327	8.2	13.0	9.3	16	K400	800	150	49
DEC 01...	1530	504	345	8.8	7.5	12.3	34	830	1300	150	46
06...	1545	523	325	7.6	3.0	13.6	25	330	460	140	45
JAN 17...	1730	587	342	7.8	.0	12.2	19	K610	5000	150	47
FEB 15...	1445	649	375	--	.0	13.2	35	4600	K230000	140	45
MAR 01...	1545	2000	298	8.4	5.5	11.3	--	K100	5800	120	39
APR 13...	0950	3020	334	8.0	4.0	10.7	75	16000	K770000	140	41
MAY 24...	2030	1120	340	7.8	22.0	8.0	49	K78000	K4000	140	44
JUL 08...	0630	1400	333	8.1	23.5	7.3	58	870	3800	150	48
AUG 16...	1830	208	325	--	30.0	6.8	41	--	K6600	150	49
SEP 28...	1615	161	358	8.7	23.5	9.5	27	K100	580	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)	SULIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 26...	7.8	12	4.0	74	.80	.180	1.6	1.80	2.6	.520	6.3
DEC 01...	7.5	14	4.2	47	.90	.110	1.6	1.70	2.6	.260	7.0
06...	7.4	12	3.9	60	.80	.100	1.3	1.40	2.2	.250	15
JAN 17...	7.9	13	4.0	7	.90	.210	1.1	1.30	2.2	.250	5.7
FEB 15...	6.9	12	5.2	60	1.0	.980	2.2	3.20	4.2	.490	11
MAR 01...	6.6	10	5.0	260	.40	.220	2.4	2.60	3.0	.530	23
APR 13...	8.4	15	5.6	500	.70	.280	2.8	3.10	3.8	.660	--
MAY 24...	7.5	10	4.6	194	.30	.110	1.6	1.70	2.0	.290	19
JUL 08...	7.1	10	3.3	159	.20	.030	2.3	2.30	2.5	.390	21
AUG 16...	7.4	13	4.4	33	<.10	.070	1.4	1.50	--	.270	11
SEP 28...	7.9	12	3.9	19	.10	.070	1.0	1.10	1.2	.240	5.5

06799000 ELKHORN RIVER AT NORFOLK, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY 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)	SOLIDS, DTS- SOLVED (TONS PER AC-FT) (70303)
DEC 01...	1530	0	11	.4	7.7	159	.30	40	226	.31
FEB 15...	1445	0	11	.4	8.0	159	.30	39	223	.30
MAY 24...	2030	0	17	.6	7.5	164	<.10	25	214	.29
AUG 16...	1830	0	11	.4	7.4	171	.30	41	236	.32

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
DEC 01...	308	.89	.180	5	100	0	<1	<10	0	1400
FEB 15...	391	.95	.330	--	--	0	--	--	--	--
MAY 24...	647	.26	.130	6	300	0	1	10	20	7200
AUG 16...	133	<.10	.140	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
DEC 01...	1400	50	0	100	80	17	.0	2	<0	100
FEB 15...	--	70	--	--	--	28	--	--	--	--
MAY 24...	7100	60	0	380	380	5	4.0	1	<0	50
AUG 16...	--	20	--	--	--	10	--	--	--	--

PLATTE RIVER BASIN

06799080 WILLOW CREEK NEAR FOSTER, NE

LOCATION.--Lat 42°10'38", long 97°40'02" in NW1/4NE1/4 sec.4, T.25 N., R.3 W., Pierce County, Hydrologic Unit 10220002, on left downstream bank at county road bridge, 6.8 mi south of Foster and 7.2 mi southwest of Pierce.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1975 (monthly discharge only) to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,650 ft from topographic map.

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

AVERAGE DISCHARGE.--8 years, 10.8 ft³/s, 7,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 380 ft³/s Apr. 1, 1983, gage height, 7.19 ft; maximum gage height, 8.28 ft Feb. 24, 1983, backwater from ice; minimum daily discharge, 1.5 ft³/s Feb. 2, 1981.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 24	1600	130	*a8.28	Apr. 17	0100	141	5.53
Mar. 6	1500	108	5.11	May 3	0330	275	6.65
Mar. 16	1530	109	5.12	May 20	1430	112	5.16
Apr. 1	1330	*380	7.19	June 18	0300	134	5.55
Apr. 13	2100	208	6.33	June 20	1900	147	5.72
Apr. 14	1830	174	5.97	July 2	0300	148	5.73

a Backwater from ice.

Minimum daily discharge, 4.7 ft³/s Oct. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	6.5	15	8.4	14	103	330	42	14	128	8.5	6.4
2	14	6.5	18	8.8	15	73	165	123	14	143	8.2	6.1
3	10	6.5	18	9.0	13	63	71	200	13	91	8.4	5.7
4	6.2	5.8	18	8.8	12	56	51	111	12	49	8.7	5.9
5	5.1	5.8	17	9.0	14	79	40	56	12	34	8.2	6.1
6	4.7	6.4	15	9.4	13	150	44	41	12	25	8.3	5.9
7	4.7	5.9	14	9.8	12	99	55	34	11	19	8.2	5.6
8	8.0	5.3	12	10	14	45	48	29	11	17	7.7	5.8
9	27	6.9	10	11	13	34	37	25	10	16	7.4	5.4
10	17	13	12	11	14	31	37	22	10	15	7.2	5.3
11	12	19	10	10	15	28	33	19	10	13	7.0	5.5
12	13	40	9.0	11	16	27	54	19	10	13	6.9	5.6
13	11	41	9.3	12	18	26	142	18	20	12	7.5	5.6
14	10	35	9.0	11	19	24	121	18	29	11	8.2	6.0
15	8.7	21	8.8	11	19	59	64	18	30	10	7.8	7.2
16	7.5	16	8.6	11	21	96	99	17	30	10	7.4	6.7
17	6.6	14	8.6	11	23	65	115	17	52	10	7.5	6.8
18	7.3	14	9.0	11	25	54	67	40	91	12	5.1	6.0
19	6.3	16	8.8	12	28	47	46	70	82	11	5.1	5.9
20	8.9	18	9.2	12	32	40	35	102	129	9.3	5.9	5.9
21	10	18	8.8	13	36	33	29	77	116	8.6	6.3	6.1
22	13	16	9.2	12	44	31	27	52	53	8.1	6.1	6.2
23	12	12	9.3	12	60	30	25	37	39	8.0	6.5	6.3
24	14	13	12	13	100	31	23	28	29	8.6	7.0	6.5
25	11	12	24	14	150	35	21	22	24	8.8	9.0	6.4
26	9.4	11	15	13	265	27	19	20	20	8.3	7.5	6.3
27	8.6	10	9.0	15	235	22	18	21	39	11	7.1	6.0
28	7.8	11	8.6	16	150	39	18	18	66	10	7.1	5.7
29	7.2	11	8.2	16	---	34	18	16	82	9.5	6.8	6.0
30	6.9	12	8.0	15	---	44	19	15	94	8.7	6.5	7.3
31	6.6	---	8.2	15	---	140	---	14	---	8.6	6.5	---
TOTAL	304.2	428.6	359.6	361.2	1390	1665	1871	1341	1164	746.5	225.6	182.2
MEAN	9.81	14.3	11.6	11.7	49.6	53.7	62.4	43.3	38.8	24.1	7.28	6.07
MAX	27	41	24	16	265	150	330	200	129	143	9.0	7.3
MIN	4.7	5.3	8.0	8.4	12	22	18	14	10	8.0	5.1	5.3
AC-FT	603	850	713	716	2760	3300	3710	2660	2310	1480	447	361
CAL YR 1982	TOTAL	3927.4	MEAN 10.8	MAX 102	MIN 3.0	AC-FT 7790						
WTR YR 1983	TOTAL	10038.9	MEAN 27.5	MAX 330	MIN 4.7	AC-FT 19910						

PLATTE 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 southeast of Pierce.

DRAINAGE AREA.--700 mi², approximately, of which about 30 mi² is noncontributing.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,553.07 ft National Geodetic Vertical Datum of 1929 (U.S. Weather Bureau levels).

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

AVERAGE DISCHARGE.--23 years, 82.6 ft³/s, 59,840 acre-ft/yr; median of yearly mean discharges, 64 ft³/s, 46,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s Feb. 19, 1971, gage height, 15.10 ft; minimum daily, 3.8 ft³/s July 24, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 870 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 28	2030	922	8.86	Apr. 17	0230	970	9.15
Mar. 7	0130	1240	10.40	May 3	0300	1400	11.14
Mar. 16	0800	1190	10.14	June 18	1930	1130	9.89
Apr. 1	1030	*1900	12.55	June 30	0930	918	9.13
Apr. 13	1230	1450	11.31				

Minimum daily discharge, 22 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	43	82	54	68	858	1770	346	101	548	49	23
2	66	43	100	66	52	650	1080	1240	102	372	45	23
3	50	42	92	70	58	624	608	1180	104	300	42	23
4	43	41	79	80	52	656	506	592	100	255	46	23
5	39	40	70	90	58	824	443	422	95	208	45	28
6	35	41	62	90	54	1120	450	364	92	170	45	28
7	33	42	59	86	52	1090	460	307	88	142	40	24
8	39	41	56	80	50	506	386	245	84	125	35	24
9	208	37	74	76	50	285	317	195	81	114	32	23
10	113	52	92	76	52	293	316	170	79	105	33	22
11	99	112	76	78	56	261	298	155	77	97	32	23
12	60	390	73	76	60	230	411	156	77	91	31	23
13	46	394	67	66	53	235	1320	169	124	86	31	23
14	39	259	64	60	52	224	804	158	366	82	32	24
15	38	124	56	60	55	671	472	145	324	66	31	26
16	42	86	65	56	60	1070	842	144	232	64	30	26
17	38	76	113	58	68	562	893	133	190	64	29	24
18	35	79	112	70	84	453	591	240	869	97	28	24
19	37	95	108	74	158	396	449	563	880	97	26	24
20	46	115	89	62	194	328	350	473	596	66	26	24
21	52	109	87	60	198	274	286	333	420	55	26	25
22	63	86	95	56	215	246	254	274	320	49	23	26
23	69	71	96	54	344	234	229	217	247	49	24	25
24	73	77	97	53	619	234	198	166	195	52	25	25
25	70	73	305	55	691	238	177	149	157	53	31	26
26	61	58	150	149	540	228	164	143	145	52	30	26
27	54	59	100	135	648	146	149	135	485	60	28	26
28	50	55	80	100	889	150	144	124	707	62	27	25
29	47	54	66	54	---	182	142	114	843	61	26	26
30	45	59	54	60	---	279	149	107	927	55	24	26
31	43	---	50	58	---	1070	---	103	---	52	23	---
TOTAL	1809	2853	2769	2262	5530	14617	14658	9262	9107	3749	995	738
MEAN	58.4	95.1	89.3	73.0	198	472	489	299	304	121	32.1	24.6
MAX	208	394	305	149	889	1120	1770	1240	927	548	49	28
MIN	33	37	50	53	50	146	142	103	77	49	23	22
AC-FT	3590	5660	5490	4490	10970	28990	29070	18370	18060	7440	1970	1460
CAL YR 1982	TOTAL	39888	MEAN 109	MAX 1930	MIN 20	AC-FT 79120						
WTR YR 1983	TOTAL	68349	MEAN 187	MAX 1770	MIN 22	AC-FT 135600						

PLATTE RIVER BASIN

06799230 UNION CREEK AT MADISON, NE

LOCATION.--Lat 41°49'52", long 97°27'19", in SW1/4SE1/4 sec.32, T.22 N., R.1 W., Madison County, Hydrologic Unit 10220003, on left bank 12 ft downstream from bridge on U.S. Highway 81, in Madison.

DRAINAGE AREA.--174 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,549.70 ft, National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years, 33.2 ft³/s, 24,050 acre-ft/yr.

EXREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,540 ft³/s May 19, 1982, gage height, 21.15 ft, from floodmark; minimum daily, 3.6 ft³/s July 30, 31, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,680 ft³/s June 29, gage height, 19.22 ft; minimum daily, 7.2 ft³/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	19	24	19	18	79	209	130	27	55	17	9.5
2	45	19	26	18	16	56	74	206	25	45	16	8.7
3	47	19	26	18	15	59	51	80	24	35	17	7.2
4	28	19	24	19	18	73	46	46	23	31	20	7.3
5	18	18	23	19	17	121	44	38	26	29	17	9.5
6	15	18	23	21	16	83	51	36	26	26	23	9.7
7	14	18	22	21	15	59	48	58	24	24	509	12
8	47	18	20	21	15	37	41	39	23	26	69	11
9	290	19	19	21	16	32	40	31	23	26	28	9.9
10	144	20	20	22	16	32	43	28	22	27	22	10
11	33	354	19	21	16	33	41	27	21	25	20	10
12	25	740	18	20	15	33	89	28	24	26	19	10
13	21	52	19	20	16	33	235	28	292	25	17	11
14	20	31	19	20	18	35	70	28	400	24	18	12
15	20	26	19	19	21	81	76	25	41	25	18	15
16	18	25	18	19	26	67	95	26	28	26	17	14
17	18	23	18	19	29	43	87	31	24	25	16	14
18	18	23	19	18	37	39	66	52	300	28	17	12
19	21	25	19	19	114	37	54	50	60	25	18	13
20	28	25	19	18	648	35	47	34	40	23	18	12
21	38	24	20	18	330	32	42	30	30	21	18	11
22	40	22	20	18	217	31	39	28	27	21	18	11
23	31	20	20	18	351	31	37	25	26	22	18	11
24	26	19	27	18	372	31	33	26	25	20	11	12
25	26	20	90	18	139	31	30	22	24	16	11	12
26	22	19	55	18	79	33	29	61	25	16	11	12
27	20	19	31	17	110	32	26	143	300	68	10	11
28	19	20	14	18	138	34	28	32	200	87	8.7	11
29	19	21	24	18	---	36	30	28	1840	29	7.8	22
30	19	22	21	18	---	51	30	25	211	21	9.5	14
31	18	---	19	18	---	209	---	26	---	18	10	---
TOTAL	1170	1717	755	589	2838	1618	1831	1470	4181	915	1049.0	344.8
MEAN	37.7	57.2	24.4	19.0	101	52.2	51.0	47.4	139	29.5	33.8	11.5
MAX	290	740	90	22	648	209	235	206	1840	87	509	22
MIN	14	18	14	17	15	31	26	22	21	16	7.8	7.2
AC-FT	2320	3410	1500	1170	5630	3210	3630	2920	8290	1810	2080	684
CAL YR 1982	TOTAL	21639.3	MEAN	59.3	MAX	2320	MIN	7.2	AC-FT	42920		
WTR YR 1983	TOTAL	18477.8	MEAN	50.6	MAX	1840	MIN	7.2	AC-FT	36650		

06799350 ELKHORN RIVER AT WEST POINT, NE

LOCATION.--Lat 41°50'22", long 96°43'38", in SW1/4NW1/4 sec.34, T.22 N., R.6 E., Cuming county, Hydrologic Unit 10220003, on right bank near right downstream wingwall of bridge on State Highway 32 and 1 mi west of West Point.

DRAINAGE AREA.--5,100 mi², approximately, of which about 4,100 mi² contributes directly to surface runoff.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year. March 1960 to September 1972 (no winter records 1960-68) in files of Corps of Engineers. Gage-height records collected since 1940 are in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,291.26 ft National Geodetic Vertical Datum of 1929. Prior to May 18, 1976, at site on left bank 50 ft upstream from bridge at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Some small diversions above station for irrigation.

AVERAGE DISCHARGE.--15 years (water years 1969-83), 760 ft³/s, 550,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge estimated, 33,000 ft³/s June 25, 1969, gage height, 13.21 ft; maximum gage height, 16.09 ft Mar. 18, 1978, ice jam; minimum daily, 41 ft³/s Aug. 31, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1960 reached a stage of 19.09 ft, backwater from ice; observed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	0300	6880	8.88	Apr. 13	1230	6430	8.53
Nov. 12	0730	5290	8.25	May 3	0130	6750	8.90
Feb. 22	1300	10300	9.65	June 14	1200	5080	8.38
Mar. 6	2100	7860	8.90	June 18	1030	*10400	9.93
Mar. 16	1400	4960	7.91	June 28	1500	9560	9.70
Apr. 3	0030	8700	9.20				

Minimum daily discharge, 200 ft³/s Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	583	853	340	820	4670	8210	2370	1300	3580	733	319
2	1130	584	988	450	840	4170	8300	6210	1190	2320	698	309
3	876	604	1160	540	800	3720	8600	6500	1210	1630	664	303
4	779	617	1160	640	760	3550	8020	6520	1120	1520	655	294
5	631	597	1010	640	740	4760	5990	6840	1020	1630	637	289
6	570	580	906	660	640	6600	4810	6630	959	1660	579	280
7	511	564	862	640	620	6370	3830	5610	910	1660	577	275
8	1580	563	829	620	680	5500	3120	4060	867	1610	622	271
9	6160	578	842	600	700	4780	2870	3030	842	1720	909	269
10	2700	628	779	580	700	3570	2760	2600	817	1670	609	256
11	842	1180	620	580	700	3220	2700	2080	786	1390	523	252
12	576	4280	840	580	700	2850	2630	1900	797	1220	484	252
13	524	3190	1000	640	720	2610	5860	1890	1390	1050	452	248
14	518	1690	1080	800	760	2310	5900	1700	4540	906	444	261
15	530	1390	1200	940	780	3040	4920	1560	3120	824	440	288
16	518	1260	1140	940	860	4740	4000	1480	1370	756	441	308
17	511	1080	1100	900	1000	4340	4500	1450	1270	725	437	308
18	497	1020	1120	880	1400	3020	4800	1800	8630	692	416	308
19	504	1040	1140	880	2500	2610	5000	2760	4760	701	385	308
20	648	1150	1100	900	4000	2260	4900	2980	3350	705	355	299
21	773	1240	1040	940	7900	2130	4300	3020	2290	653	349	299
22	808	1150	940	960	8530	1900	3800	2870	1980	603	337	289
23	838	1030	880	940	8060	1660	3150	2600	1750	612	329	294
24	812	879	840	920	8060	1790	2640	2170	1580	642	328	294
25	743	827	900	940	7140	1820	2240	1650	1340	671	354	299
26	700	794	500	960	5940	1990	2060	1410	1170	723	344	308
27	681	777	250	940	5340	2340	1830	1390	2010	824	344	308
28	651	860	220	940	5150	2120	1700	1390	7240	1170	347	323
29	632	856	200	920	---	1910	1600	1400	6670	1080	341	377
30	606	837	240	900	---	2050	1590	1400	5320	907	329	431
31	585	---	250	860	---	5080	---	1350	---	785	324	---
TOTAL	29504	32428	25989	23970	76840	103480	126630	90620	71598	36639	14786	8919
MEAN	952	1081	838	773	2744	3338	4221	2923	2387	1182	477	297
MAX	6160	4280	1200	960	8530	6600	8600	6840	8630	3580	909	431
MIN	497	563	200	340	620	1660	1590	1350	786	603	324	248
AC-FT	58520	64320	51550	47540	152400	205300	251200	179700	142000	72670	29330	17690
CAL YR 1982	TOTAL	404245	MEAN	1108	MAX	14800	MIN	200	AC-FT	801800		
WTR YR 1983	TOTAL	641403	MEAN	1757	MAX	8630	MIN	200	AC-FT	1272000		

PLATTE RIVER BASIN

06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1968-69, October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 26...	1315	694	493	8.2	11.5	10.3	23	K1700	6600	230	68
DEC 01...	0920	1470	470	7.4	3.5	13.1	36	2500	8300	210	62
06...	1130	874	490	--	2.0	14.2	33	1500	3500	220	65
JAN 17...	1400	887	490	8.0	.0	11.8	25	1000	K69000	210	64
FFB 15...	1125	484	490	--	.0	13.3	42	K2100	K92000	190	58
MAR 01...	1130	4550	388	8.2	4.0	11.9	89	K1500	K500000	160	48
APR 13...	1310	6490	427	8.1	5.0	11.0	120	21000	K1000000	170	49
MAY 24...	1430	2260	463	8.3	22.0	9.0	52	K86000	K6700	190	55
JUL 08...	1100	1660	442	8.2	24.5	8.3	55	2100	4000	200	61
AUG 16...	1430	445	--	--	31.0	13.2	64	--	K10000	160	43
SEP 28...	1200	341	468	8.6	20.0	10.5	27	670	520	200	57

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, 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)	CARRON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 26...	14	44	9.4	165	1.8	.220	1.8	2.00	3.8	.480	8.9
DEC 01...	13	33	8.8	82	1.5	.260	2.3	2.60	4.1	.370	9.4
06...	14	43	8.5	113	1.6	.220	1.6	1.80	3.4	.330	7.9
JAN 17...	13	33	9.6	95	1.5	.520	2.0	2.50	4.0	.430	6.5
FFB 15...	12	29	9.4	73	1.6	.920	3.0	3.90	5.5	.480	8.6
MAR 01...	9.8	30	6.8	692	1.1	.540	3.2	3.70	4.8	.830	31
APR 13...	12	34	8.9	940	1.4	.380	.42	.80	2.2	1.50	29
MAY 24...	12	33	7.9	223	1.1	.070	2.2	2.30	3.4	.410	19
JUL 08...	11	25	6.5	448	1.1	.030	3.1	3.10	4.2	.580	19
AUG 16...	12	32	10	56	<.10	.080	1.9	2.00	--	.220	15
SEP 28...	13	31	9.5	44	.40	.090	1.5	1.60	2.0	.250	5.6

06799350 ELKHORN RIVER AT WEST POINT, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- 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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
DEC 01...	0920	3	18	.6	8.2	206	.30	35	302	.41
FEB 15...	1125	0	16	.5	7.7	199	.30	34	286	.39
MAY 24...	1430	0	20	.7	8.0	193	<.10	24	276	.37
AUG 16...	1430	15	17	.6	8.2	142	.30	29	237	.32

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
DEC 01...	1200	1.5	.200	5	200	0	<1	<10	0	3000
FEB 15...	373	1.6	.330	--	--	0	--	--	--	--
MAY 24...	1680	1.1	.160	6	300	0	1	10	40	8100
AUG 16...	284	<.10	.050	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
DEC 01...	3000	40	0	180	150	34	.0	4	<0	40
FEB 15...	--	30	--	--	--	31	--	--	--	--
MAY 24...	8000	50	0	380	370	12	.5	3	<0	60
AUG 16...	--	10	--	--	--	11	--	--	--	--

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 downstream from bridge on county road, 1 mi southwest of Scribner and 3 mi upstream from mouth.

DRAINAGE AREA.--204 mi².

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

REVISED RECORDS.--WRD NE-82-1: 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,234.72 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--5 years, 52.4 ft³/s, 37,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,880 ft³/s Oct. 9, 1982, gage height, 23.33 ft; minimum daily, 0.29 ft³/s July 20, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,880 ft³/s Oct. 9, gage height, 23.33 ft; minimum daily, 13 ft³/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323	24	42	35	16	92	478	735	42	102	36	16
2	526	23	45	32	18	76	223	674	44	86	34	16
3	92	21	36	33	17	84	155	407	46	77	33	16
4	37	20	28	34	19	90	130	134	47	67	33	16
5	29	20	26	34	18	215	119	110	40	60	32	17
6	31	20	25	35	18	290	137	99	42	59	31	18
7	31	20	24	36	19	217	121	155	42	55	31	15
8	930	20	19	39	21	67	105	85	40	52	29	15
9	5260	20	28	49	22	52	120	75	37	49	29	16
10	270	22	22	47	22	55	155	69	35	47	29	16
11	126	1470	32	40	23	58	102	66	35	44	28	15
12	88	537	27	42	24	62	132	68	197	41	27	14
13	76	69	22	37	25	64	291	68	694	42	27	15
14	70	50	22	67	27	62	94	70	2180	40	25	15
15	58	43	21	60	30	290	160	67	138	38	25	15
16	50	42	23	35	35	301	281	57	96	40	24	15
17	45	41	20	30	160	113	230	72	391	43	22	14
18	42	40	21	27	450	94	155	215	3560	39	20	13
19	41	46	22	26	1510	80	130	165	246	37	19	34
20	85	47	22	25	827	65	101	85	172	35	18	76
21	97	38	22	22	166	56	106	77	136	30	22	19
22	58	33	23	21	253	54	89	69	112	27	19	16
23	39	28	23	20	300	54	79	57	98	27	18	16
24	34	28	31	19	158	56	67	54	90	27	18	16
25	33	28	635	18	67	54	64	51	84	28	24	15
26	32	26	50	17	57	54	60	50	365	27	24	15
27	29	27	40	16	136	40	55	52	1140	249	18	14
28	28	29	45	17	134	42	58	50	1590	103	17	35
29	26	31	35	19	---	65	56	45	210	78	17	107
30	25	35	33	18	---	119	56	42	124	52	16	33
31	25	---	30	17	---	583	---	41	---	38	16	---
TOTAL	8636	2898	1494	967	4572	3604	4109	4064	12073	1739	761	673
MEAN	279	96.6	48.2	31.2	163	116	137	131	402	56.1	24.5	22.4
MAX	5260	1470	635	67	1510	583	478	735	3560	249	36	107
MIN	25	20	19	16	16	40	55	41	35	27	16	13
AC-FT	17130	5750	2960	1920	9070	7150	8150	8060	23950	3450	1510	1330
CAL YR 1982	TOTAL	33001.7	MEAN	90.4	MAX	5260	MIN	2.8	AC-FT	65460		
WTR YR 1983	TOTAL	45590.0	MEAN	125	MAX	5260	MIN	13	AC-FT	90430		

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 downstream from bridge on Nebraska State Highway 94 at Pender and 0.7 mi downstream from Rattlesnake Creek.

DRAINAGE AREA.--731 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,300.96 ft 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.--18 years, 134 ft³/s, 97,080 acre-ft/yr; median of yearly mean discharges, 116 ft³/s, 87,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,900 ft³/s Feb. 19, 1971, gage height, 23.11 ft; minimum daily, 12 ft³/s Aug. 11, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 8	2215	3750	11.02	May 2	0430	3200	9.92
Mar. 6	1915	2450	8.96	June 14	0215	*6820	13.32
Apr. 1	0730	2660	9.25	June 17	2300	3440	10.41
Apr. 13	0945	2100	8.46	June 28	0745	1980	8.49

Minimum daily discharge, 56 ft³/s Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	114	140	68	114	665	2040	836	219	489	141	77
2	365	111	150	80	112	494	889	2280	221	395	142	74
3	175	112	146	88	100	474	665	1280	221	333	140	72
4	108	112	128	82	92	526	540	616	220	307	138	74
5	86	109	116	92	88	798	468	484	205	277	136	78
6	80	112	113	100	88	1420	499	442	201	263	130	79
7	76	112	110	108	92	457	511	462	201	247	118	81
8	894	107	103	110	94	486	430	387	198	236	121	81
9	1720	110	89	118	96	339	412	337	195	225	114	81
10	512	127	98	120	94	328	540	314	192	218	108	80
11	201	225	80	110	96	346	436	292	193	206	105	80
12	160	515	86	102	98	353	534	282	194	194	103	81
13	146	210	90	110	104	368	1740	310	1000	191	100	81
14	140	175	84	118	106	347	706	286	691	183	102	82
15	132	147	80	118	108	510	454	267	886	174	104	90
16	125	142	76	116	120	608	1020	258	370	173	100	93
17	122	137	88	112	160	425	987	257	949	169	94	89
18	119	139	96	110	250	390	629	504	1930	187	88	85
19	140	144	104	108	476	372	622	826	762	231	82	84
20	185	164	100	110	771	322	513	422	542	185	75	86
21	203	154	104	116	470	288	491	360	624	164	81	89
22	218	137	98	112	466	277	447	336	402	154	78	86
23	199	121	94	110	625	273	403	305	322	146	75	86
24	171	125	90	110	621	277	354	293	298	140	77	88
25	155	134	84	120	452	284	335	276	276	141	76	86
26	142	122	72	118	363	272	318	258	290	139	75	82
27	137	118	74	110	543	202	289	255	729	149	77	82
28	128	127	66	116	813	201	277	246	1640	180	80	84
29	127	127	60	130	---	239	282	230	1640	165	75	122
30	122	131	56	130	---	316	290	222	672	155	75	114
31	119	---	58	116	---	1220	---	218	---	145	76	---
TOTAL	7371	4420	2933	3368	7612	13877	18121	14141	16483	6561	3086	2547
MEAN	238	147	94.6	109	272	448	604	456	549	212	99.5	84.9
MAX	1720	515	150	130	813	1420	2040	2280	1930	489	142	122
MIN	76	107	56	68	88	201	277	218	192	139	75	72
AC-FT	14620	8770	5820	6680	15100	27530	35940	28050	32690	13010	6120	5050
CAL YR 1982	TOTAL	77518	MEAN	212	MAX	7000	MIN	18	AC-FT	153800		
WTR YR 1983	TOTAL	100520	MEAN	275	MAX	2280	MIN	56	AC-FT	199400		

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 26...	1415	140	892	8.1	11.0	9.6	24	3900	7200	440	120
DEC 01...	1100	149	930	7.7	4.5	12.7	28	830	6300	460	130
06...	1350	114	910	7.7	3.0	13.3	26	260	960	460	130
JAN 17...	1600	113	928	7.8	.0	10.6	15	1000	5200	460	130
FEB 15...	1300	125	810	--	.0	10.6	37	2000	K73000	390	110
MAR 01...	1300	567	624	8.0	3.0	11.0	100	2700	K630000	300	84
APR 13...	1610	1910	600	7.9	3.5	9.2	250	42000	K1400000	260	70
MAY 24...	1830	290	945	7.9	21.0	7.9	18	K64000	K4000	440	120
JUL 08...	0900	238	911	8.0	20.0	8.3	29	1800	4800	460	130
AUG 16...	1600	102	810	8.4	31.0	9.2	26	--	1200	400	110
SEP 28...	1415	84	850	8.4	21.5	8.4	16	800	960	420	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, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 26...	33	140	14	147	3.7	.200	2.8	3.00	6.7	.640	7.6
DEC 01...	33	160	11	108	4.3	.070	2.1	2.20	6.5	.310	5.3
06...	34	160	9.8	93	3.5	.090	1.5	1.60	5.1	.250	5.2
JAN 17...	34	160	12	85	3.9	.300	1.6	1.90	5.8	.260	5.8
FEB 15...	27	130	9.2	72	3.5	.770	1.8	2.60	6.1	.440	6.2
MAR 01...	22	100	7.8	1020	3.9	.470	3.9	4.40	8.3	1.20	34
APR 13...	20	82	7.4	1590	4.2	.610	1.1	1.70	5.9	1.90	67
MAY 24...	33	170	10	215	6.0	<.060	--	1.70	7.7	.310	6.5
JUL 08...	33	160	7.9	359	5.6	.040	1.4	1.40	7.0	.510	7.3
AUG 16...	30	130	8.4	75	2.9	.060	1.2	1.30	4.2	.210	4.7
SEP 28...	29	140	7.2	115	2.3	.120	1.3	1.40	3.7	.280	3.6

06799450 LOGAN CREEK AT PENDER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LINIT 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)
DEC 01...	1100	125	32	.7	6.5	336	.30	22	596	.81
FEB 15...	1300	97	26	.6	7.3	289	.30	21	504	.69
MAY 24...	1830	120	29	.6	7.6	316	<.10	16	575	.78
AUG 16...	1600	121	27	.6	6.8	278	.30	21	500	.68

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
DEC 01...	240	4.3	.140	4	100	0	<1	<10	0	3800
FEB 15...	170	3.4	.270	--	--	0	--	--	--	--
MAY 24...	450	5.7	.130	5	200	0	1	<10	10	6100
AUG 16...	138	2.9	.110	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
DEC 01...	3800	10	0	310	180	130	.0	16	<0	30
FEB 15...	--	50	--	--	--	210	--	--	--	--
MAY 24...	6100	0	0	400	350	54	.0	21	<0	60
AUG 16...	--	30	--	--	--	29	--	--	--	--

PLATTE RIVER BASIN

06799500 LOGAN CREEK NEAR UEHLING, NE

LOCATION.--Lat 41°42'50", long 96°31'15", on south line of SE1/4SE1/4 sec.9, T.20 N., R.8 E., Dodge County, Hydrologic Unit 10220004, near right bank on downstream side of bridge on county road, 2 mi southwest of Uehling and 8 mi upstream from mouth.

DRAINAGE AREA.--1,030 mi², approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,208.73 ft 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.--42 years, 182 ft³/s, 13,900 acre-ft/yr; median of yearly mean discharges, 159 ft³/s, 115,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,200 ft³/s Feb. 20, 1971, gage height, 20.15 ft, from floodmark; maximum gage height, 20.15 ft, Mar. 27, 1962, present datum, Feb. 20, 1971; minimum daily discharge, 6.1 ft³/s July 26, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1940, reached a stage of 20.6 ft, present datum, from floodmarks, discharge, 22,200 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	0600	3280	9.31	May 3	0030	3780	9.82
Mar. 6	2130	2980	8.35	May 19	1900	1540	6.20
Apr. 1	1600	3340	8.81	June 14	1000	*6280	13.31
Apr. 13	1430	2210	7.24	June 18	0830	3860	10.12
Apr. 16	2130	1610	6.35	June 27	2130	2980	8.92

Minimum daily discharge, 100 ft³/s Sept. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	368	150	215	116	170	1080	3090	1010	319	1210	202	103
2	553	145	210	120	160	806	1830	3370	319	828	194	102
3	546	139	200	125	150	701	1160	2750	316	662	194	100
4	239	136	185	135	145	726	947	1340	304	568	198	100
5	166	135	160	135	135	997	831	957	291	502	189	107
6	135	136	155	140	140	1980	861	745	282	459	184	115
7	132	141	145	145	135	2400	884	756	273	428	178	106
8	135	137	140	150	140	1060	787	700	267	398	173	106
9	2220	138	130	155	145	586	748	579	260	376	165	103
10	1490	154	118	160	150	533	876	529	259	356	159	102
11	717	526	112	160	155	510	888	507	254	340	151	102
12	332	731	120	155	160	531	830	498	268	323	144	104
13	246	556	130	155	160	535	1790	520	836	311	140	104
14	209	278	124	150	170	539	1470	538	4420	298	141	109
15	187	251	122	150	180	787	810	486	1610	283	146	121
16	172	218	118	145	200	1310	1370	439	939	273	144	127
17	164	194	125	150	350	929	1460	435	706	271	133	129
18	158	189	135	150	700	699	1190	768	3030	261	126	123
19	157	202	150	155	1000	637	966	1380	2070	283	114	132
20	198	214	145	160	1100	563	858	1080	1400	298	111	150
21	256	216	135	155	1210	479	741	698	1050	245	111	129
22	280	189	130	150	1080	433	706	583	921	225	111	130
23	285	163	125	160	1310	417	626	503	655	218	118	128
24	260	153	122	160	1130	416	536	443	560	215	111	132
25	223	190	120	170	856	420	483	406	517	211	112	134
26	187	180	120	165	650	429	460	380	589	201	109	132
27	177	170	114	160	771	354	436	371	1960	260	114	129
28	172	170	112	170	1100	295	403	362	2710	254	109	140
29	165	190	110	190	---	337	395	343	2730	283	110	178
30	160	205	110	200	---	486	398	326	1940	249	107	203
31	155	---	108	190	---	1560	---	319	---	221	105	---
TOTAL	10844	6596	4245	4781	13752	23535	28830	24121	32055	11310	4403	3680
MEAN	350	220	137	154	491	759	961	778	1069	365	142	123
MAX	2220	731	215	200	1310	2400	3090	3370	4420	1210	202	203
MIN	132	135	108	116	135	295	395	319	254	201	105	100
AC-FT	21510	13080	8420	9480	27280	46680	57180	47840	63580	22430	8730	7300
CAL YR 1982	TOTAL	109423	MEAN	300	MAX	8000	MIN	23	AC-FT	217000		
WTR YR 1983	TOTAL	168152	MEAN	461	MAX	4420	MIN	100	AC-FT	333500		

06800000 MAPLE CREEK NEAR NICKERSON, NE

LOCATION.--Lat 41°32'44", long 96°30'09", in NE1/4SW1/4 sec.10, T.18 N., R.8 E., Dodge County, Hydrologic Unit 10220003, on right bank 120 ft upstream from bridge on Un U.S. Highways 77 and 275, 1.5 mi northwest of Nickerson, and 4 mi upstream from mouth.

DRAINAGE AREA.--450 mi², approximately.

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1630: 1957-58.

GAGE.--Water-stage recorder. Datum of gage is 1,194.56 ft National Geodetic Vertical Datum of 1929. Prior to July 28, 1960, nonrecording gage at site 120 ft downstream at present datum.

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

AVERAGE DISCHARGE.--32 years, 59.0 ft³/s, 42,750 acre-ft/yr; median of yearly mean discharges, 50 ft³/s, 36,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s June 21, 1960, gage height, 14.67 ft; maximum gage height, 16.54 ft June 18, 1983; minimum daily discharge, 0.1 ft³/s Jan. 15, 16, 1956, Aug. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since 1944, 35,000 ft³/s June 11, 1944, from indirect measurement of peak flow; gage height, 16.28 ft, from floodmarks.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 2	2130	968	9.05	May 2	0430	3060	13.79
Oct. 10	0300	4320	16.15	June 14	2100	4270	16.10
Nov. 12	0400	3370	14.44	June 18	2330	*4540	16.54
a	----	1800	ice jam	c	----	unknown	unknown
Apr. 1	0500	2470	b12.64				

a Sometime during period Feb. 17-19.

b From floodmark.

c Sometime during period June 26-30.

Minimum daily discharge, 13 ft³/s Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	736	44	65	42	37	235	1510	430	95	220	74	25
2	530	44	81	45	38	203	629	1640	100	200	70	24
3	391	43	85	47	35	202	379	631	103	180	64	23
4	104	39	59	45	30	212	296	316	99	160	58	23
5	55	34	48	47	33	319	259	245	91	140	57	23
6	39	33	47	50	29	401	281	219	95	130	55	23
7	53	35	46	52	29	425	267	222	96	120	58	21
8	138	37	37	58	32	206	243	180	87	112	57	21
9	3450	37	35	62	35	143	235	166	83	106	49	21
10	2160	37	42	54	39	134	320	161	81	99	45	19
11	363	605	37	40	40	145	255	155	79	92	41	15
12	196	1770	40	43	45	144	245	153	155	87	39	14
13	163	253	50	45	48	146	530	158	826	83	38	13
14	136	139	44	47	50	147	279	149	4010	81	37	13
15	119	99	40	45	80	267	237	157	1310	74	36	17
16	106	101	35	45	150	420	566	142	455	72	37	19
17	94	82	37	43	250	225	443	148	319	92	36	20
18	86	69	40	40	800	198	324	258	3490	96	36	19
19	92	74	43	42	1500	184	279	281	1880	81	34	21
20	128	95	45	44	1300	166	235	184	530	78	33	136
21	172	85	42	45	530	148	237	164	379	70	38	43
22	129	60	50	43	368	139	222	153	299	69	40	21
23	95	52	52	42	497	136	203	139	250	69	37	16
24	80	25	52	45	350	137	178	127	220	67	33	15
25	71	40	47	42	207	141	167	121	200	66	32	15
26	64	43	40	40	175	143	164	108	180	64	39	16
27	59	40	43	38	253	101	149	121	170	85	38	17
28	54	45	39	43	276	91	143	116	2000	324	33	25
29	49	49	35	45	---	138	147	101	800	135	31	54
30	45	52	37	43	---	177	139	92	300	105	30	38
31	43	---	40	39	---	601	---	92	---	84	27	---
TOTAL	10000	4161	1433	1401	7256	6474	9561	7329	18782	3441	1332	770
MEAN	323	139	46.2	45.2	259	209	319	236	626	111	43.0	25.7
MAX	3450	1770	85	62	1500	601	1510	1640	4010	324	74	136
MIN	39	25	35	38	29	91	139	92	79	64	27	13
AC-FT	19830	8250	2840	2780	14390	12840	18960	14540	37250	6830	2640	1530
CAL YR 1982	TOTAL	42318.76	MEAN	116	MAX	3450	MIN	.20	AC-FT	83940		
WTR YR 1983	TOTAL	71940.00	MEAN	197	MAX	4010	MIN	13	AC-FT	142700		

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°17'25", long 96°17'05", in SW1/4 sec.3, T.15 N., R.10 E., Douglas County, Hydrologic Unit 10220003, on right bank 100 ft upstream from bridge at north edge of Waterloo and 3.5 mi downstream from Rawhide Creek.

DRAINAGE AREA.--6,900 mi², approximately, of which about 5,870 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1899 to November 1903, May 1911 to September 1915, August 1928 to current year.

Published as "at Arlington" 1899-1903, July 1913 to September 1915. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1914(M), 1915, 1936, 1943(M). WDR NE-74: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,104.73 ft National Geodetic Vertical Datum of 1929. Oct. 1, 1960, to June 28, 1978, at datum 2.00 ft higher. See WSP 1918 for history of changes prior to Oct. 1, 1960.

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

AVERAGE DISCHARGE.--63 years, 1,142 ft³/s, 827,400 acre-ft/yr; median of yearly mean discharges, 1,000 ft³/s, 724,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft³/s June 12, 1944, gage height, 16.6 ft from floodmark in gage well, site and datum then in use, from rating curve extended above 22,000 ft³/s on basis of current-meter measurement of peak flow in main channel and velocity-area studies of overflow section; minimum observed, 50 ft³/s Nov. 12, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage and discharge of the flood of June 12, 1944, are the greatest known since at least 1880.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 10	0400	16100	11.63	Apr. 13	2300	8700	8.48
Nov. 12	0700	7840	8.01	May 3	1100	14100	10.86
Feb. 20	0800	14100	10.87	June 14	2400	18200	11.94
Mar. 7	0900	11500	9.50	June 19	0630	*18700	12.12
Mar. 16	1500	7400	7.50	June 29	0100	14100	10.45
Apr. 1	1800	12800	10.36				

Minimum daily discharge, 300 ft³/s Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2950	1070	1470	500	1100	6260	11900	3210	2050	7200	1250	560
2	3070	1040	1480	600	1160	5710	11300	11300	1990	5450	1140	535
3	3820	1020	1530	700	1140	5110	9460	13200	1960	4130	1060	522
4	2380	1030	1680	740	1100	4860	8780	9400	1900	3650	1050	516
5	1660	1050	1640	740	1120	5320	7600	7750	1810	3410	1050	516
6	1370	1020	1510	760	1080	7650	6330	7290	1800	3160	1070	516
7	1210	1000	1410	740	1020	10500	5290	6890	1750	2910	1050	522
8	1130	1000	1300	700	1100	7770	4680	5680	1640	2680	1020	522
9	9600	992	1170	680	1120	5980	4420	4680	1540	2470	984	516
10	12300	1060	1030	660	1100	5070	4660	4070	1470	2340	1150	510
11	5540	1830	1400	640	1120	4680	4290	3720	1430	2190	1180	497
12	2940	6740	1600	720	1180	4470	3920	3300	1420	2050	944	485
13	2050	5100	1550	900	1200	4290	6390	3250	2400	1940	858	473
14	1780	3080	1600	1100	1240	4140	7970	3160	12900	1780	827	455
15	1560	2210	1800	1100	1300	4850	6010	3010	13100	1690	843	503
16	1450	1940	1750	1100	1500	6580	6450	2800	5560	1570	843	516
17	1370	1830	1850	1080	1700	5450	6300	2790	3310	1500	820	548
18	1280	1740	1850	1000	3000	4300	5710	3160	11500	1480	790	573
19	1220	1750	2000	1060	7000	3690	5430	4790	16600	1390	746	548
20	1230	1800	1240	1100	8000	3400	5180	4360	7320	1350	731	820
21	1590	1850	1200	1120	8640	3200	4880	4060	4960	1320	805	1140
22	1810	1910	1140	1140	8390	3000	4440	3840	3900	1210	782	703
23	1750	1790	1100	1100	10000	2900	4070	3750	3270	1080	703	613
24	1710	1640	1140	1120	9340	3000	3680	3450	2800	1050	675	586
25	1580	1540	2950	1140	8550	3300	3500	3120	2630	1040	668	586
26	1430	1490	2000	1160	6980	4000	3180	2800	2450	1030	689	600
27	1340	1420	1400	1180	6450	3600	2940	2640	4390	1020	703	606
28	1280	1370	940	1180	6580	3200	2730	2540	11400	1810	647	613
29	1210	1500	350	1200	---	3140	2590	2440	13200	1880	627	1010
30	1130	1520	300	1160	---	3620	2510	2200	10100	1700	613	1190
31	1090	---	350	1140	---	7060	---	2100	---	1420	573	---
TOTAL	75830	54332	43730	29260	103210	150100	166590	140750	152550	68900	26891	18300
MEAN	2446	1811	1411	944	3686	4842	5553	4540	5085	2223	867	610
MAX	12300	6740	2950	1200	10000	10500	11900	13200	16600	7200	1250	1190
MIN	1090	992	300	500	1020	2900	2510	2100	1420	1020	573	455
AC-FT	150400	107800	86740	58040	204700	297700	330400	279200	302600	136700	53340	36300

CAL YR 1982 TOTAL 661841 MEAN 1813 MAX 16000 MIN 250 AC-FT 1313000
WTR YR 1983 TOTAL 1030443 MEAN 2823 MAX 16600 MIN 300 AC-FT 2044000

PLATTE RIVER BASIN

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06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1981.

WATER TEMPERATURES: November 1977 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 750 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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHQS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR PFR (COLS. 100 ML) (31673)
NOV											
09...	1230	998	635	7.9	5.0	--	--	--	34	1300	K90000
29...	1300	1570	610	8.0	.5	736	50	15.3	36	2500	21000
DEC											
15...	1130	2110	750	7.8	.0	748	--	13.0	42	1200	K15000
JAN											
11...	1130	645	--	8.1	1.0	--	34	--	24	1200	K31000
FEB											
07...	1100	1030	635	8.4	.5	--	--	13.2	25	K160	1200
MAR											
30...	1140	3310	550	8.1	6.0	--	160	11.6	77	9300	K2000000
APR											
28...	1030	2750	625	8.3	13.5	--	--	10.5	38	K11000	17000
MAY											
13...	1200	3240	610	8.2	17.0	745	90	9.9	48	K630	24000
JUN											
07...	1035	1710	--	8.5	18.0	--	--	10.3	35	--	--
JUL											
11...	1430	2170	570	8.3	27.0	745	70	8.2	82	K4000	5400
AUG											
16...	1100	840	385	8.9	28.5	735	--	11.5	56	670	2300
SEP											
14...	1200	453	540	7.9	18.5	742	17	12.3	44	<100	1100

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

DATE	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV										
09...	280	--	79	19	--	--	--	--	59	14
29...	260	6	74	17	22	.6	8.3	250	52	10
DEC										
15...	350	--	100	24	--	--	--	--	73	16
JAN										
11...	270	24	79	18	23	.6	9.0	248	53	13
FEB										
07...	280	--	82	18	23	.6	--	--	51	11
MAR										
30...	230	0	64	16	21	.6	9.1	226	51	10
APR										
28...	250	--	72	18	23	.7	--	--	67	11
MAY										
13...	250	18	72	18	24	.7	8.3	237	62	11
JUN										
07...	290	--	82	20	24	.6	--	--	69	15
JUL										
11...	250	2	73	17	22	.6	7.6	251	52	11
AUG										
16...	150	--	33	17	29	1.1	--	--	61	16
SEP										
14...	210	15	51	21	27	.8	7.5	199	60	19

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

DATE	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 CONSTIT- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
NOV										
09...	--	--	--	--	--	--	95	--	--	2.6
29...	.30	27	371	362	.50	1570	154	3.1	.040	3.1
DEC										
15...	--	--	--	--	--	--	332	--	--	3.8
JAN										
11...	.30	29	369	375	.50	643	96	3.3	.060	3.4
FEB										
07...	--	--	--	--	--	--	12	--	--	2.7
MAR										
30...	.30	22	338	331	.46	3020	354	3.0	.070	3.1
APR										
28...	--	--	--	--	--	--	316	--	--	3.7
MAY										
13...	.40	19	386	358	.53	3380	407	3.6	.070	3.7
JUN										
07...	--	--	--	--	--	--	82	--	--	3.7
JUL										
11...	.40	28	375	363	.51	2200	264	3.2	.050	3.2
AUG										
16...	--	--	--	--	--	--	--	--	--	.10
SEP										
14...	.30	21	330	327	.45	404	79	.38	.020	.40

DATE	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, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV										
09...	--	.130	--	.97	1.10	3.7	.430	--	--	6.2
29...	3.1	.210	.280	1.9	2.10	5.2	.460	.270	.120	8.7
DEC										
15...	--	.300	--	2.2	2.50	6.3	.760	--	--	11
JAN										
11...	3.6	.670	.800	1.7	2.40	5.8	.500	.400	.330	6.4
FEB										
07...	--	.410	--	1.5	1.90	4.6	.350	--	--	4.8
MAR										
30...	2.9	.550	.480	2.7	3.20	6.3	.840	.300	.240	20
APR										
28...	--	.540	--	2.2	2.70	6.4	.540	--	--	14
MAY										
13...	3.8	.180	.140	2.3	2.50	6.2	.600	.220	.190	14
JUN										
07...	--	<.060	--	--	1.90	5.6	.420	--	--	7.0
JUL										
11...	3.2	.060	.170	.24	.30	3.5	.610	.360	.320	24
AUG										
16...	--	.170	--	--	--	--	.310	--	--	10
SEP										
14...	.37	.100	.080	2.2	2.30	2.7	.400	.130	.140	8.4

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	REPYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 29...	1300	30	5	4	100	170	0	<1	<1	<10	<1
MAR 30...	1140	40	6	4	300	160	0	1	<1	10	<1
MAY 13...	1200	30	8	4	400	170	0	1	<1	10	<1
JUL 11...	1430	20	9	8	200	170	0	<1	<1	<10	<1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 29...	<0	0	4	4700	20	10	2	30	210	20	.0
MAR 30...	<0	30	12	9800	30	40	4	20	430	47	.0
MAY 13...	<0	40	33	8000	20	80	4	30	520	5	.0
JUL 11...	<0	30	5	7400	10	20	<1	30	510	5	.0

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 29...	<.0	<10	3	7	7	<0	<1	370	<6.0	40	10
MAR 30...	.0	<10	2	6	6	<0	<1	330	<6.0	70	10
MAY 13...	<.0	20	1	7	9	<0	<1	390	<6.0	50	40
JUL 11...	<.0	<10	20	5	5	<0	<1	380	8.0	40	20

PLATTE RIVER BASIN

06800500 ELKHORN RIVER AT WATERLOO, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
NOV 29...	--	--	50	55	90	93	--
MAR 01...	29	33	66	81	96	99	100
30...	27	33	55	71	95	100	--
MAY 13...	22	25	54	68	98	100	--
JUL 11...	--	--	66	75	99	100	--
SEP 14...	--	--	21	21	24	85	100

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)
NOV 29...	1300	1570	.5	555	2350	--	--
MAR 01...	1215	6260	7.0	3270	55300	25	27
30...	1140	3310	6.0	1050	9380	24	25
MAY 13...	1200	3240	17.0	1040	9100	19	20
JUL 11...	1430	2170	27.0	557	3260	--	--
SEP 14...	1200	453	18.5	960	1170	--	--

PLATTE RIVER BASIN

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06803000 SALT CREEK AT ROCA, NE

LOCATION.--Lat 40°39'29", long 96°39'55", in NW1/4SW1/4 sec.17, T.8 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 15 ft downstream from highway bridge at west edge of Roca.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,192.50 ft 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.--32 years, 42.3 ft³/s, 30,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,700 ft³/s July 10, 1958, gage height, 22.70 ft; minimum daily, 0.2 ft³/s July 23, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 8, 1950, reached a stage of 26.0 ft, from floodmark established by Corps of Engineers, discharge, 67,000 ft³/s, but may have been exceeded by flood of July 5, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft³/s at 0900 June 18, gage height, 11.36 ft, no other peak above base of 850 ft³/s; minimum daily, 2.1 ft³/s Aug. 19, Sept. 2, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	6.6	12	15	86	58	276	352	22	123	6.1	2.4
2	8.0	6.2	12	16	70	52	193	363	22	90	5.6	2.1
3	8.6	6.0	12	15	50	45	143	184	20	80	5.6	2.6
4	8.3	5.8	11	15	45	44	112	119	19	56	5.1	2.2
5	7.2	6.1	11	15	50	291	105	88	27	47	5.6	2.2
6	6.5	6.3	12	15	30	177	121	71	26	42	5.8	2.4
7	6.6	6.7	12	22	20	119	107	121	21	37	5.7	2.1
8	7.4	7.6	10	21	23	93	88	97	20	31	5.3	2.7
9	7.6	7.3	12	21	23	74	96	68	20	27	4.8	2.2
10	7.7	7.5	12	59	24	60	127	54	29	23	4.6	2.2
11	7.1	15	11	43	26	52	97	47	32	21	4.0	2.4
12	7.3	15	11	28	27	47	119	46	23	19	3.5	3.6
13	6.9	8.3	11	26	28	45	111	42	98	18	3.6	3.9
14	6.0	6.8	11	34	60	40	130	49	336	17	3.4	3.4
15	5.7	6.8	12	27	200	42	167	55	107	15	3.7	14
16	7.3	8.0	10	23	445	48	158	42	70	14	3.2	5.3
17	7.2	7.8	10	20	512	41	125	56	52	13	2.9	3.3
18	6.4	8.0	11	17	308	38	102	207	742	12	2.7	2.7
19	5.9	8.3	12	15	392	36	86	255	286	10	2.1	2.5
20	6.4	8.3	11	14	313	37	74	148	170	9.2	2.2	3.6
21	6.4	8.5	11	14	195	33	67	115	114	8.5	4.2	4.0
22	5.8	8.0	11	14	155	31	63	103	90	7.8	4.2	3.2
23	6.1	7.8	11	13	138	28	55	78	66	7.4	3.6	2.8
24	6.2	8.0	11	13	112	27	47	64	50	7.5	3.7	2.9
25	5.9	8.3	14	13	90	28	43	91	40	7.9	3.5	2.8
26	5.9	9.6	12	13	78	102	45	64	33	6.7	3.3	2.9
27	6.2	9.3	11	13	73	172	39	50	180	6.2	3.2	3.2
28	7.6	11	11	14	64	195	37	41	165	5.3	3.6	3.2
29	7.4	13	12	100	---	276	35	33	201	7.6	3.9	4.9
30	7.4	13	13	200	---	443	33	28	192	8.2	4.1	5.0
31	8.4	---	14	113	---	468	---	24	---	6.8	3.3	---
TOTAL	214.7	254.9	357	981	3637	3242	3001	3155	3273	784.1	126.1	102.7
MEAN	6.93	8.50	11.5	31.6	130	105	100	102	109	25.3	4.07	3.42
MAX	8.6	15	14	200	512	468	276	363	742	123	6.1	14
MIN	5.7	5.8	10	13	20	27	33	24	19	5.3	2.1	2.1
AC-FT	426	506	708	1950	7210	6430	5950	6260	6490	1560	250	204
CAL YR 1982	TOTAL	26045.9	MEAN	71.4	MAX	1610	MIN	5.7	AC-FT	51660		
WTR YR 1983	TOTAL	19128.5	MEAN	52.4	MAX	742	MIN	2.1	AC-FT	37940		

PLATTE RIVER BASIN

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 west of U.S. Highway 77 and of northeast corner of State Penitentiary at Lincoln.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--Water year 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DFG 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)
OCT										
26...	1400	13	750	7.8	11.5	13.2	33	K37	110	290
NOV										
22...	1330	17	887	7.1	5.5	11.4	19	K10	K110	330
DEC										
21...	1100	19	980	7.4	1.5	12.0	25	K13	110	320
JAN										
18...	1315	26	770	7.8	.5	12.4	25	380	5000	280
FEB										
17...	1120	711	320	7.8	.5	13.4	120	K1800	300000	100
MAR										
28...	0945	200	540	7.7	2.5	13.2	64	K12000	160000	190
APR										
20...	0845	104	--	8.2	7.5	11.3	24	280	2400	240
MAY										
19...	1245	540	415	7.8	12.5	9.4	100	K63000	400000	160
JUN										
21...	1430	120	550	8.0	25.0	6.5	54	K1200	39000	200
JUL										
12...	1340	27	725	7.9	30.5	10.1	28	830	2200	270
AUG										
08...	1030	13	715	8.1	23.5	7.3	27	300	5000	260
SEP										
07...	1430	5.5	750	7.9	22.5	12.5	34	K100	3300	260

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

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	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, 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)
OCT										
26...	85	20	71	31	<1	.50	.070	1.6	1.70	2.2
NOV										
22...	94	22	77	35	9	.92	.060	1.2	1.30	2.2
DEC										
21...	92	23	94	87	4	1.1	<.060	--	.90	2.0
JAN										
18...	77	21	85	42	22	1.1	.110	1.2	1.30	2.4
FEB										
17...	29	7.7	30	8.3	760	1.6	.630	5.5	6.10	7.7
MAR										
28...	51	14	66	23	350	1.5	.340	3.1	3.40	4.9
APR										
20...	66	18	75	19	60	1.2	.120	1.3	1.40	2.6
MAY										
19...	46	12	53	15	2060	2.1	.490	13	13.0	15
JUN										
21...	55	15	58	16	386	1.5	.240	2.6	2.80	4.3
JUL										
12...	76	19	70	35	55	1.5	.060	1.4	1.50	3.0
AUG										
08...	71	19	71	32	14	.70	.030	.97	1.00	1.7
SEP										
07...	72	19	75	37	75	<.10	.040	1.4	1.40	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

PLATTE RIVER BASIN

194

06803080 SALT CREEK ABOVE BEAL SLOUGH, AT LINCOLN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV 22...	1330	0	52	1.3	6.0	326	.30
FEB 17...	1120	3	16	.7	8.3	101	.20
MAY 19...	1245	10	26	.9	8.6	155	.30
AUG 08...	1030	0	49	1.4	6.2	264	.30

DATE	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)
NOV 22...	25	507	.69	23.0	.92	.330	0
FEB 17...	8.9	169	.23	325	1.5	.240	0
MAY 19...	12	266	.36	388	1.7	.190	0
AUG 08...	19	426	.58	15.0	.70	.200	100

PLATTE RIVER BASIN

195

06803500 SALT CREEK AT LINCOLN, NE

LOCATION.--Lat 40°50'49", long 96°40'54", in NW1/4SW1/4 sec.7, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203 on right bank 135 ft downstream from bridge on North 27th Street at north edge of Lincoln, 1 mi downstream from Oak Creek.

DRAINAGE AREA.--684 mi².

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

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,113.90 ft National Geodetic Vertical Datum of 1929. Prior to July 27, 1979, water-stage recorder for stages above 6.2 ft on downstream side of bridge pier, 135 ft upstream at same datum, and nonrecording gage read twice daily.

REMARKS.--Records good. Flood flow affected by several detention dams.

AVERAGE DISCHARGE.--34 years, 211 ft³/s, 152,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft³/s June 2, 1951, gage height, 26.15 ft; minimum daily, 21 ft³/s July 10, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1951, may have been equaled or exceeded in discharge by flood of July 6, 1908, which reached a stage of 33.6 ft. Channel changes since 1908 have materially altered the stage-discharge relation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	2400	3880	10.50	June 18	0530	7730	14.67
May 1	1600	7390	14.34	June 27	0700	*10500	17.14
May 18	2130	3270	9.71	June 29	unknown	5000	unknown
June 14	0200	3940	10.58				

Minimum daily discharge, 83 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	128	138	140	339	340	1910	4020	242	1050	129	100
2	310	138	135	144	290	323	1290	1900	242	826	127	101
3	214	127	131	141	301	308	962	1020	237	655	122	93
4	188	125	127	141	312	345	796	751	229	529	119	90
5	171	123	126	141	311	1240	755	606	344	458	115	92
6	197	121	125	159	276	804	783	544	268	408	115	90
7	177	121	123	175	254	518	709	621	244	369	120	94
8	173	120	117	180	252	426	612	536	233	341	121	94
9	549	121	103	196	233	373	660	441	228	307	120	94
10	351	120	124	268	224	332	728	403	439	281	119	88
11	250	262	101	249	219	308	638	377	374	264	115	83
12	196	192	110	183	211	298	714	379	300	248	109	109
13	186	151	122	213	248	291	727	376	813	240	102	88
14	177	131	122	254	549	281	798	423	2170	234	103	95
15	164	125	121	224	1240	613	936	390	833	223	110	120
16	158	119	112	194	1580	541	865	357	599	209	109	113
17	146	117	118	189	1580	428	776	528	778	199	104	121
18	160	117	121	162	1140	383	664	1590	5560	194	98	124
19	160	118	121	176	1230	358	593	1600	2410	186	92	142
20	154	122	120	179	1140	343	548	753	1610	177	107	168
21	162	119	119	177	765	322	521	564	1130	173	130	99
22	154	121	118	167	600	304	503	504	900	167	228	98
23	152	123	123	170	556	295	482	446	744	160	169	93
24	150	115	164	166	496	289	445	398	628	153	126	93
25	146	116	204	162	427	301	421	375	533	157	116	93
26	139	119	169	145	386	557	417	356	790	151	110	93
27	138	116	150	149	368	788	394	333	6030	147	105	93
28	144	167	130	182	354	816	380	309	2500	141	99	110
29	128	142	120	1650	---	1000	371	281	3500	155	106	269
30	128	141	130	993	---	1740	359	260	1600	138	105	151
31	124	---	135	542	---	2940	---	253	---	131	106	---
TOTAL	5867	3977	3979	8211	15881	18205	20757	21694	36508	9071	3656	3291
MEAN	189	133	128	265	567	587	692	700	1217	293	118	110
MAX	549	262	204	1650	1580	2940	1910	4020	6030	1050	228	269
MIN	124	115	101	140	211	281	359	253	228	131	92	83
AC-FT	11640	7890	7890	16290	31500	36110	41170	43030	72410	17990	7250	6530
CAL YR 1982	TOTAL	132485	MEAN	363	MAX	11700	MIN	55	AC-FT	262800		
WTR YR 1983	TOTAL	151097	MEAN	414	MAX	6030	MIN	83	AC-FT	299700		

PLATTE 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 downstream from county road bridge and 0.4 mi north of intersection of Interstate Highway 80 and North 27th Street north of Lincoln.

DRAINAGE AREA.--43.6 mi².

PERIOD OF RECORD.--January 1969 to current year.

REVISED RECORDS.--WDR NE-77-1: 1969-73(M).

GAGE.--Water-stage recorder. Datum of gage is 1,114.73 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 10, 1980, water-stage recorder at present site and datum 3.00 ft higher.

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

AVERAGE DISCHARGE.--14 years, 12.3 ft³/s, 8,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft³/s June 15, 1982, gage height, 15.80 ft from rating curve extended above 1,400 ft³/s on basis of slope-area measurement; maximum gage height, 16.38 ft Oct. 11, 1973, backwater from Salt Creek, current datum, minimum daily discharge, 0.20 ft³/s Sept. 29, 30, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 1	1000	1170	10.93	June 27	0230	692	9.39
May 18	2130	*2340	12.92	June 29	1500	1020	10.50
June 17	2330	1240	11.10				

Minimum daily discharge, 2.7 ft³/s Aug. 4, 5, Sept. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	6.4	11	5.6	18	14	44	372	14	17	3.5	3.0
2	10	6.8	9.4	6.0	15	13	31	42	13	14	3.4	3.0
3	7.9	6.3	8.3	6.6	12	13	27	32	13	12	2.9	3.0
4	6.6	6.3	8.2	7.0	10	14	23	23	13	11	2.7	2.9
5	6.6	6.5	8.8	8.0	11	32	29	21	23	10	2.7	3.0
6	6.9	6.6	7.6	9.0	8.0	20	30	19	14	9.8	3.0	3.1
7	7.5	6.8	7.6	10	7.0	17	24	20	12	9.2	3.2	3.0
8	7.1	6.5	8.7	10	9.0	14	22	17	11	8.5	3.2	2.9
9	18	6.7	8.8	11	10	13	31	16	10	7.8	4.4	2.8
10	7.0	6.6	6.9	12	10	13	25	15	10	7.5	3.2	2.8
11	6.2	15	13	13	11	13	20	15	12	7.1	3.0	2.7
12	6.3	10	11	13	12	14	33	15	12	7.0	3.2	2.7
13	6.2	6.7	8.4	15	15	14	28	15	107	6.7	3.2	2.8
14	6.2	6.4	7.2	22	20	14	44	19	54	6.0	3.2	3.1
15	6.2	6.2	6.9	13	60	75	44	16	15	5.8	3.1	3.5
16	5.8	6.7	8.1	12	116	28	38	14	13	5.7	3.0	3.4
17	6.1	6.7	6.8	10	61	21	30	35	112	5.6	2.8	3.2
18	6.1	6.9	7.5	9.0	53	19	24	384	253	5.2	3.1	3.1
19	6.0	7.0	7.7	9.3	57	19	22	139	27	4.8	3.2	3.4
20	6.5	6.4	7.5	8.3	40	17	20	31	19	4.3	4.3	4.1
21	6.4	5.9	7.4	8.0	26	16	19	26	15	4.3	4.6	3.6
22	6.4	5.7	7.5	7.0	23	15	18	22	13	4.2	18	3.6
23	6.1	5.5	7.7	6.6	21	14	17	19	12	4.3	7.8	3.9
24	6.3	5.2	9.8	6.6	20	14	16	17	11	4.7	4.5	3.8
25	6.3	5.2	23	7.0	16	15	16	16	10	4.6	3.5	3.8
26	6.4	5.3	13	6.8	16	36	15	16	11	4.3	3.4	4.1
27	6.5	5.8	10	6.8	16	41	16	15	212	3.8	3.3	4.0
28	6.9	6.5	8.0	8.0	14	49	15	14	39	4.0	3.2	4.4
29	6.2	12	7.0	201	---	53	15	13	172	3.9	3.2	10
30	6.1	11	6.0	39	---	215	15	13	25	3.8	3.1	6.2
31	6.3	---	5.6	19	---	124	---	13	---	3.8	3.1	---
TOTAL	218.7	211.6	274.4	525.6	707.0	989	751	1444	1277	210.7	122.0	108.9
MEAN	7.05	7.05	8.85	17.0	25.3	31.9	25.0	46.6	42.6	6.80	3.94	3.63
MAX	18	15	23	201	116	215	44	384	253	17	18	10
MIN	5.8	5.2	5.6	5.6	7.0	13	15	13	10	3.8	2.7	2.7
AC-FT	434	420	544	1040	1400	1960	1490	2860	2530	418	242	216

CAL YR 1982 TOTAL 8639.2 MEAN 23.7 MAX 1950 MIN 1.7 AC-FT 17140
WTR YR 1983 TOTAL 6839.9 MEAN 18.7 MAX 384 MIN 2.7 AC-FT 13570

PLATTE RIVER BASIN

197

06803520 STEVENS CREEK NEAR LINCOLN, NE

LOCATION.--Lat 40°51'25", long 96°35'42", in NW1/4NE1/4 sec.11, T.10 N., R.7 E., Lancaster County, Hydrologic Unit 10200203, on left bank 20 ft upstream from county road bridge on Havelock Avenue and 1.6 mi east of 70th Street at east edge of Lincoln.

DRAINAGE AREA.--47.8 mi².

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,125.57 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--15 years, 14.8 ft³/s, 10,720 acre-ft/yr; median of yearly mean discharges, 8.7 ft³/s, 6,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,820 ft³/s June 15, 1982, gage height, 18.85 ft; no flow July 31, Aug. 2-4, 1977.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	2130	1010	9.14	June 18	0930	663	7.50
May 1	1100	1490	11.11	June 27	1100	*2660	14.79
May 18	2130	1070	9.38				

Minimum daily discharge, 1.2 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	5.5	9.7	9.6	25	19	124	476	14	29	4.0	2.1
2	13	6.0	8.6	9.4	22	18	66	71	15	22	3.8	1.8
3	11	6.2	7.2	9.1	19	17	46	56	14	17	3.5	1.9
4	7.6	5.3	6.2	9.1	15	18	37	32	13	14	3.3	1.7
5	6.6	5.1	7.0	8.8	13	170	40	26	17	12	3.2	1.4
6	8.5	5.6	6.3	11	14	51	65	24	21	12	3.1	1.5
7	8.3	6.5	5.6	20	12	31	72	23	16	11	3.4	1.4
8	6.6	6.3	5.8	20	11	22	40	19	13	9.9	3.4	1.5
9	9.4	5.5	6.0	20	10	18	61	18	12	9.1	3.1	1.4
10	7.7	5.9	5.8	74	12	17	101	17	11	8.8	2.9	1.2
11	6.4	31	5.4	36	12	17	43	17	15	8.0	2.8	1.2
12	5.8	20	5.4	31	13	18	55	18	18	7.7	2.6	1.4
13	5.6	9.0	6.0	21	17	18	47	19	44	7.5	2.3	1.7
14	5.7	6.8	5.8	44	103	16	56	26	130	6.6	2.5	1.3
15	5.4	6.0	5.4	24	194	24	104	22	23	6.6	2.4	1.6
16	5.2	6.1	6.2	23	204	24	85	18	15	6.5	2.3	1.8
17	4.8	6.3	7.0	17	202	18	52	34	330	6.5	2.1	1.7
18	5.0	6.5	6.8	17	171	17	36	271	323	6.1	2.1	1.3
19	5.3	7.4	7.2	11	208	16	30	252	48	5.5	2.1	1.6
20	5.9	7.5	7.0	11	130	16	27	57	25	5.0	2.1	1.8
21	5.7	6.4	6.8	13	57	14	24	38	18	4.6	4.1	1.8
22	5.6	5.4	7.1	12	43	14	23	37	14	4.3	5.4	1.5
23	5.1	5.3	7.6	11	42	14	22	27	12	4.2	4.5	1.5
24	5.1	10	8.9	11	35	14	19	24	11	4.3	3.2	1.4
25	5.2	4.7	26	11	26	14	19	25	9.6	4.7	2.5	1.7
26	4.7	5.1	14	11	23	76	18	19	11	4.6	2.3	1.5
27	4.5	4.9	10	11	23	134	17	18	1320	4.5	2.1	1.3
28	6.2	9.2	15	80	21	110	17	16	270	4.2	2.0	1.3
29	6.6	14	13	60	---	155	18	14	116	5.2	2.0	3.8
30	5.7	11	11	103	---	431	17	13	44	4.9	2.1	3.1
31	5.7	---	10	27	---	284	---	13	---	4.1	1.9	---
TOTAL	204.9	240.5	259.8	776.0	1677	1825	1381	1740	2942.6	260.4	89.1	50.2
MEAN	6.61	8.02	8.38	25.0	59.9	58.9	46.0	56.1	98.1	8.40	2.87	1.67
MAX	13	31	26	103	208	431	124	476	1320	29	5.4	3.8
MIN	4.5	4.7	5.4	8.8	10	14	17	13	9.6	4.1	1.9	1.2
AC-FT	406	477	515	1540	3330	3620	2740	3450	5840	517	177	100

CAL YR 1982	TOTAL	11822.40	MEAN 32.4	MAX 2120	MIN .60	AC-FT 23450
WTR YR 1983	TOTAL	11446.50	MEAN 31.4	MAX 1320	MIN 1.2	AC-FT 22700

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 north of Interstate Highway 80 and 3 mi southwest of Waverly.

DRAINAGE AREA.--815 mi².

PERIOD OF RECORD.--Water year 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHUS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 27...	1200	143	6000	7.6	14.0	6.6	K120	K23	360	95	29
NOV 22...	1145	154	5300	7.5	6.5	10.8	K160	K120	370	99	30
DEC 20...	1400	144	5400	8.3	4.5	14.3	<33	<20	370	100	30
JAN 18...	1215	75	4300	7.7	.5	11.2	K2	K35	340	92	27
FEB 17...	1345	2070	680	7.8	2.0	13.5	K1600	160000	130	36	9.2
MAR 28...	1315	800	1340	7.9	5.0	12.9	<330	K2000	200	56	15
APR 21...	1330	660	2180	8.1	11.5	10.9	K2	K17	290	80	22
MAY 19...	1045	2990	625	7.6	12.5	8.6	40000	K240000	110	30	8.0
JUN 15...	1500	1150	1220	7.9	22.5	6.8	20000	36000	210	58	16
JUL 12...	1230	293	4050	8.0	25.0	7.2	770	640	340	95	26
AUG 08...	1400	140	6500	8.0	28.5	9.2	K230	3200	360	94	30
SEP 07...	1235	85	--	8.0	21.0	9.0	K350	780	390	99	34

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

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, NO2+NO3 (MG/L AS N) (00630)	NITRO- GEN, AMMONIA (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)
OCT 27...	280	1600	1.8	2.60	1.7	4.30	6.1	1.80	--	--	--
NOV 22...	260	1500	2.9	1.70	1.8	3.50	6.4	1.70	4	<100	<1
DEC 20...	260	1400	1.6	3.20	.80	4.00	5.6	1.70	--	--	--
JAN 18...	210	1000	1.6	3.20	1.8	5.00	6.6	1.70	--	--	--
FEB 17...	42	99	1.4	.810	4.7	5.50	6.9	1.30	9	100	<1
MAR 28...	89	240	1.4	.720	2.5	3.20	4.6	.770	--	--	--
APR 21...	120	450	1.5	.750	1.7	2.40	3.9	.600	--	--	--
MAY 19...	44	85	1.9	.570	14	15.0	17	1.30	12	400	1
JUN 15...	78	210	2.3	.490	3.9	4.40	6.7	1.50	--	--	--
JUL 12...	210	1000	2.6	.760	1.5	2.30	4.9	.940	--	--	--
AUG 08...	320	1700	2.9	1.20	1.1	2.30	5.2	8.10	7	100	<1
SEP 07...	390	2300	1.8	2.20	1.2	3.40	5.2	1.70	--	--	--

06803525 SALT CREEK BELOW STEVENS CREEK, NEAR WAVERLY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (010134)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY, TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELF- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 27...	--	--	--	--	--	--	--	--	--	8.3
NOV 22...	<10	0	530	0	310	.0	2	<0	20	6.2
DEC 20...	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	7.2
FEB 17...	30	40	29000	40	1300	.0	1	<0	170	33
MAR 28...	--	--	--	--	--	--	--	--	--	17
APR 21...	--	--	--	--	--	--	--	--	--	7.3
MAY 19...	50	70	61000	90	1700	.0	1	0	240	57
JUN 15...	--	--	--	--	--	--	--	--	--	23
JUL 12...	--	--	--	--	--	--	--	--	--	6.7
AUG 08...	<10	0	430	0	350	<.0	3	<0	30	5.6
SEP 07...	--	--	--	--	--	--	--	--	--	6.0

DATE	TIME	HARDNESS NONCARBONATE (MG/L AS CaCO3) (95902)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CaCO3) (90410)	FLUORIDE, 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)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT 27...	1200	43	1100	26	12	314	.60	22	3330	4.5	1280	1.8
NOV 22...	1145	47	1100	26	12	324	.60	23	3220	4.4	1340	2.9
DEC 20...	1400	47	970	23	11	327	.60	21	2990	4.1	1160	1.6
JAN 18...	1215	27	740	18	11	314	.60	22	2290	3.1	464	1.6
FEB 17...	1345	6	77	3.1	8.6	122	.30	11	356	.48	1990	1.4
MAR 28...	1315	0	180	5.7	7.9	204	.30	12	723	.98	1560	1.4
APR 21...	1330	23	310	8.2	8.1	268	.40	13	1160	1.6	2070	1.5
MAY 19...	1045	0	64	2.8	6.7	108	.30	11	314	.43	2530	1.8
JUN 15...	1500	16	160	5.0	8.6	195	.40	12	660	.90	2050	2.3
JUL 12...	1230	54	710	17	11	291	.50	--	--	--	--	2.6
AUG 08...	1400	36	1200	29	14	323	.60	21	3570	4.9	1350	2.9
SEP 07...	1235	73	1600	37	25	315	.70	23	4660	6.3	1070	1.7

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 bank 30 ft downstream from bridge on east-west county road and 5.7 mi southeast of Ceresco.

DRAINAGE AREA.--119 mi².

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

REVISED RECORDS.--WDR NE-76-1: 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 1,112.18 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1980, at datum 3.0 ft higher.

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

AVERAGE DISCHARGE.--13 years, 32.0 ft³/s, 23,180 acre-ft/yr; median of yearly mean discharges, 30 ft³/s, 21,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s June 15, 1982, gage height, 18.84 ft, present datum, from floodmark; minimum daily, 0.25 ft³/s July 13, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 15	2400	1160	8.58	May 1	1800	2000	11.40
Mar. 15	1100	940	7.93	June 18	0930	*2470	12.51
Mar. 30	2200	1380	9.49				

Minimum daily discharge, 4.0 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	13	26	11	30	72	244	835	33	33	9.9	9.4
2	43	14	24	12	30	34	106	221	30	28	9.9	9.1
3	28	14	19	13	20	32	67	190	27	25	10	8.5
4	18	13	16	14	24	32	55	72	24	21	9.1	7.2
5	15	13	16	14	25	124	64	53	35	20	9.1	7.6
6	16	14	16	15	20	72	107	50	29	20	11	7.2
7	22	16	14	30	17	45	76	68	24	19	11	7.0
8	16	14	15	27	20	33	50	43	22	18	9.9	7.2
9	131	14	18	28	24	30	87	36	21	17	9.3	6.7
10	23	15	15	45	25	30	96	33	21	17	8.7	5.3
11	15	47	16	40	26	28	52	31	30	16	9.1	4.7
12	14	57	15	35	27	31	132	34	27	14	8.2	4.9
13	13	18	15	40	30	30	93	35	91	14	7.4	5.4
14	13	17	15	120	354	29	108	50	320	15	8.7	7.6
15	13	15	14	30	720	440	152	38	45	15	9.3	9.4
16	12	14	13	20	649	125	158	30	34	14	8.6	8.2
17	12	12	14	17	44	72	120	75	57	15	7.5	6.5
18	12	14	15	13	251	50	69	159	1400	14	10	5.7
19	12	17	15	14	281	39	59	287	208	14	9.4	5.3
20	14	18	15	13	184	32	54	69	215	13	10	8.9
21	13	16	15	13	82	30	53	52	46	12	16	5.6
22	13	16	15	13	71	30	49	47	33	9.1	27	4.1
23	13	15	16	14	75	30	44	38	31	8.9	26	4.0
24	13	15	19	15	60	30	38	38	28	9.6	14	4.8
25	13	16	100	15	44	32	35	34	26	11	10	5.4
26	13	16	35	16	41	95	33	30	35	9.7	9.2	5.6
27	13	19	20	17	44	126	30	30	83	9.9	8.9	4.7
28	13	22	14	18	40	152	32	28	63	11	9.5	5.7
29	13	29	12	225	---	163	31	24	224	13	9.4	13
30	12	26	11	100	---	522	31	23	58	12	9.3	8.1
31	13	---	11	56	---	792	---	26	---	10	9.3	---
TOTAL	640	559	594	1053	3258	3382	2325	2779	3320	478.2	334.7	202.8
MEAN	20.6	18.6	19.2	34.0	116	109	77.5	89.6	111	15.4	10.8	6.76
MAX	131	57	100	225	720	792	244	835	1400	33	27	13
MIN	12	12	11	11	17	28	30	23	21	8.9	7.4	4.0
AC-FT	1270	1110	1180	2090	6460	6710	4610	5510	6590	949	664	402

CAL YR 1982	TOTAL	25139.1	MEAN	68.9	MAX	4990	MIN	6.0	AC-FT	49860
WTR YR 1983	TOTAL	18925.7	MEAN	51.9	MAX	1400	MIN	4.0	AC-FT	37540

PLATTE RIVER BASIN

201

06803555 SALT CREEK AT GREENWOOD, NE

LOCATION.--Lat 40°57'56", long 96°27'01", at center of sec.31, T.12 N., R.9 E., Cass County, Hydrologic Unit 10200203, on right bank just downstream from county road bridge, 0.5 mi west of Greenwood.

DRAINAGE AREA.--1,051 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1951 to current year. Records furnished by Corps of Engineers prior to Oct. 1, 1972.

REVISED RECORDS.--WDR NE-71: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,068.14 ft 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.--31 years (water years 1953-83), 298 ft³/s, 215,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft³/s June 24, 1963, gage height, 23.46 ft; maximum gage height, 24.93 ft June 15, 1982; minimum daily discharge, 14 ft³/s Jan. 10, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 29	1815	5320	9.51	June 14	0445	5480	9.68
Feb. 16	0445	3820	8.16	June 18	1000	12300	14.36
Mar. 31	0300	7160	11.02	June 27	1045	*15400	16.11
May 1	1700	12000	14.17	June 29	0745	7720	11.43
May 18	2400	12500	14.49				

Minimum daily discharge, 110 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	270	164	236	180	541	482	2770	5760	399	1460	169	140
2	453	182	226	180	450	463	1690	3680	390	1150	169	130
3	335	179	206	185	400	444	1270	1710	386	930	169	125
4	250	169	188	190	400	453	1040	1070	369	765	169	120
5	207	169	185	200	450	1490	1010	828	561	656	162	130
6	236	169	180	210	350	1230	1210	720	475	595	165	125
7	236	169	175	250	340	779	1060	750	403	534	176	123
8	204	165	158	260	300	622	892	745	365	493	172	112
9	608	160	170	300	320	529	957	599	345	457	163	115
10	538	161	161	400	330	456	1110	543	511	417	154	113
11	319	386	166	350	330	431	914	511	590	382	153	110
12	266	357	180	300	357	414	1050	506	488	360	139	134
13	238	250	190	350	370	411	1070	520	821	346	132	121
14	230	210	188	400	1110	393	1120	604	3690	338	131	118
15	223	194	174	350	2700	1190	1510	571	1330	323	130	155
16	205	191	166	300	3130	977	1320	497	887	309	141	151
17	194	188	177	240	2990	656	1120	695	796	296	132	155
18	194	183	173	180	2040	595	962	2540	8810	282	129	158
19	194	195	178	190	2220	529	801	5170	3650	276	125	161
20	199	196	173	200	1850	479	705	1360	2370	254	127	291
21	194	184	174	210	1140	466	703	898	1510	242	274	154
22	188	174	174	220	838	421	723	781	1180	219	352	141
23	181	177	173	220	776	390	689	680	988	208	250	138
24	178	163	198	230	708	386	599	608	851	205	200	135
25	178	155	360	230	616	382	560	576	744	208	160	134
26	178	172	230	220	537	637	551	538	682	208	145	134
27	172	161	200	240	535	1190	557	506	9430	201	140	137
28	198	278	180	276	514	1270	521	475	3020	194	135	138
29	185	273	160	2790	---	1610	510	439	5960	230	140	464
30	172	249	160	2300	---	2660	491	403	2730	205	140	263
31	163	---	170	933	---	5450	---	386	---	190	145	---
TOTAL	7586	6023	5829	13084	26642	27885	29485	35669	54731	12933	5088	4625
MEAN	245	201	188	422	952	900	983	1151	1824	417	164	154
MAX	608	386	360	2790	3130	5450	2770	5760	9430	1460	352	464
MIN	163	155	158	180	300	382	491	386	345	190	125	110
AC-FT	15050	11950	11560	25950	52840	55310	58480	70750	108600	25650	10090	9170
CAL YR 1982	TOTAL	242484	MEAN	664	MAX	32500	MIN	72	AC-FT	481000		
WTR YR 1983	TOTAL	229580	MEAN	629	MAX	9430	MIN	110	AC-FT	455400		

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 Oct. 11, 1973; minimum daily, 1.0 ton Oct. 9, 1971.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 7,350 micromhos Sept. 12; minimum daily, 332 micromhos June 27.

WATER TEMPERATURES: Maximum, 34.0°C Aug. 17; minimum, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)
OCT										
27...	0930	178	4800	7.3	11.0	6.8	33	K160	K60	340
NOV										
22...	1030	181	4400	7.6	6.5	11.1	25	K150	770	350
DEC										
20...	1225	173	4300	8.2	3.0	13.4	<10	K31	K67	340
JAN										
18...	1100	82	3500	7.9	.0	12.6	29	K23	240	340
FEB										
18...	1100	1860	735	7.9	2.0	13.4	100	K1700	74000	140
MAR										
28...	1130	1150	1240	8.0	3.5	12.8	60	K330	14000	200
APR										
20...	1200	707	1850	8.2	9.5	12.2	30	K5	1100	280
MAY										
19...	0945	4850	490	7.8	12.5	8.0	210	31000	K340000	86
JUN										
21...	0930	1560	1020	8.0	23.0	6.2	78	K7000	16000	210
JUL										
12...	1030	370	3420	7.9	27.0	7.4	31	K1100	5800	390
AUG										
08...	1300	176	5200	8.2	28.0	10.1	32	280	2500	360
SEP										
07...	1100	123	6700	8.1	21.0	9.2	45	2700	K2300	350

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

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SULFATE DIS- SOLVED (MG/L AS S(14) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT 27...	93	27	240	1200	29	2.6	1.60	1.5	3.10	5.7
NOV 22...	94	28	210	1100	2	3.4	.880	.62	1.50	4.9
DEC 20...	93	27	210	1000	14	2.2	2.30	1.3	3.60	5.8
JAN 18...	90	27	180	890	66	1.9	2.20	1.0	3.20	5.1
FEB 18...	39	10	46	100	1010	1.6	.680	4.4	5.10	6.7
MAR 28...	54	15	82	220	298	1.6	.450	2.8	3.20	4.8
APR 20...	76	22	120	350	200	2.0	.490	1.6	2.10	4.1
MAY 19...	24	6.4	33	57	2520	1.8	.560	5.1	5.70	7.5
JUN 21...	59	15	68	150	589	1.5	2.00	3.6	5.60	7.1
JUL 12...	110	28	180	830	33	2.9	.400	1.8	2.20	5.1
AUG 08...	96	29	270	1400	25	2.9	.380	1.2	1.60	4.5
SEP 07...	91	29	320	1800	23	2.7	1.50	1.3	2.80	5.5

DATE	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECov- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECov- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECov- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECov- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECov- ERABLE (UG/L AS FE) (01045)	IRON, SUS- PENDED RECov- ERABLE (UG/L AS FF) (01044)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 27...	1.70	5	<100	<1	10	0	800	--	--
NOV 22...	1.70	4	100	<1	10	0	740	710	30
DEC 20...	1.50	4	100	2	<10	10	490	--	--
JAN 18...	1.50	4	<100	<1	<10	0	1500	--	--
FEB 18...	1.10	8	200	1	20	30	22000	22000	340
MAR 28...	.760	5	200	1	20	20	12000	--	--
APR 20...	.590	5	100	<1	10	20	4700	--	--
MAY 19...	1.60	15	800	1	60	100	71000	71000	300
JUN 21...	.480	9	500	<1	20	40	27000	--	--
JUL 12...	1.40	7	100	<1	10	0	1700	--	--
AUG 08...	1.60	8	<100	<1	<10	0	560	510	50
SEP 07...	2.60	7	200	<1	<10	0	650	--	--

PLATTE RIVER BASIN

06803555 SALT CREEK AT GREENWOOD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 27...	0	190	--	--	.0	3	<0	20	6.4
NOV 27...	0	250	50	200	.0	2	<0	30	6.5
DEC 20...	0	310	--	--	.0	2	<0	20	5.6
JAN 18...	0	270	--	--	.0	2	<0	20	6.5
FEB 18...	20	1000	910	94	.0	1	<0	110	28
MAR 28...	30	430	--	--	<.0	2	<0	60	18
APR 20...	20	260	--	--	.5	3	<0	20	7.3
MAY 19...	90	2200	2100	66	.0	1	<0	300	68
JUN 21...	20	1200	--	--	.0	--	<0	120	28
JUL 12...	0	140	--	--	.0	3	<0	30	5.3
AUG 08...	0	170	10	160	.0	2	<0	40	5.5
SEP 07...	0	890	--	--	<.0	2	<0	30	7.5

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 AS CACO3) (90410)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV 22...	1030	34	820	20	11	317	.60
FEB 18...	1100	10	83	3.2	8.6	129	.20
MAY 19...	0945	5	51	2.5	6.4	81	.20
AUG 08...	1300	55	950	23	12	305	.60

DATE	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)
NOV 22...	24	2480	3.4	1210	3.4	1.70	400
FEB 18...	11	376	.51	1890	1.6	.260	0
MAY 19...	10	237	.32	3100	1.7	.030	0
AUG 08...	21	2960	4.0	1410	3.0	1.50	470

PLATTE RIVER BASIN

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06803555 SALT CREEK AT GREENWOOD, NE--Continued

SPECIFIC CONDUCTANCE (MICROMHUS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3260	4840	4440	---	1680	2430	647	544	3170	1160	5130	5650
2	2290	4890	3970	---	2380	2440	885	624	3250	1350	5120	5820
3	2950	4310	4090	---	2610	2570	1110	973	3270	1670	5120	5920
4	3760	4500	4140	4110	2610	1210	1370	1330	3350	1870	5280	6060
5	4140	4680	4310	4110	2440	1190	1540	1700	3340	2130	5180	6400
6	4520	4670	4350	3990	2450	1240	1390	1860	2740	2330	5310	6390
7	4090	4670	4370	3990	---	1630	1460	2030	3160	2520	5320	6550
8	4100	4770	4350	3090	2850	1940	1680	1680	3350	2560	5310	7080
9	2670	4890	4550	3180	2830	2250	1450	2130	3540	---	5500	6670
10	1940	4760	5240	2170	2960	2280	1480	2370	2550	2990	5680	6600
11	2850	1610	4850	2160	2960	2570	1590	2470	1990	3140	5700	6280
12	3460	2740	5310	2550	3150	2660	1530	2540	2620	3230	5920	7350
13	3750	3700	5520	2740	3150	2750	1450	2440	2790	2760	5780	5880
14	3760	4000	4680	2750	1210	2770	1450	2230	543	3260	5850	6700
15	4130	4080	4850	2660	737	1390	1130	2300	946	3350	6350	5660
16	4130	4480	4500	2660	572	1360	---	2520	1580	3390	6350	5380
17	4290	4480	4840	2890	600	1830	---	2550	1820	3550	5900	5320
18	4440	4450	4480	2930	735	2140	1580	1410	397	3360	6380	5690
19	4270	4350	4490	3500	813	2270	1780	698	608	3740	5700	5520
20	4250	4360	4380	3510	813	2390	1870	1240	795	3760	5870	3140
21	4240	4300	4540	3530	1450	2480	1970	1680	1090	3620	5870	5290
22	4260	4270	4540	3540	1460	2670	2160	1930	1310	4090	3750	6150
23	4500	4490	4510	3780	1580	2740	2160	2120	1510	4150	3950	6210
24	4700	4490	4530	3780	1670	2770	2230	2370	1570	4150	3960	6260
25	4530	4680	2750	3840	1820	2780	2370	2440	1880	4150	4870	---
26	4640	4770	2960	3850	2130	1690	2480	2470	2080	4120	5120	6760
27	4700	4690	3050	3860	2210	1180	2440	2650	332	4120	5120	6690
28	4860	4730	---	3850	2150	1170	2660	2750	563	4150	5520	6260
29	4360	3820	3860	3860	---	838	2640	2930	355	3860	5520	2230
30	4530	3810	---	1200	---	838	2680	3160	845	4150	5470	4320
31	4640	---	3860	1180	---	496	---	3220	---	4150	5530	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	13.5	6.0	---	.5	9.5	7.0	12.0	16.0	27.0	30.0	30.0
2	20.0	13.0	10.5	---	.5	10.0	5.5	11.0	19.0	28.0	30.0	29.5
3	20.5	8.0	9.5	---	.0	12.0	5.5	13.0	23.0	27.0	28.0	27.5
4	20.5	4.0	7.0	1.0	.5	12.0	5.5	16.0	23.0	25.0	26.0	27.0
5	23.0	5.0	5.5	2.0	.5	12.5	4.0	17.0	18.0	26.0	29.0	25.5
6	17.5	9.0	6.0	5.0	.5	11.5	5.0	20.0	19.5	27.0	25.0	26.0
7	18.0	10.0	3.0	4.0	---	7.5	7.5	16.0	22.0	25.0	30.0	25.0
8	20.0	7.0	2.0	3.0	.5	4.5	7.0	15.5	24.0	28.0	31.0	26.0
9	15.5	11.0	.5	3.0	.5	4.5	4.0	18.0	26.0	---	24.0	29.0
10	13.5	11.0	4.0	5.0	3.0	5.0	8.5	18.0	21.5	27.0	25.0	24.0
11	13.0	10.0	.0	4.5	4.0	7.0	10.5	19.5	20.0	26.0	25.0	21.5
12	13.0	5.0	.0	2.5	5.0	9.0	10.0	17.0	20.5	26.5	23.0	21.5
13	12.5	3.0	.0	4.0	5.5	11.0	7.0	17.0	20.0	29.0	27.0	21.0
14	17.0	3.5	4.0	3.0	3.5	10.0	6.5	14.0	17.5	27.0	31.0	19.5
15	16.0	3.5	4.5	2.0	4.5	9.0	7.0	16.0	20.5	28.0	25.0	23.5
16	15.0	---	2.0	2.0	2.5	6.0	---	18.5	20.0	25.0	26.0	23.0
17	16.0	---	4.5	2.0	2.0	4.0	---	17.0	21.0	28.5	34.0	25.0
18	17.5	---	4.5	1.5	6.5	3.5	10.0	---	19.0	30.0	26.0	22.0
19	11.5	12.0	4.5	.5	5.0	4.5	8.0	14.0	20.0	31.0	32.0	25.5
20	10.0	11.5	3.0	.5	4.5	3.0	10.0	15.0	23.0	32.0	26.0	16.0
21	11.0	9.5	6.5	3.0	6.0	5.5	12.0	15.0	26.0	32.0	23.0	16.0
22	12.0	4.5	7.0	3.0	7.0	7.0	13.0	18.0	27.0	33.0	27.0	17.0
23	12.0	3.5	6.0	3.5	7.5	7.0	14.0	19.0	27.0	28.0	26.0	16.5
24	13.0	3.5	6.0	3.5	5.0	8.0	15.0	19.5	28.0	24.0	32.0	12.0
25	14.5	4.0	4.0	2.0	3.0	5.0	16.0	20.0	27.0	27.0	32.0	---
26	13.5	3.0	1.0	.5	7.5	1.5	19.0	20.0	25.0	28.0	32.0	22.0
27	14.0	2.0	1.0	.5	9.0	4.0	14.0	22.0	22.5	29.5	28.0	23.0
28	14.0	2.5	---	1.0	10.0	5.5	16.0	22.0	23.0	31.0	30.0	20.0
29	12.5	3.0	.5	2.0	---	5.0	14.0	20.0	22.0	29.5	30.0	21.0
30	14.0	4.5	1.0	2.5	---	8.0	15.0	18.5	25.0	29.5	28.5	23.0
31	14.0	---	---	1.0	---	6.5	---	16.0	---	29.5	29.0	---

PLATTE RIVER BASIN

06804000 WAHOO CREEK AT ITHACA, NE

LOCATION.--Lat 41°08'40", long 96°32'10", in NW1/4NW1/4 sec.33, T.14 N., R.8 E., Saunders County, Hydrologic Unit 10200203, on right bank 16 ft downstream from bridge on State Highway 63 and 0.5 mi south of Ithaca.

DRAINAGE AREA.--271 mi², of which 268 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WDR NE-71-1: Drainage area. WDR NE-78-1: 1977(P).

GAGE.--Water-stage recorder. Datum of gage is 1,110.48 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1959, nonrecording gages at same site and datum. Oct. 28, 1959, to Feb. 22, 1961, nonrecording gage at site 1.5 mi upstream at datum 8.21 ft higher.

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

AVERAGE DISCHARGE.--34 years, 80.8 ft³/s, 58,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,400 ft³/s June 24, 1963, gage height, 22.93 ft, from rating curve extended above 13,000 ft³/s on basis of indirect measurement of peak flow; minimum daily, 3.3 ft³/s June 11, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since about 1910, 23.22 ft, from floodmark, Aug. 2, 1959, discharge, 45,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	0645	2740	17.87	May 1	2345	1840	14.66
Jan. 29	1400	2450	16.83	June 14	0730	2210	16.09
Feb. 16	0345	1910	15.12	June 18	unknown	*5200	a20.60
Apr. 1	0300	1720	14.47	June 29	unknown	2580	a17.20

a Highwater mark.

Minimum daily discharge, 28 ft³/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	380	51	61	37	80	110	1020	544	128	206	62	39
2	171	53	67	38	70	100	522	760	129	167	58	38
3	127	55	62	37	60	96	374	700	129	149	54	38
4	60	51	54	40	50	92	311	318	120	131	51	37
5	52	48	51	45	54	700	279	260	121	119	51	36
6	72	49	52	50	45	800	338	239	128	114	52	37
7	74	53	50	70	43	400	284	264	117	108	63	36
8	103	54	43	80	45	150	248	214	112	104	56	33
9	1540	52	41	75	50	96	254	197	109	102	52	33
10	239	52	50	85	56	92	294	190	106	97	51	33
11	143	70	39	90	58	104	231	182	113	91	48	32
12	106	193	48	60	60	101	268	183	118	92	45	32
13	88	66	55	70	72	103	320	187	133	86	44	32
14	75	55	49	150	398	97	240	184	985	83	46	34
15	64	51	48	100	1080	402	334	182	193	80	46	38
16	62	56	42	80	1330	275	448	165	194	79	44	33
17	58	56	44	70	1010	167	426	182	205	78	40	28
18	58	55	47	65	516	150	312	282	3680	76	40	30
19	59	57	52	60	808	136	270	232	886	71	38	31
20	62	60	48	60	543	123	231	188	1020	68	39	75
21	64	53	48	54	225	110	238	172	540	62	67	64
22	56	49	49	50	189	109	218	167	300	59	69	41
23	55	47	51	52	205	106	201	153	200	58	47	38
24	54	40	55	54	172	105	183	147	180	58	47	39
25	54	44	413	50	136	106	177	148	170	60	45	39
26	56	47	131	45	121	136	172	140	180	60	43	37
27	54	40	80	47	136	142	158	142	250	58	43	34
28	53	55	60	52	120	178	157	134	150	57	43	37
29	52	76	45	1360	---	204	158	125	1300	61	43	68
30	50	67	40	545	---	297	152	121	445	60	42	81
31	51	---	38	193	---	1030	---	124	---	55	39	---
TOTAL	4192	1755	2013	3864	7732	6817	8818	7226	12441	2749	1508	1203
MEAN	135	58.5	64.9	125	276	220	294	233	415	88.7	48.6	40.1
MAX	1540	193	413	1360	1330	1030	1020	760	3680	206	69	81
MIN	50	40	38	37	43	92	152	121	106	55	38	28
AC-FT	8310	3480	3990	7660	15340	13520	17490	14330	24680	5450	2990	2390
CAL YR 1982	TOTAL	69869	MEAN 191	MAX 13300	MIN 15	AC-FT 138600						
WTR YR 1983	TOTAL	60318	MEAN 165	MAX 3680	MIN 28	AC-FT 119600						

PLATTE RIVER BASIN

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06805500 PLATTE RIVER AT LOUISVILLE, NE
(National stream-quality accounting network station)

LOCATION.--Lat 41°00'55", long 96°09'28", in NW1/4NW1/4 sec.14, T.12 N., R.11 E., Sarpy County, Hydrologic Unit 10200202, on the left bank at the upstream side of bridge on Nebraska Highway 50, 1 mi north of Louisville.

DRAINAGE AREA.--85,800 mi², approximately, of which about 71,000 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1953 to current year. October 1961 to September 1973 published as Platte River at South Bend.

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

GAGE.--Water-stage recorder. Datum of gage is 1,007.10 ft National Geodetic Vertical Datum of 1929. Dec. 5, 1961, to Sept. 30, 1973, at site 7 mi upstream at datum 31.43 feet higher.

REMARKS.--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.--30 years, 5,976 ft³/s, 4,330,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 124,000 ft³/s Mar. 30, 1960, gage height, 12.45 ft; minimum daily, 131 ft³/s Sept. 3, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since at least 1881, 124,000 ft³/s Mar. 30, 1960, gage height, 12.45 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 69,000 ft³/s June 19, gage height, 9.36 ft; minimum daily discharge, 2,400 ft³/s Dec. 30-Jan. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5240	6000	6620	2400	7000	15700	30300	14300	14500	45200	10400	9570
2	10100	5470	7120	2800	6600	14300	27500	25900	14500	36900	10700	10300
3	11000	5720	7110	3200	6000	14100	23600	29000	15000	33000	10600	9370
4	10600	5310	6900	3500	5800	13500	22100	27500	15500	30300	10800	9190
5	11000	5130	7080	4000	5400	14000	20800	24000	14500	29200	10400	8510
6	11100	5630	7650	4500	5400	17900	18900	21900	15500	26800	10300	8960
7	7940	5690	7180	5200	5800	25700	17800	21800	17500	26000	10200	8450
8	7570	6200	6330	6000	6100	22200	16400	22200	18000	24900	9220	8500
9	14200	5650	5480	7000	6400	17700	16200	19600	17700	23800	9600	7920
10	5690	5270	5450	8000	6800	15000	15700	19500	19000	24600	8980	8320
11	17900	6710	5360	9000	7200	13600	16400	17500	18900	23700	8800	7770
12	14000	12600	4820	10200	8400	12500	16700	16000	21500	22600	8180	8340
13	10100	15500	4860	10900	9650	11200	17700	15300	24700	21700	7550	8150
14	8340	12700	5100	11300	11900	10500	23100	15400	44200	20600	8230	8600
15	7610	9170	4780	11300	15600	13300	21900	17400	47000	18900	7430	8710
16	7060	7930	5170	11000	17800	17900	21500	15800	38400	17500	7950	9450
17	6460	7550	5570	10700	20300	18800	21600	15700	33200	16000	7910	9170
18	5690	7420	6290	9700	23200	16100	20100	16400	50700	15500	7720	9240
19	6440	6380	6580	8400	31800	14200	20100	26500	64600	14600	7760	8810
20	6380	7300	7100	7600	34200	13000	19500	24600	50100	13100	7650	10200
21	6450	7470	6980	7000	27400	11600	17600	24800	43100	12000	7870	10600
22	7500	7000	7240	7000	20800	11500	16800	22600	38400	10600	8480	9960
23	7510	7360	7090	7000	20500	10300	17000	21100	36700	9430	8510	9380
24	6650	7490	7270	6800	20200	10000	15000	20400	32200	8150	8000	9620
25	6540	6470	7000	6800	19600	9680	14200	19100	31200	7370	9730	9470
26	5850	6790	6600	7000	17700	12000	13100	16800	31800	7230	9020	9580
27	6220	6460	6200	7200	16000	13400	11500	16100	43800	7220	10900	9360
28	5690	7100	4000	7400	16700	13500	13300	15000	44400	7600	10800	10500
29	6130	6930	3500	7600	---	14800	10100	14400	53900	9300	9570	11100
30	5900	7000	2400	7400	---	15100	11000	14000	58000	10000	9960	11400
31	5290	---	2400	7200	---	22800	---	14100	---	10700	9750	---
TOTAL	254150	219400	183230	225100	400250	455880	547500	604700	968500	584500	282970	278500
MEAN	8198	7313	5911	7261	14290	14710	18250	19510	32280	18850	9128	9283
MAX	17900	15500	7650	11300	34200	25700	30300	29000	64600	45200	10900	11400
MIN	5240	5130	2400	2400	5400	9680	10100	14000	14500	7220	7430	7770
AC-FT	504100	435200	363400	446500	793900	904200	1086000	1199000	1921000	1159000	561300	552400
CAL YR 1982	TOTAL	3143840	MEAN	8613	MAX	43800	MIN	1260	AC-FT	6236000		
WTR YR 1983	TOTAL	5004680	MEAN	13710	MAX	64600	MIN	2400	AC-FT	9927000		

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 September 1981.

WATER TEMPERATURES: November 1974 to September 1981.

SUSPENDED SEDIMENT DISCHARGE: October 1971 to September 1981.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,450 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 Mar. 21, 1978; minimum daily, 64 tons July 19, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
OCT											
29...	1300	5900	660	8.1	10.5	--	--	10.1	28	1100	20000
NOV											
02...	1200	4760	680	8.1	11.5	738	45	10.9	18	K500	3200
DEC											
10...	1110	5020	--	--	.5	--	--	15.8	22	250	7200
JAN											
17...	1300	4700	730	8.1	.5	--	--	13.9	19	K200	16000
FEB											
15...	1300	16500	655	8.1	.5	747	250	14.4	89	1800	K65000
MAR											
16...	1300	17400	630	7.9	4.5	--	--	11.9	110	24000	320000
APR											
13...	1115	17100	735	8.2	7.5	--	--	--	54	3500	K290000
MAY											
20...	1200	23000	702	7.8	12.5	735	160	9.6	55	K35000	K50000
JUN											
20...	1100	51000	570	8.0	21.5	730	--	7.0	170	53000	140000
JUL											
11...	1030	22200	770	8.0	26.0	745	--	7.2	38	K600	1100
AUG											
15...	1215	7710	968	8.5	27.5	740	50	7.5	56	K130	2400
SEP											
26...	1100	9900	860	8.5	17.5	--	--	9.5	51	K150	3600

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

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 29...	200	--	58	13	--	--	--	--	69	49
NOV 02...	210	13	59	14	52	1.6	9.4	193	62	50
DEC 10...	230	--	72	13	--	--	--	--	93	--
JAN 17...	210	--	61	15	64	2.0	--	--	110	58
FEB 15...	180	32	50	13	56	1.9	8.6	147	100	48
MAR 16...	200	--	56	15	45	1.4	--	--	93	33
APR 13...	220	--	62	17	50	1.5	--	--	110	37
MAY 20...	240	60	64	19	53	1.5	9.5	179	130	36
JUN 20...	200	--	57	14	--	--	--	--	110	20
JUL 11...	240	--	66	19	68	2.0	--	--	150	41
AUG 15...	240	37	62	20	100	2.9	11	201	190	71
SEP 26...	250	--	65	21	88	2.5	--	--	170	47

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 29...	--	--	--	--	--	--	66	--	--	1.5
NOV 02...	.40	38	397	402	.54	5100	155	1.4	.030	1.4
DEC 10...	--	--	--	--	--	--	--	--	--	1.9
JAN 17...	--	--	--	--	--	--	77	--	--	1.4
FEB 15...	.40	25	399	391	.54	17800	1180	1.6	.050	1.6
MAR 16...	--	--	--	--	--	--	1160	--	--	1.9
APR 13...	--	--	--	--	--	--	478	--	--	2.3
MAY 20...	.40	21	439	442	.60	27300	77	1.7	.070	1.8
JUN 20...	--	--	--	--	--	--	2260	--	--	1.2
JUL 11...	--	--	--	--	--	--	153	--	--	.50
AUG 15...	.60	23	564	599	.77	11700	130	--	.020	<.10
SEP 26...	--	--	--	--	--	--	35	--	--	<.10

PLATTE RIVER BASIN

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHOPHOS- PHATE DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 29...	--	.110	--	2.0	2.10	3.6	.440	--	--	7.1
NOV 02...	1.4	.110	.100	1.8	1.90	3.3	.430	.320	.250	7.6
DEC 10...	--	.080	--	1.0	1.10	3.0	.340	--	--	5.6
JAN 17...	--	.280	--	1.2	1.50	2.9	.320	--	--	5.5
FEB 15...	1.6	.520	.550	2.9	3.40	5.0	1.10	.260	.220	20
MAR 16...	--	.220	--	5.8	6.00	7.9	1.70	--	--	38
APR 13...	--	.180	--	2.7	2.90	5.2	.700	--	--	16
MAY 20...	1.8	.400	.230	2.9	3.30	5.1	.650	.190	.150	17
JUN 20...	--	.100	--	8.5	8.60	9.8	.520	--	--	51
JUL 11...	--	.070	--	1.5	1.60	2.1	.450	--	--	12
AUG 15...	<.10	.150	.050	.75	.90	--	.360	.120	.150	11
SEP 26...	--	.050	--	1.8	1.80	--	.230	--	--	14

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)
NOV 02...	1200	30	7	5	<100	150	<0	1	<1	10	<1
FEB 15...	1300	90	8	4	200	130	<0	<1	<1	20	<1
MAY 20...	1200	40	7	4	300	150	<0	3	<1	20	<1
AUG 15...	1215	20	6	6	100	110	<0	<1	<1	<10	<1

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 02...	<0	10	5	3100	20	0	8	30	150	4	.0
FEB 15...	<0	40	17	26000	150	30	<1	20	860	110	.0
MAY 20...	<0	30	5	16000	40	10	6	20	620	7	.0
AUG 15...	<0	10	4	3700	0	0	1	50	340	2	.0

06805500 PLATTE RIVER AT LOUISVILLE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENIUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 02...	<.0	<10	4	3	3	<0	<1	370	7.0	40	0
FEB 15...	<.0	<10	<1	2	1	<0	<1	370	<6.0	150	10
MAY 20...	<.0	<10	4	2	2	<0	<1	480	<6.0	110	40
AUG 15...	<.0	10	4	2	2	<0	1	590	12	50	0

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	TEMPER- ATURE (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)
NOV 02...	1200	4760	11.5	315	4050	--	--
FEB 15...	1300	16500	.5	2970	132000	19	21
MAY 20...	1200	23000	12.5	2270	141000	12	13
AUG 15...	1215	7710	27.5	2560	53300	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SED. SUSP. FALL DIAM. % FINER THAN .125 MM (70343)	SED. SUSP. FALL DIAM. % FINER THAN .250 MM (70344)	SED. SUSP. FALL DIAM. % FINER THAN .500 MM (70345)	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM (70346)
NOV 02...	--	--	81	84	93	100	--
FEB 15...	24	28	61	70	86	94	100
MAY 20...	14	16	33	41	53	68	100
AUG 15...	--	--	1	2	5	30	91

WEEPING WATER CREEK BASIN

06806500 WEEPING WATER CREEK AT UNION, NE

LOCATION.--Lat 40°47'35"N, long 95°54'40"W, 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 southeast of Union and 2.8 mi downstream from South Branch Weeping Water Creek.

DRAINAGE AREA.--241 mi².

PERIOD OF RECORD.--February 1950 to current year.

REVISED RECORDS.--WSP 2118: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 926.72 ft National Geodetic Vertical Datum of 1929. Prior to May 14, 1951, nonrecording gage at site 2 mi upstream at different datum. May 15, 1951, to Aug. 22, 1968, water-stage recorder for stages above 7.9 ft and nonrecording gage, Aug. 23, 1968 to Aug. 22, 1980, water-stage recorder on downstream side of bridge pier, and Aug. 23, 1980 to Nov. 4, 1980 at present site, all at datum 3.00 ft higher.

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

AVERAGE DISCHARGE.--33 years, 88.8 ft³/s, 64,340 acre-ft/yr; median of yearly mean discharges, 69 ft³/s, 50,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft³/s May 9, 1950, gage height, 29.80 ft, from floodmark, present site and datum, from rating curve extended above 12,000 ft³/s on basis of measurement of peak flow through bridges and over highway embankment; minimum daily, 0.1 ft³/s Sept. 10-12, 14, 15, 17, 18, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 14	0300	5030	19.59
June 27	1815	*8560	23.67

Minimum daily discharge, 30 ft³/s Sept. 11-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	66	75	78	180	141	699	253	113	349	68	46
2	103	65	72	70	160	133	449	360	113	296	65	43
3	90	62	68	70	140	133	368	283	111	239	63	41
4	85	61	65	66	120	148	325	258	103	211	58	38
5	84	61	67	66	110	225	322	203	118	190	58	38
6	78	63	64	66	100	366	404	193	131	181	55	35
7	77	70	62	76	100	273	375	185	108	165	77	38
8	76	67	59	76	96	196	311	176	98	155	67	38
9	79	64	59	79	90	162	341	169	93	152	57	37
10	80	63	63	144	83	149	407	169	89	141	54	31
11	75	82	55	107	79	150	331	173	104	133	52	30
12	72	124	82	88	77	150	368	174	99	124	47	30
13	72	88	64	95	84	150	405	176	483	118	46	30
14	72	71	60	98	223	148	341	180	2710	113	47	32
15	72	67	59	93	485	226	420	180	247	112	48	40
16	70	68	59	88	482	239	345	168	138	108	44	42
17	70	68	59	80	667	200	304	178	125	105	42	38
18	70	69	60	70	357	174	272	322	1570	101	38	35
19	71	71	60	72	550	168	258	819	415	96	35	32
20	73	76	59	72	496	167	250	297	227	85	35	36
21	73	70	59	66	256	155	240	225	166	79	61	35
22	71	67	59	64	209	156	236	233	145	74	81	33
23	70	65	60	62	198	153	225	211	144	72	127	32
24	68	61	67	62	181	149	212	194	128	74	131	33
25	67	63	79	60	157	152	209	1080	108	77	76	34
26	66	63	64	58	144	316	205	201	105	79	57	34
27	66	62	80	66	144	441	194	144	4490	75	53	34
28	72	79	90	64	142	341	198	131	2080	71	50	34
29	71	85	100	90	---	408	196	122	1850	82	48	38
30	67	80	90	140	---	591	190	111	565	76	46	41
31	68	---	82	250	---	1670	---	111	---	73	47	---
TOTAL	2362	2121	2101	2636	6110	8230	9400	7679	16976	4006	1833	1078
MEAN	76.2	70.7	67.8	85.0	218	265	313	248	566	129	59.1	35.9
MAX	134	124	100	250	667	1670	699	1080	4490	349	131	46
MIN	66	61	55	58	77	133	190	111	89	71	35	30
AC-FT	4690	4210	4170	5230	12120	16320	18640	15230	33670	7950	3640	2140
CAL YR 1982	TOTAL	77114	MEAN 211	MAX 13700	MIN 16	AC-FT 153000						
WTR YR 1983	TOTAL	64532	MEAN 177	MAX 4490	MIN 30	AC-FT 128000						

06807000 MISSOURI RIVER AT NEBRASKA CITY, NE

LOCATION.--Lat 40°40'55", long 95°50'48", in NW1/4NE1/4 sec.9, T.8 N., R.14 E., Otoe County, Hydrologic Unit 10240001, on right bank 0.7 mi upstream from Waubonsie Highway Bridge at Nebraska City, and at mi 562.6 (905.2 km).

DRAINAGE AREA.--410,000 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--August 1929 to current year. Gage-height records collected in this vicinity from August 1878 to December 1899 are contained in reports of Missouri River Commission.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 905.36 ft 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. Corps of Engineers rain-gage and gage-height satellite telemeter at station.

AVERAGE DISCHARGE.--54 years, 36,060 ft³/s, 26,130,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 414,000 ft³/s Apr. 19, 1952; maximum gage height, 27.66 ft Apr. 18, 1952; minimum discharge, 1,600 ft³/s Dec. 31, 1946 (discharge measurement); minimum gage height observed, -0.28 ft Dec. 24, 1960, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 121,000 ft³/s July 1, gage height, 21.21 ft; minimum daily, 31,400 ft³/s Dec. 31; minimum gage height, 6.59 ft Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44300	49800	57900	32600	40400	72500	81700	53600	52400	119000	55400	49600
2	47200	50000	57200	33100	38700	74200	90000	66700	51900	114000	54500	49600
3	50400	49600	57300	33400	37600	75300	83800	81900	52900	103000	54900	49300
4	51300	49400	57500	33800	35900	75400	74000	90100	53900	94900	55200	48200
5	51000	49000	57900	34400	35600	73700	68600	84500	54700	87600	55300	47100
6	50400	49500	56400	35100	35500	75000	68600	75400	54500	82500	54200	48000
7	49800	50600	54800	36500	36400	86200	72200	72800	55500	78600	53100	48300
8	48800	50200	53200	38100	35900	94200	73400	73200	56300	76000	52500	48100
9	50100	50200	50400	38800	35800	89700	71600	70700	55900	73600	51200	47800
10	61900	49600	48900	39700	36000	80500	70900	66400	56300	69800	51000	48000
11	61200	52200	47800	40500	36700	72200	71600	62200	57000	67000	50200	47800
12	58500	57600	46000	39600	37400	68100	70300	59800	57300	64300	49600	47200
13	55700	63100	42900	38900	36900	64100	72700	59600	58800	62900	48800	48300
14	53200	66300	40700	39800	38800	60400	84900	58800	79700	61500	48600	48600
15	51200	64000	38700	40400	41900	61400	88600	57600	98600	60700	48700	48200
16	51100	62700	37100	39500	46300	67300	84600	56100	93800	60200	48500	49100
17	51100	60800	36700	38600	51000	69700	81200	53900	78600	59200	48500	49100
18	51500	59800	37000	38600	52700	63200	82500	55000	82900	58400	48300	48400
19	52100	60000	38000	37400	60500	59100	80200	63000	105000	58000	48200	48400
20	52100	61200	38200	37200	75000	57100	74800	64500	114000	57300	48100	50500
21	51800	61500	37900	37700	71400	56700	70200	64700	103000	57600	48200	51600
22	50900	61000	38200	37400	63100	55400	67400	62000	100000	57700	48600	50200
23	50900	61800	38200	38200	63100	54900	64500	60300	101000	57100	48900	49800
24	51000	62600	38400	38700	64300	53100	62400	59100	96800	56900	48100	49600
25	52100	60900	39800	38000	63600	52500	59900	59700	86400	57800	47800	49700
26	52300	59800	44400	38100	62500	55000	58100	58300	78700	57100	48100	50000
27	51900	58900	42000	38000	61700	58800	56500	58400	81800	55200	48700	49800
28	51500	58800	39300	37200	67000	58600	55200	56300	89000	55000	49600	50200
29	50600	59300	35500	38500	---	58400	53600	54700	96000	55800	49900	51300
30	50500	58900	32100	44200	---	60200	52600	52400	110000	56000	49400	51600
31	50300	---	31400	42900	---	65800	---	51400	---	56000	49600	---
TOTAL	1606700	1709100	1371800	1174900	1361700	2068700	2146600	1963100	2312700	2130700	1561700	1473400
MEAN	51830	56970	44250	37900	48630	66730	71550	63330	77090	68730	50380	49110
MAX	61900	66300	57900	44200	75000	94200	90000	90100	114000	119000	55400	51600
MIN	44300	49000	31400	32600	35500	52500	52600	51400	51900	55000	47800	47100
AC-FT	3187000	3390000	2721000	2330000	2701000	4103000	4258000	3894000	4587000	4226000	3098000	2922000
CAL YR 1982	TOTAL	15645600	MEAN	42860	MAX	97500	MIN	11500	AC-FT	31030000		
WTR YR 1983	TOTAL	20881100	MEAN	57210	MAX	119000	MIN	31400	AC-FT	41420000		

LITTLE NEMAH RIVER BASIN

06811500 LITTLE NEMAH RIVER AT AUBURN, NE

LOCATION.--Lat 40°23'33", long 95°48'46", in NE1/4NW1/4 sec.23, T.5 N., R.14 E., Nemaha County, Hydrologic Unit 10240006, on left bank at downstream side of bridge on U.S. Highway 136, 1 mi downstream from Longs Creek and Willow Creek and 1 mi east of Auburn.

DRAINAGE AREA.--793 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 889.87 ft 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.--34 years, 283 ft³/s, 205,000 acre-ft/yr; median of yearly mean discharges, 200 ft³/s, 145,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 164,000 ft³/s May 9, 1950, gage height, 27.65 ft, from floodmark, from rating curve extended above 49,000 ft³/s on basis of computations of peak flow through bridge and culvert openings and over highway and railway embankments at gage heights 24.96 ft and 27.65 ft; minimum daily, 0.87 ft³/s July 6-8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 26	2030	5920	12.42	June 14	0700	*9880	15.56
Mar. 31	0700	5340	11.84	June 18	1400	8720	14.86
May 25	0730	6830	13.27	June 27	2400	5460	11.96

Minimum daily discharge, 52 ft³/s Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	126	173	130	180	297	1740	377	249	494	82	72
2	228	124	164	150	170	289	1100	1000	248	355	79	68
3	193	122	154	140	150	281	783	661	247	287	74	66
4	170	121	144	140	140	287	633	611	233	247	69	63
5	152	122	178	140	190	1370	605	480	264	219	65	62
6	145	123	182	145	220	1270	938	422	357	207	71	61
7	143	124	148	160	200	815	924	416	276	198	76	60
8	140	122	110	160	230	482	712	390	237	188	79	58
9	145	122	96	170	250	368	753	367	216	179	73	57
10	155	120	82	180	250	316	1350	328	209	171	65	57
11	141	133	90	170	260	307	908	261	215	162	63	60
12	132	184	100	160	280	304	810	241	239	157	61	60
13	128	189	105	160	300	306	1300	249	240	152	58	64
14	128	144	120	170	400	303	773	274	5810	147	58	66
15	126	132	130	170	800	328	924	276	1210	140	62	74
16	122	133	140	160	1200	423	743	253	597	138	59	88
17	120	130	150	160	2000	389	608	259	423	134	57	86
18	118	131	165	160	1570	350	524	411	5680	130	54	69
19	118	134	155	170	1970	331	471	1060	2080	121	52	65
20	125	136	139	180	1590	333	449	695	790	111	52	73
21	129	134	134	200	748	318	435	398	539	101	67	75
22	124	129	132	180	554	307	420	365	396	94	87	73
23	122	126	136	200	539	301	403	335	331	90	90	68
24	121	121	142	210	471	293	390	287	297	87	89	69
25	120	121	166	200	395	293	372	3810	271	91	87	67
26	121	129	177	190	342	2520	357	866	256	93	75	65
27	123	118	167	160	324	3890	345	502	3150	90	70	63
28	173	163	300	160	313	2110	340	398	2620	83	70	62
29	186	204	100	180	---	2670	330	355	1710	87	71	63
30	148	195	110	200	---	2550	330	289	938	98	75	66
31	133	---	120	200	---	4080	---	260	---	89	74	---
TOTAL	4465	4112	4409	5255	16036	28481	20770	16896	30328	4940	2164	2000
MEAN	144	137	142	170	573	919	692	545	1011	159	69.8	66.7
MAX	236	204	300	210	2000	4080	1740	3810	5810	494	90	88
MIN	118	118	82	130	140	281	330	241	209	83	52	57
AC-FT	8860	8160	8750	10420	31810	56490	41200	33510	60160	9800	4290	3970

CAL YR 1982	TOTAL	193713	MEAN	531	MAX	14500	MIN	30	AC-FT	384200
WTR YR 1983	TOTAL	139856	MEAN	383	MAX	5810	MIN	52	AC-FT	277400

06811500 LITTLE NEMAH RIVER AT AUBURN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STEAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FFCAL, 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											
29...	0945	196	560	7.8	9.5	9.6	38	K22000	K55000	220	62
NOV											
10...	1400	114	--	8.5	13.0	11.2	10	K2000	860	260	76
DEC											
09...	1145	94	720	8.2	.5	14.4	23	K12000	8400	300	86
JAN											
06...	1400	146	635	8.0	.5	13.7	18	1100	5600	270	77
FEB											
08...	1330	226	600	7.4	.0	12.1	18	4800	5800	260	74
MAR											
02...	1530	294	600	7.8	12.0	10.6	22	6000	3200	260	75
31...	1600	3340	295	7.5	8.5	11.6	94	3200	92000	97	27
APR											
27...	1700	145	--	8.3	14.5	10.4	25	1800	5800	250	69
MAY											
13...	1445	65	698	7.6	22.5	10.5	--	6700	1000	--	--
26...	1800	699	385	8.0	20.5	7.3	120	15000	17000	140	41
JUN											
22...	1115	385	530	8.2	25.0	7.3	41	K4700	28000	230	67
JUL											
18...	1345	133	620	8.4	30.5	10.6	33	7300	11200	250	72
AUG											
18...	1500	55	587	8.4	33.5	12.1	26	5800	1200	250	67
SEP											
13...	1445	65	698	7.6	22.5	10.5	19	6700	1000	260	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, 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)	CARRON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
29...	15	50	13	308	1.9	.120	2.5	2.60	4.5	.480	11
NOV											
10...	18	58	13	27	2.0	.120	.98	1.10	3.1	.220	3.9
DEC											
09...	21	67	16	51	2.5	.250	1.3	1.50	4.0	.370	4.8
JAN											
06...	19	52	12	13	3.2	.240	1.1	1.30	4.5	.300	4.7
FEB											
08...	18	53	9.2	107	3.5	.260	1.3	1.60	5.1	.330	5.0
MAR											
02...	18	55	10	162	3.4	.160	1.5	1.70	5.1	.470	7.4
31...	7.2	40	8.6	3670	2.7	.490	9.4	9.90	13	2.70	50
APR											
27...	19	61	12	76	3.4	.100	1.0	1.10	4.5	.310	6.3
MAY											
13...	--	--	--	--	--	--	--	--	--	--	--
26...	10	30	6.2	1820	2.5	.140	7.8	7.90	10	.930	44
JUN											
22...	15	44	8.8	348	4.1	.080	1.8	1.90	6.0	.390	11
JUL											
18...	18	60	13	10	2.3	.090	1.7	1.80	4.1	.380	11
AUG											
18...	20	73	17	26	.70	.100	1.4	1.50	2.2	.260	5.9
SEP											
13...	19	53	15	29	1.3	.370	.83	1.20	2.5	.340	2.3

LITTLE NEMAH RIVER BASIN

06811500 LITTLE NEMAH RIVER AT AUBURN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY 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 CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 10...	1400	0	35	1.0	4.3	276	.40	15	385	.52
FEB 08...	1330	0	32	.9	4.9	268	.30	20	372	.51
MAY 26...	1800	0	21	.8	5.9	148	.40	11	214	.29
AUG 18...	1500	13	40	1.1	4.4	237	.40	18	382	.52

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 10...	119	2.0	.180	5	<100	0	<1	<10	0	810
FEB 08...	227	3.4	.230	--	--	0	--	--	--	--
MAY 26...	405	2.7	.160	11	400	0	<1	40	50	43000
AUG 18...	56.7	.69	.160	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV- (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 10...	800	0	0	100	60	43	.0	2	<0	60
FEB 08...	--	20	--	--	--	32	--	--	--	--
MAY 26...	43000	60	10	1400	1400	4	.0	1	<0	180
AUG 18...	--	0	--	--	--	33	--	--	--	--

MISSOURI RIVER MAIN STEM

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06813500 MISSOURI RIVER AT RULO, NE

LOCATION (REVISED).--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 right bank at downstream side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Big Nemaha River, and at mi 498.0.

DRAINAGE AREA.--414,900 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

PERIOD OF RECORD.--October 1949 to current year in reports of Geological Survey. Gage-height record collected at site 80 ft (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 National Geodetic Vertical Datum of 1929. Oct. 1949 to Sept. 12, 1950, nonrecording gage at site 80 ft upstream and Sept. 13, 1950 to Apr. 19, 1983, recording gage on downstream end of middle pier, all at same datum.

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

AVERAGE DISCHARGE.--34 years, 40,190 ft³/s, 29,120,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s Apr. 22, 1952, gage height, 25.60 ft; minimum daily, 4,420 ft³/s Jan. 13, 1957; minimum gage height, 0.65 ft Jan. 7, 1971, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 122,000 ft³/s July 2, gage height, 21.38 ft; minimum daily, 34,000 ft³/s Dec. 31; minimum gage height, 7.17 ft Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44800	50500	62800	34200	41600	74200	86000	63100	55600	116000	57100	50900
2	47700	50400	62300	34800	38600	74800	104000	72900	55700	121000	56200	50800
3	52600	50400	61800	34800	37000	75100	98100	88500	55000	121000	56100	50900
4	53400	49800	62000	34600	36600	74700	87300	94400	55600	116000	56000	50000
5	53200	49600	61900	35200	35800	77100	77700	93800	56500	107000	56400	49100
6	51400	49400	61100	36000	35700	78800	75800	85400	56700	96700	55400	48500
7	51700	50700	59000	38000	36000	82100	75700	78100	56500	87300	54800	50000
8	51100	50400	57500	39600	36400	90400	75700	76000	57500	81000	54700	49400
9	51800	50300	54300	40800	35800	89800	75400	74000	57900	77200	53900	48900
10	57700	51300	52500	42400	35800	82000	76000	67800	57300	74500	53600	48300
11	64500	52000	51700	44500	36500	72700	75400	66000	58500	71800	52500	48900
12	56300	58900	49200	43000	37200	68300	74700	63200	58500	69100	51900	47900
13	55300	66400	47200	41000	37600	66500	77700	63200	60600	66900	51100	48200
14	53800	68700	44700	40400	41100	64500	84900	66100	82500	64500	49900	49700
15	53200	65700	42600	41600	48900	64800	93900	65800	97800	62500	50300	50200
16	51900	64000	41000	40800	54900	68900	94300	64200	100000	61200	49600	49800
17	51600	63200	40100	39700	59200	74700	88600	62300	91700	60200	49600	51000
18	52100	64000	40000	39100	60100	71400	87700	64200	104000	59200	49100	50400
19	51500	64400	40700	38500	63200	66000	87000	75900	116000	58300	48700	49800
20	51800	65700	41500	37800	79300	63200	83900	79000	114000	57000	48200	51800
21	52500	66900	41300	38200	87100	62400	78100	73300	113000	57000	48700	54400
22	52800	65500	40800	38600	74800	61400	74600	71600	110000	57900	48700	53300
23	52000	64300	40900	38800	72600	60900	72000	66100	108000	57800	49900	51600
24	50900	64500	40700	39900	74500	60100	70000	63600	109000	56800	49600	50100
25	50900	64400	41400	39500	71700	60300	67200	66600	108000	58100	48700	49900
26	51300	63800	44000	38700	69300	63800	66300	64500	97700	58100	49600	49500
27	51200	62200	46800	38300	66100	77900	65100	60400	90900	56100	49500	50400
28	52100	60800	45200	37500	68200	67700	63900	59800	95200	54500	51000	50300
29	51800	61700	41900	38300	---	62900	63900	57900	101000	55000	51000	52000
30	51300	62600	36500	42600	---	63500	62100	56400	109000	56800	50600	52600
31	50700	---	34000	47000	---	70500	---	55300	---	57000	51000	---
TOTAL	1624900	1772500	1487400	1214200	1471600	2191400	2363000	2159400	2489700	2253500	1603400	1508600
MEAN	52420	59080	47980	39170	52560	70690	78770	69660	82990	72690	51720	50290
MAX	64500	68700	62800	47000	87100	90400	104000	94400	116000	121000	57100	54400
MIN	44800	49400	34000	34200	35700	60100	62100	55300	55000	54500	48200	47900
AC-FT	3223000	3516000	2950000	2408000	2919000	4347000	4687000	4283000	4938000	4470000	3180000	2992000
CAL YR 1982	TOTAL	16940500	MEAN	46410	MAX	121000	MIN	11600	AC-FT	33600000		
WTR YR 1983	TOTAL	22139600	MEAN	60660	MAX	121000	MIN	34000	AC-FT	43910000		

BIG NEMAHA RIVER BASIN

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 downstream from Clear Creek, 5.0 mi upstream from Big Nemaha River, and 8.0 mi northwest of Seneca.

DRAINAGE AREA.--276 mi².

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 1,037.53 ft, National Geodetic Vertical Datum of 1929. Prior to Oct. 19, 1956, water-stage recorder (occasional operation only) and nonrecording gage on former channel 400 ft south of present site at present datum. Oct. 19, 1956, to June 15, 1957, nonrecording gage at highway bridge 1.2 mi upstream at different datum. June 16, 1957, to Mar. 27, 1958, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--35 years, 126 ft³/s, 91,290 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s Oct. 11, 1973, gage height, 24.77 ft; no flow at times in 1956-57, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 27	0100	9,860	22.46
June 18	1400	*14,200	23.43

Minimum discharge, 3.3 ft³/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	24	25	66	58	112	1260	119	119	142	16	6.0
2	34	23	23	58	60	110	598	136	115	107	15	5.5
3	28	24	23	52	55	110	361	113	118	94	14	5.0
4	25	24	22	51	40	120	299	108	113	82	13	4.5
5	23	24	47	49	45	1460	359	100	113	72	13	4.4
6	24	23	39	53	45	431	518	96	149	68	13	4.2
7	24	22	27	88	40	252	431	76	119	65	18	3.9
8	33	22	23	113	50	191	299	87	107	62	15	3.6
9	61	22	21	128	45	156	416	90	96	57	13	3.5
10	35	21	52	457	55	136	558	83	85	53	12	3.7
11	26	70	34	263	65	132	322	81	101	49	10	3.5
12	25	38	30	90	76	129	560	84	99	45	9.4	3.6
13	27	26	35	107	102	127	425	85	291	42	9.1	3.8
14	26	24	32	102	306	119	305	144	929	40	11	3.5
15	25	23	29	64	675	113	265	164	241	37	14	5.5
16	23	23	28	66	918	109	233	101	146	35	11	8.8
17	22	23	30	57	1020	105	215	122	121	32	9.3	6.5
18	22	22	29	48	617	102	200	883	9220	31	7.6	4.7
19	22	23	28	54	626	103	186	1210	3380	28	6.7	4.1
20	23	22	26	55	495	113	174	343	579	26	7.8	5.9
21	23	21	25	56	279	99	165	359	365	24	17	6.6
22	22	21	26	54	221	103	165	450	278	22	15	5.5
23	23	21	26	55	207	99	164	241	231	21	16	4.9
24	23	20	26	52	174	94	149	208	200	20	23	4.8
25	22	22	29	50	146	94	141	717	173	20	12	4.9
26	21	22	27	39	131	2860	136	246	153	20	8.5	4.4
27	21	20	76	35	124	4020	123	187	143	20	6.6	4.3
28	47	28	325	45	117	1090	150	161	138	18	6.3	4.0
29	102	31	100	90	---	1280	131	143	198	18	6.4	3.9
30	46	28	80	200	---	667	123	126	320	18	6.5	4.1
31	30	---	70	122	---	527	---	118	---	17	6.2	---
TOTAL	941	757	1413	2819	6792	15163	9431	7181	18440	1385	361.4	141.6
MEAN	30.4	25.2	45.6	90.9	243	489	314	232	615	44.7	11.7	4.72
MAX	102	70	325	457	1020	4020	1260	1210	9220	142	23	8.8
MIN	21	20	21	35	40	94	123	76	85	17	6.2	3.5
AC-FT	1870	1500	2800	5590	13470	30080	18710	14240	36580	2750	717	281
CAL YR 1982	TOTAL	61321.0	MEAN	168	MAX	8420	MIN	15	AC-FT	121600		
WTR YR 1983	TOTAL	64825.0	MEAN	178	MAX	9220	MIN	3.5	AC-FT	128600		

BIG NEMAHA RIVER BASIN

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06814500 NORTH FORK BIG NEMAHA RIVER AT HUMBOLDT, NE

LOCATION.--Lat 40°09'25", long 95°56'40", in NW1/4NE1/4 sec.10, T.2 N., R.13 E., Richardson County, Hydrologic Unit 10240008, on right pile bent of bridge on State Highway 105 at south edge of Humboldt, 800 ft downstream from Long Branch Creek.

DRAINAGE AREA.--548 mi².

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1967 published as North Fork Nemaha River at Humboldt.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder for stages above 4.95 ft; nonrecording gage read twice daily. Datum of gage is 944.44 ft 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.--31 years, 195 ft³/s, 141,300 acre-ft/yr; median of yearly mean discharges, 169 ft³/s, 122,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft³/s Aug. 13, 1982, gage height, 31.25 ft, from floodmark; maximum gage height, 31.70 ft July 10, 1958; minimum daily, 0.07 ft³/s July 22, 23, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 26	----	17800	a17.5
June 18	0800	*21000	19.20

a From graph based on observers readings.

Minimum daily discharge, 17 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	57	58	48	80	155	1410	124	151	231	40	28
2	67	57	55	50	70	137	772	188	157	176	35	29
3	67	49	52	52	50	131	446	172	157	132	31	26
4	58	47	52	54	45	156	356	140	148	116	28	22
5	60	49	69	56	40	1920	389	137	172	100	32	25
6	55	49	63	65	40	746	553	129	201	95	37	22
7	49	54	55	71	42	339	487	132	160	90	54	21
8	60	60	48	69	42	240	356	116	148	88	40	22
9	80	57	48	112	105	190	492	116	137	75	39	20
10	67	55	107	350	110	172	675	109	129	75	32	17
11	57	69	52	230	105	166	433	124	151	75	29	17
12	55	65	60	118	112	155	649	129	160	71	25	22
13	54	57	54	130	82	155	603	129	166	71	25	20
14	54	58	56	110	200	146	389	191	2110	71	35	20
15	51	58	54	80	520	137	348	154	568	75	32	71
16	48	62	54	66	892	140	340	129	274	68	28	28
17	48	57	52	70	1130	137	278	179	208	60	31	25
18	49	60	52	50	833	134	249	882	8990	58	26	22
19	48	60	55	45	977	131	218	1160	1600	54	26	21
20	51	60	60	46	889	155	201	373	680	51	22	37
21	48	60	55	44	450	137	191	336	381	49	51	29
22	48	57	57	46	339	126	194	312	278	51	53	28
23	48	54	57	46	296	128	191	228	211	44	66	25
24	46	55	55	46	268	120	166	188	179	44	58	21
25	48	58	62	48	215	137	160	951	160	49	49	21
26	51	57	51	46	197	7590	151	297	132	47	37	28
27	48	55	50	44	172	1970	146	211	132	51	32	26
28	82	74	44	42	164	1880	163	182	235	44	34	28
29	105	65	40	46	---	2060	157	154	574	45	34	28
30	67	62	42	52	---	1460	124	148	764	42	32	32
31	62	---	46	100	---	1820	---	146	---	40	32	---
TOTAL	1794	1737	1715	2432	8465	23070	11287	7966	19513	2338	1125	781
MEAN	57.9	57.9	55.3	78.5	302	744	376	257	650	75.4	36.3	26.0
MAX	105	74	107	350	1130	7590	1410	1160	8990	231	66	71
MIN	46	47	40	42	40	120	124	109	129	40	22	17
AC-FT	3560	3450	3400	4820	16790	45760	22390	15800	38700	4640	2230	1550
CAL YR 1982	TOTAL	111185	MEAN 305	MAX 18100	MIN 25	AC-FT 220500						
WTR YR 1983	TOTAL	82223	MEAN 225	MAX 8990	MIN 17	AC-FT 163100						

BIG NEMAH RIVER BASIN

06815000 BIG NEMAH RIVER AT FALLS CITY, NE

LOCATION (REVISED).--Lat 40°02'08", long 95°35'45", in NE1/4SE1/4 sec.22, T.1 N., R.16 E., Richardson County, Hydrologic Unit 10240008, on right bank near upstream side of bridge on U.S. Highway 73, 1 mi south of Falls City and 13 mi upstream from mouth.

DRAINAGE AREA.--1,340 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1944 to current year. Prior to October 1967, published as Nemaha River at Falls City.

REVISED RECORDS.--WSP 1086: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 861.24 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 16, 1952, nonrecording gage and Oct. 17, 1952 to Aug. 24, 1982, water-stage recorder for stages above 6.1 ft and nonrecording gage read twice daily at site 150 ft downstream at same datum.

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

AVERAGE DISCHARGE.--39 years, 587 ft³/s, 425,300 acre-ft/yr; median of yearly mean discharges, 430 ft³/s, 384,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,600 ft³/s Oct. 11, 1973, gage height, 31.40 ft; minimum daily discharge, 3.0 ft³/s July 9, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 26	2030	18400	16.93
June 14	1300	*30100	22.10

Minimum daily discharge, 50 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	193	219	230	250	524	5780	670	574	803	147	78
2	268	183	227	300	200	501	5280	985	557	526	143	74
3	244	166	254	290	190	485	1980	773	549	439	126	69
4	232	159	216	280	200	495	1410	677	533	382	116	65
5	224	157	243	300	250	3910	1430	621	518	344	111	63
6	220	157	502	320	290	3410	3230	594	590	321	116	59
7	211	164	342	340	350	1370	1870	563	541	309	135	54
8	219	169	240	400	320	940	1470	520	468	296	128	54
9	315	169	105	350	380	740	1510	499	428	287	121	51
10	362	169	120	700	400	629	2340	493	396	278	109	50
11	251	200	250	800	450	577	1740	495	417	267	98	50
12	216	289	170	500	500	562	1570	508	453	260	85	56
13	205	257	160	250	520	557	2410	878	442	250	86	54
14	208	183	170	300	680	537	1450	2530	4000	245	88	53
15	211	171	150	250	2500	537	1190	1700	2070	240	97	69
16	198	171	140	200	3960	508	1120	892	877	238	97	98
17	188	178	170	210	5080	464	995	711	645	233	86	75
18	188	181	200	150	3220	447	917	2390	15900	228	78	69
19	188	193	220	160	2930	444	861	5030	12900	219	71	62
20	186	198	200	180	2760	477	813	2140	2760	208	70	109
21	183	186	196	190	1740	471	771	1280	1390	195	89	82
22	183	178	134	200	1160	430	774	2740	943	186	115	75
23	178	171	135	200	977	434	796	1340	732	180	121	67
24	181	157	151	210	896	427	740	908	634	174	130	64
25	181	148	166	200	761	415	689	4580	562	174	124	65
26	183	166	165	170	652	7090	665	1860	540	177	104	65
27	178	155	202	150	589	12600	657	1020	487	175	85	63
28	190	196	500	150	551	5670	774	828	502	167	84	63
29	377	227	200	200	---	6720	822	725	852	163	83	61
30	314	232	150	400	---	3600	699	654	1270	157	79	60
31	211	---	200	350	---	3610	---	598	---	152	80	---
TOTAL	6953	5523	6497	8930	32756	59581	46753	40202	53530	8273	3202	1977
MEAN	224	184	210	288	1170	1922	1558	1297	1784	267	103	65.9
MAX	377	289	502	800	5080	12600	5780	5030	15900	803	147	109
MIN	178	148	105	150	190	415	657	493	396	152	70	50
AC-FT	13790	10950	12890	17710	64970	118200	92730	79740	106200	16410	6350	3920
CAL YR 1982	TOTAL	307748	MEAN	843	MAX	28200	MIN	77	AC-FT	610400		
WTR YR 1983	TOTAL	274177	MEAN	751	MAX	15900	MIN	50	AC-FT	543800		

BIG NEMAH RIVER BASIN

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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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHUS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 28...	1615	210	775	8.1	13.0	10.6	19	110	240	320	89
NOV 10...	1130	161	820	8.3	12.5	10.2	25	<30	K180	350	100
DEC 09...	0900	99	750	8.2	.0	14.2	24	K2800	K18000	320	91
JAN 06...	1000	325	790	8.0	1.0	15.2	17	280	2300	340	100
FEB 08...	1600	296	698	7.2	.0	13.0	18	500	2500	320	93
MAR 02...	1245	471	740	8.2	10.0	10.4	18	2800	3000	330	96
31...	1300	4020	410	7.8	7.5	11.8	89	2600	85000	170	50
APR 27...	1430	647	685	8.3	14.0	10.0	14	K110	K980	300	85
MAY 26...	1400	1580	410	7.9	18.5	8.2	98	32000	21000	180	53
JUN 22...	1230	912	580	8.3	25.5	6.9	51	K4000	26000	260	78
JUL 18...	1930	217	480	8.4	33.0	12.7	57	K1100	7600	170	35
AUG 18...	1200	79	600	8.1	30.5	10.6	34	K100	1000	240	58
SEP 13...	1145	54	790	7.5	21.0	10.3	28	K1000	14000	270	68

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

DATE	MAGNF- 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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 28...	24	89	39	49	1.1	.070	1.1	1.20	2.3	.140	3.9
NOV 10...	24	89	31	36	1.4	<.060	--	.90	2.3	.160	4.1
DEC 09...	22	77	29	46	2.0	.150	1.3	1.40	3.4	.310	6.2
JAN 06...	23	75	25	18	2.7	.130	.77	.90	3.6	.200	3.5
FEB 08...	22	77	19	105	2.7	.230	1.1	1.30	4.0	.270	4.5
MAR 02...	22	74	15	116	2.6	.290	1.1	1.40	4.0	.410	5.2
31...	11	22	5.8	1230	2.8	.330	3.4	3.70	6.5	1.10	22
APR 27...	22	78	19	61	2.3	.110	1.5	1.60	3.9	.220	5.6
MAY 26...	11	37	8.4	588	2.1	.080	1.3	1.40	3.5	1.50	33
JUN 22...	15	57	13	738	3.2	<.060	--	2.20	5.4	.300	16
JUL 18...	20	84	22	114	.30	.090	2.2	2.30	2.6	.540	9.9
AUG 18...	24	99	29	24	<.10	.050	2.2	2.20	--	.200	7.3
SEP 13...	25	120	42	49	<.10	.060	1.3	1.40	--	.150	6.6

BIG NEMAHA RIVER BASIN

06815000 BIG NEMAHA RIVER AT FALLS CITY, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY 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 CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV										
10...	1130	39	40	1.0	4.3	310	.40	12	487	.66
JAN										
06...	1000	--	35	.9	--	--	--	--	--	--
FEB										
08...	1600	20	32	.8	4.4	303	.30	17	446	.61
MAR										
02...	1245	--	29	.7	--	--	--	--	--	--
31...	1300	--	16	.6	--	--	--	--	--	--
APR										
27...	1430	--	30	.8	--	--	--	--	--	--
MAY										
26...	1400	18	15	.5	4.9	160	.40	12	238	.32
JUL										
18...	1930	--	32	1.1	--	--	--	--	--	--
AUG										
18...	1200	66	40	1.2	4.1	178	.30	14	375	.51
SEP										
13...	1145	--	51	1.4	--	--	--	--	--	--

[illegible][illegible]

KANSAS RIVER BASIN

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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., Dundly County, Hydrologic Unit 10250001, on right bank at downstream side of bridge on U.S. Highway 34, 1.3 mi upstream from Burlington Northern Inc. bridge, 1.8 mi upstream from confluence with North Fork Republican River, 2 mi northwest of Haigler, and 3.2 mi downstream from Kansas-Nebraska State line.

DRAINAGE AREA.--1,640 mi², approximately, of which about 980 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 1919: 1951, 1954, 1956, 1960. WSP 2119: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,250.98 ft National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Sept. 29, 1964. Sept. 29, 1964 to Apr. 25, 1982 on left bank 57 ft downstream from bridge at present datum.

REMARKS.--Records poor. Natural flow affected by ground-water withdrawals and diversions for irrigation of about 1,500 ft³/s in Colorado and by return flow from Pioneer Canal.

AVERAGE DISCHARGE.--52 years, 22.9 ft³/s, 16,590 acre-ft/yr; median of yearly mean discharges, 18 ft³/s, 13,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s May 31, 1935, gage height, 11.2 ft, site and datum then in use, from floodmarks, from rating curve extended above 3,800 ft³/s on basis of slope-area measurement of peak flow; no flow for some periods in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 692 ft³/s June 5, gage height, 8.30 ft, no peak above base of 800 ft³/s; minimum daily, 0.55 ft³/s Nov. 11, 13, 14, 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	.72	.79	1.4	9.6	9.3	23	61	21	12	1.8	1.8
2	9.9	.72	.83	1.4	8.0	9.0	19	39	23	12	1.6	1.7
3	9.1	.65	.89	1.4	7.0	9.1	19	32	19	9.4	1.6	1.7
4	8.1	.65	1.0	1.4	4.9	9.9	19	27	17	8.0	1.7	1.7
5	6.9	.62	1.1	1.4	5.8	57	27	26	218	7.8	1.8	1.7
6	7.7	.58	1.3	1.4	7.2	46	29	29	43	5.7	1.8	1.8
7	8.8	.58	1.3	1.4	6.0	33	25	34	30	5.1	1.8	1.8
8	8.1	.58	1.3	1.5	7.2	25	23	25	24	6.1	1.6	1.8
9	5.4	.58	1.4	1.5	9.7	21	22	23	21	4.9	1.8	1.8
10	6.2	.58	1.3	1.5	17	19	20	22	16	3.8	1.8	1.8
11	7.5	.55	1.3	1.5	24	18	20	18	16	3.0	1.8	1.7
12	7.2	.58	1.3	1.4	20	17	54	14	21	2.4	1.8	1.6
13	6.9	.55	1.3	1.5	20	16	60	14	29	1.8	1.8	1.7
14	6.1	.55	1.4	1.4	15	15	42	23	35	1.6	1.8	1.8
15	5.4	.58	1.4	1.4	13	15	36	19	24	1.6	1.7	1.8
16	4.4	.55	1.4	1.3	12	21	31	16	21	1.7	1.7	1.8
17	3.8	.55	1.4	1.2	13	23	27	25	19	1.7	1.7	1.8
18	3.1	.55	1.4	1.2	13	20	25	25	19	1.7	1.7	1.8
19	2.6	.58	1.4	1.2	12	20	23	21	16	1.6	1.8	1.8
20	2.4	.58	1.4	1.2	9.7	22	22	25	18	1.6	1.8	1.8
21	2.2	.58	1.4	1.2	14	19	21	27	13	1.6	1.8	1.9
22	1.8	.62	1.4	1.1	15	22	24	20	15	1.6	1.7	1.8
23	1.6	.65	1.4	1.2	12	23	26	17	12	1.6	1.8	1.8
24	1.4	.65	1.2	1.4	10	22	23	15	13	1.7	1.8	1.8
25	1.1	.65	.87	2.4	11	30	22	15	12	1.7	1.8	1.8
26	1.0	.65	1.3	3.5	11	30	20	26	18	1.8	1.8	1.8
27	.91	.65	1.4	6.0	10	24	19	25	58	1.8	1.8	1.8
28	.91	.65	1.4	9.0	9.6	26	19	19	26	1.8	1.7	1.9
29	.79	.65	1.4	14	---	21	25	16	19	1.6	1.7	1.8
30	.79	.72	1.4	13	---	20	25	24	15	1.8	1.7	1.7
31	.72	---	1.4	12	---	21	---	30	---	1.8	1.7	---
TOTAL	142.12	18.35	39.48	92.4	326.7	683.3	790	752	851	112.3	54.2	53.3
MEAN	4.58	.61	1.27	2.98	11.7	22.0	26.3	24.3	28.4	3.62	1.75	1.78
MAX	9.9	.72	1.4	14	24	57	60	61	218	12	1.8	1.9
MIN	.72	.55	.79	1.1	4.9	9.0	19	14	12	1.6	1.6	1.6
AC-FT	282	36	78	183	648	1360	1570	1490	1690	223	108	106
CAL YR 1982	TOTAL	4992.25	MEAN	13.7	MAX	434	MIN	.55	AC-FT	9900		
WTR YR 1983	TOTAL	3915.15	MEAN	10.7	MAX	218	MIN	.55	AC-FT	7770		

KANSAS RIVER BASIN

06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

LOCATION.--Lat 40°04'10", long 102°03'05", in sec.10, T.1 N., R.42 W., Dundy County, Nebraska, Hydrologic Unit 10250002, on right bank 100 ft east of Colorado-Nebraska State line and 9.5 mi upstream from confluence with Arikaree River.

DRAINAGE AREA.--1,360 mi², approximately, of which about 100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1932, published as North Fork of Arikaree River at Colorado-Nebraska State line. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1947(M). WSP 1390: 1934. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Steel piling control since January 1965. Datum of gage is 3,336.09 ft 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 fair. Natural flow affected by diversion in Pioneer Canal for irrigation of about 2,700 acres in Colorado and Nebraska.

AVERAGE DISCHARGE.--53 years, 47.4 ft³/s, 34,340 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s Apr. 28, 1947, gage height, 5.92 ft, from rating curve extended above 800 ft³/s on basis of slope-area measurement of peak flow; no flow Aug. 25, 26, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 160 ft³/s at 2000 Aug. 22, gage height, 1.75 ft, no other peak above base of 130 ft³/s; minimum daily, 7.3 ft³/s Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	53	58	34	59	61	66	73	51	21	11	20
2	42	55	56	51	58	61	62	66	51	19	9.1	17
3	42	55	56	34	59	61	64	62	52	21	9.5	18
4	42	55	56	43	57	63	66	59	49	21	9.5	19
5	39	57	57	55	57	97	68	58	60	19	9.0	20
6	37	56	58	61	61	95	70	61	58	17	9.5	21
7	34	56	57	74	58	79	68	64	54	12	9.5	21
8	34	57	56	65	58	69	66	60	50	11	10	19
9	40	58	56	55	59	65	63	56	51	9.9	11	20
10	53	58	58	52	61	64	62	55	50	9.1	11	22
11	53	64	57	51	63	63	63	55	47	11	11	22
12	53	65	57	51	64	62	77	55	45	11	9.2	24
13	54	61	57	52	65	61	85	56	60	9.2	7.6	22
14	54	59	57	53	65	62	74	61	66	8.9	8.0	21
15	54	58	57	52	65	62	69	59	52	8.3	8.2	20
16	54	58	56	51	64	65	66	57	42	8.4	9.3	19
17	53	58	57	52	64	66	65	62	45	8.7	9.0	22
18	53	58	57	50	65	66	64	61	42	8.7	8.2	22
19	53	58	55	50	64	65	64	59	36	8.5	7.3	20
20	54	58	57	51	62	65	64	59	35	8.5	8.2	18
21	54	58	57	51	65	65	63	59	31	8.6	9.0	20
22	55	58	58	51	65	66	69	56	25	8.9	29	22
23	55	59	58	53	62	66	70	54	24	9.3	43	25
24	54	58	60	53	61	66	67	53	23	12	24	22
25	55	58	31	54	61	70	64	27	22	13	21	23
26	55	58	69	54	61	69	61	36	22	12	21	23
27	54	57	61	55	61	66	60	37	29	12	28	19
28	52	58	28	58	61	66	60	38	38	14	26	18
29	53	58	21	59	---	63	64	38	30	13	27	18
30	52	58	25	60	---	62	65	39	24	12	27	17
31	52	---	26	60	---	63	---	44	---	12	22	---
TOTAL	1532	1737	1629	1645	1725	2074	1989	1679	1264	378.0	462.1	614
MEAN	49.4	57.9	52.5	53.1	61.6	66.9	66.3	54.2	42.1	12.2	14.9	20.5
MAX	55	65	69	74	65	97	85	73	66	21	43	25
MIN	34	53	21	34	57	61	60	27	22	8.3	7.3	17
AC-FT	3040	3450	3230	3260	3420	4110	3950	3330	2510	750	917	1220

CAL YR 1982 TOTAL 16950.4 MEAN 46.4 MAX 495 MIN 5.5 AC-FT 33620
WTR YR 1983 TOTAL 16728.1 MEAN 45.8 MAX 97 MIN 7.3 AC-FT 33180

KANSAS RIVER BASIN

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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 upstream from county highway bridge, 0.4 mi upstream from mouth, and 4 mi northeast of Haigler.

DRAINAGE AREA.--260 mi², approximately, of which about 13 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 2119: 1948-50(M), 1957(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,188.90 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 19, 1980, at site 0.5 mi upstream at datum 15.67 ft higher.

REMARKS.--Records fair except those for winter period, which are poor. Natural flow affected by diversion about 1 mi upstream for irrigation of 880 acres.

AVERAGE DISCHARGE.--43 years, 7.52 ft³/s, 5,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 140 ft³/s June 27, 1948, gage height, 4.37 ft, site and datum then in use; minimum gage height, 5.93 ft Jan. 3, 1976, site and datum then in use, backwater from ice; no flow at times in 1955, 1968, 1973-80.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15 ft³/s Apr. 14, gage height, 3.10 ft; maximum gage height, 3.82 ft from range in stage line during period of no gage height record Dec. 28 to Jan. 11, backwater from ice; no peak above base of 20 ft³/s; minimum daily discharge, 0.23 ft³/s Aug. 18-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	6.5	7.5	8.0	8.5	8.1	9.5	9.6	7.9	7.2	.61	.86
2	7.9	6.3	7.3	9.0	8.1	8.1	8.7	9.0	7.9	7.5	.50	.82
3	8.6	6.1	7.3	10	7.6	7.9	8.3	8.5	8.0	6.5	.48	.67
4	8.1	6.5	7.6	11	8.0	8.6	8.7	8.1	8.3	5.9	.49	.68
5	7.6	6.3	7.4	12	8.5	13	9.1	8.6	9.6	5.2	.54	.80
6	8.1	6.8	7.4	13	9.0	12	9.3	9.0	8.1	4.5	.59	.90
7	8.1	7.6	7.2	12	9.4	10	9.1	8.9	8.3	1.7	.55	.87
8	7.9	7.7	7.0	11	9.2	8.6	8.7	8.2	8.0	.72	.62	.76
9	8.5	7.7	6.4	10	9.1	8.7	8.1	7.7	7.7	.96	.34	.65
10	7.0	7.7	7.0	9.0	9.8	8.6	8.0	7.8	7.4	.89	.28	.98
11	7.4	8.2	6.7	8.8	9.7	8.5	8.0	8.0	7.1	1.0	.28	.96
12	7.4	8.3	6.4	8.5	9.5	8.3	10	7.7	7.0	1.1	.28	1.0
13	7.2	8.3	6.8	8.3	9.9	8.3	11	7.8	8.0	1.2	.28	.96
14	8.7	7.8	7.4	8.1	9.9	8.3	10	8.9	8.7	.84	.28	1.2
15	9.3	8.3	8.0	7.4	9.4	8.3	8.8	8.6	7.9	.77	.28	1.4
16	9.7	7.9	8.0	7.6	9.0	8.7	8.8	8.2	7.0	.76	.27	1.4
17	9.7	7.8	8.3	7.2	9.4	9.0	8.4	9.7	7.0	1.1	.25	1.4
18	8.7	7.8	8.6	7.6	9.1	8.8	8.0	9.9	6.7	1.9	.23	1.3
19	8.1	7.7	9.0	7.6	9.1	8.8	7.9	9.3	6.3	1.3	.23	1.2
20	8.9	7.5	9.2	7.6	9.3	8.7	8.3	9.1	6.3	1.0	.23	1.1
21	7.4	7.6	9.0	7.2	9.3	9.0	8.1	8.8	6.2	.85	.23	1.5
22	7.2	7.2	9.0	7.2	9.6	8.7	8.3	8.2	5.9	.76	.25	1.7
23	6.8	7.7	8.6	7.2	9.0	8.8	8.4	7.8	5.8	.87	.84	2.0
24	6.5	7.2	8.2	7.6	8.7	8.7	8.0	7.6	5.7	1.7	1.3	2.2
25	6.8	8.3	5.3	7.4	8.9	9.1	7.7	7.6	5.7	1.8	.60	2.9
26	7.4	8.1	.74	7.3	8.5	9.5	7.8	7.8	5.9	1.7	.50	2.7
27	7.6	7.9	3.0	7.2	8.5	9.1	7.2	8.3	6.3	1.6	1.5	2.5
28	7.0	7.9	4.5	7.8	8.3	8.8	7.8	8.2	6.3	1.6	1.8	2.8
29	6.8	8.0	5.0	8.2	---	8.8	8.3	8.0	6.3	1.3	1.8	3.3
30	6.8	7.6	6.0	8.6	---	8.7	8.8	7.9	6.3	.54	1.5	3.6
31	6.7	---	7.0	9.0	---	9.0	---	8.1	---	.58	2.2	---
TOTAL	241.8	226.3	216.84	268.4	252.3	277.5	257.1	260.9	213.6	65.34	20.13	45.11
MEAN	7.80	7.54	6.99	8.66	9.01	8.95	8.57	8.42	7.12	2.11	.65	1.50
MAX	9.7	8.3	9.2	13	9.9	13	11	9.9	9.6	7.5	2.2	3.6
MIN	6.5	6.1	.74	7.2	7.6	7.9	7.2	7.6	5.7	.54	.23	.65
AC-FT	480	449	430	532	500	550	510	517	424	130	40	89
CAL YR 1982	TOTAL	2282.08	MEAN 6.25	MAX 15	MIN .03	AC-FT 4530						
WTR YR 1983	TOTAL	2345.32	MEAN 6.43	MAX 13	MIN .23	AC-FT 4650						

KANSAS RIVER BASIN

06824000 ROCK CREEK AT PARKS, NE

LOCATION.--Lat 40°02'30", long 101°43'40", in SW1/4NE1/4 sec.21, T.1 N., R.39 W., Dundy County, Hydrologic Unit 10250002, on right bank at west edge of Parks, 100 ft downstream from county road bridge and 0.5 mi upstream from mouth.

DRAINAGE AREA.--20 mi², approximately, of which about 17 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1630: 1951 (M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,093.35 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. One diversion about 2 mi above station for irrigation of 215 acres; flow regulated at times by reservoir at State fish hatchery 7 mi upstream.

AVERAGE DISCHARGE.--43 years, 13.9 ft³/s, 10,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 493 ft³/s July 5, 1965, gage height, 6.00 ft, from rating curve extended above 40 ft³/s on basis of slope-conveyance study; minimum daily, 2.6 ft³/s Nov. 19, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft³/s Apr. 12, gage height, 2.24 ft, no peak above base of 25 ft³/s; maximum gage height, 3.74 ft Dec. 28, backwater from ice; minimum daily discharge, 7.2 ft³/s Aug. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	9.9	10	13	11	12	14	11	8.6	7.8	11
2	12	11	10	12	13	11	12	14	11	8.6	7.7	11
3	12	10	10	13	13	11	12	13	11	8.4	8.2	10
4	11	10	10	15	13	11	12	9.6	11	8.4	8.1	10
5	11	11	10	18	13	13	12	9.5	12	8.4	8.3	11
6	11	11	11	18	13	15	13	10	14	8.3	8.6	10
7	11	12	13	16	12	16	13	10	13	8.3	8.2	10
8	12	11	13	13	12	14	13	12	13	8.2	8.1	10
9	12	11	13	13	13	12	13	12	12	8.0	8.0	10
10	12	11	13	13	13	12	12	12	12	7.9	7.6	10
11	12	12	14	12	13	11	12	14	12	8.0	7.8	9.8
12	13	12	14	12	14	11	20	14	11	8.1	7.6	9.8
13	13	11	14	12	14	11	19	13	11	8.2	7.9	9.7
14	12	12	14	12	14	11	17	13	11	7.9	8.3	9.5
15	12	12	14	11	14	11	15	13	11	7.6	7.9	9.7
16	12	12	14	11	14	11	14	13	11	7.8	7.8	9.5
17	12	12	14	10	13	11	14	14	11	8.9	7.6	9.0
18	11	12	14	9.8	13	12	13	15	11	9.5	7.2	8.7
19	11	12	14	9.8	13	12	13	15	11	8.9	7.2	8.3
20	12	12	14	9.9	13	12	12	14	11	8.0	7.4	8.5
21	12	12	14	9.8	13	12	12	14	10	7.8	7.5	9.0
22	12	12	13	9.5	13	12	12	13	9.9	7.8	7.9	9.4
23	11	12	12	9.5	12	11	12	13	9.4	8.3	11	9.7
24	11	12	10	9.8	12	12	12	13	8.9	10	10	9.8
25	11	12	8.0	10	11	13	12	13	8.7	9.5	11	10
26	10	12	10	11	12	13	12	13	8.6	9.1	11	10
27	10	12	12	11	12	12	12	13	8.4	8.9	15	10
28	10	12	11	12	12	12	12	12	8.6	9.1	13	10
29	11	12	10	13	---	12	12	12	8.7	8.7	12	9.9
30	11	11	9.0	13	---	12	13	12	8.5	8.6	11	9.9
31	11	---	9.0	13	---	11	---	12	---	8.1	11	---
TOTAL	357	347	370.9	372.1	360	371	394	394.1	320.7	261.9	277.7	293.2
MEAN	11.5	11.6	12.0	12.0	12.9	12.0	13.1	12.7	10.7	8.45	8.96	9.77
MAX	13	12	14	18	14	16	20	15	14	10	15	11
MIN	10	10	8.0	9.5	11	11	12	9.5	8.4	7.6	7.2	8.3
AC-FT	708	688	736	738	714	736	781	782	636	519	551	582
CAL YR 1982	TOTAL	4400.8	MEAN	12.1	MAX	39	MIN	8.0	AC-FT	8730		
WTR YR 1983	TOTAL	4119.6	MEAN	11.3	MAX	20	MIN	7.2	AC-FT	8170		

06824500 REPUBLICAN RIVER AT BENKELMAN, NE

LOCATION.--Lat 40°01'55", long 101°32'30", in SE1/4SW1/4 sec.19, T.1 N., R.37 W., Dundy County, Hydrologic Unit 10250002, on left bank at downstream side of bridge on U.S. Highway 34, 0.6 mi south of Burlington Northern Inc. track, 1 mi southwest of Benkelman, 2 mi upstream from South Fork Republican River, and 11 mi downstream from Rock Creek.

DRAINAGE AREA.--4,830 mi², approximately, of which about 1,230 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to September 1895 (published as North Fork Republican River at Benkelman), October 1902 to November 1906, October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1895. WSP 1919: 1952, 1956. WSP 2119: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,975.34 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 17, 1946, nonrecording gages at several sites within 1.5 mi of present site at various datums; Dec. 17, 1946, to May 26, 1972, water-stage recorder at present site and datum and May 27, 1972, to Aug 11, 1978, at site 150 ft downstream at same datum.

REMARKS.--Records poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--42 years, 87.6 ft³/s, 63,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,040 ft³/s Sept. 7, 1951, gage height, 7.58 ft; maximum gage height, 7.80 ft Aug. 9, 1950; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 13.1 ft May 31, 1935, from elevations furnished by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 550 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 5	0500	*2810	5.32
June 6	0015	1100	4.30

Minimum daily discharge, no flow Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	73	81	48	95	71	143	158	92	51	4.4	17
2	71	80	83	55	92	70	121	183	106	46	2.1	9.8
3	65	78	72	64	90	75	115	133	99	42	1.8	4.8
4	59	76	81	70	87	94	115	128	89	40	2.2	3.2
5	53	80	80	72	85	190	127	134	650	35	2.2	7.5
6	52	80	76	84	87	295	145	148	340	33	6.7	5.7
7	56	75	73	94	90	166	152	145	239	28	5.4	4.5
8	59	67	73	100	89	202	141	151	142	22	2.5	3.1
9	57	67	82	94	100	190	134	128	124	20	1.7	2.7
10	62	76	91	86	130	140	126	115	90	16	1.9	2.2
11	65	87	88	82	120	121	118	108	84	13	2.1	2.6
12	63	93	82	83	110	101	200	97	78	15	1.5	3.0
13	69	94	89	84	117	93	251	105	114	14	2.0	3.2
14	70	91	91	86	109	100	189	121	143	9.9	2.2	5.4
15	72	86	80	80	103	142	168	118	137	6.7	1.0	8.0
16	70	84	84	76	100	161	153	113	104	5.7	.65	17
17	70	81	80	70	101	113	140	157	92	6.4	.86	19
18	68	83	80	70	102	98	126	180	88	7.2	.29	20
19	71	85	78	70	101	93	115	141	84	2.9	.00	22
20	72	85	78	70	100	94	119	124	84	1.2	.15	21
21	76	81	75	70	94	89	125	126	71	1.2	.80	22
22	75	79	79	68	106	91	131	128	62	2.4	.66	26
23	73	86	79	70	101	99	132	130	61	2.3	2.2	27
24	72	72	73	71	92	104	132	121	52	8.0	15	30
25	65	90	70	72	86	150	128	107	52	3.1	12	29
26	62	90	58	74	77	142	118	73	60	2.1	2.4	31
27	63	87	64	77	88	134	108	81	82	2.4	15	30
28	68	95	58	80	78	126	105	74	106	4.7	19	26
29	77	93	48	90	---	125	125	66	88	4.8	21	23
30	81	88	42	100	---	112	131	64	62	3.2	20	27
31	81	---	44	105	---	118	---	69	---	2.5	19	---
TOTAL	2092	2482	2312	2415	2730	3899	4133	3726	3675	451.7	168.71	452.7
MEAN	67.5	82.7	74.6	77.9	97.5	126	138	120	123	14.6	5.44	15.1
MAX	81	95	91	105	130	295	251	183	650	51	.21	31
MIN	52	67	42	48	77	70	105	64	52	1.2	.00	2.2
AC-FT	4150	4920	4590	4790	5410	7730	8200	7390	7290	896	335	898
CAL YR 1982	TOTAL	36437.50	MEAN	99.8	MAX	1610	MIN	7.6	AC-FT	72270		
WTR YR 1983	TOTAL	28537.11	MEAN	78.2	MAX	650	MIN	.00	AC-FT	56600		

KANSAS RIVER BASIN

06824500 REPUBLICAN RIVER AT BENKELMAN, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-73, October 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHUS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 04...	1100	62.0	590	8.5	12.0	9.7	22.00	K180	94.00	210	57.0
NOV 08...	1020	73.0	560	8.9	3.0	14.0	25.00	64.00	480	210	56.0
09...	1205	57.0	760	7.8	7.0	11.9	--	--	--	--	--
DEC 01...	1000	82.0	--	8.3	8.0	12.3	15.00	K27.00	270	220	58.0
JAN 11...	0825	94.0	490	7.8	.0	12.4	16.00	52.00	1800	240	62.0
FEB 08...	0930	89.0	520	8.1	.0	9.9	19.00	K6.00	150	220	58.0
MAR 08...	0940	145	590	8.4	5.0	12.6	25.00	580	840	260	66.0
APR 06...	1015	143	660	8.2	3.0	12.2	25.00	39.00	180	240	61.0
MAY 10...	1040	117	--	8.7	16.0	9.1	21.00	980	170	260	67.0
JUN 22...	1100	66.0	645	8.4	26.5	8.3	52.00	570	330	260	68.0
JUL 13...	1400	17.0	755	8.9	34.0	3.6	25.00	560	600	290	74.0
AUG 10...	1015	2.5	650	8.4	28.0	7.4	37.00	260	--	210	50.0
SEP 13...	1100	3.1	--	8.7	19.0	5.8	19.00	230	210	210	51.0

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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 04...	17.0	66.0	6.2	15	.92	.120	1.60	1.70	2.60	.110	5.10
NOV 08...	17.0	63.0	6.3	44	1.19	<.060	--	.90	2.10	.060	3.40
09...	--	--	--	--	--	--	--	--	--	--	--
DEC 01...	18.0	66.0	7.0	43	1.40	<.060	--	1.30	2.70	.080	3.30
JAN 11...	20.0	82.0	8.8	13	1.19	.120	.68	.80	2.00	.100	3.80
FEB 08...	18.0	68.0	7.2	6	1.30	.100	.90	1.00	2.30	.100	2.70
MAR 08...	22.0	95.0	9.1	21	.80	<.060	--	1.40	2.20	.230	7.90
APR 06...	22.0	110	10.0	99	.90	.090	.71	.80	1.70	.130	8.60
MAY 10...	23.0	110	10.0	--	.80	.060	.94	1.00	1.80	.170	6.10
JUN 22...	21.0	100	12.0	170	.80	<.060	--	1.20	2.00	.270	--
JUL 13...	25.0	170	14.0	47	.10	.050	1.30	1.30	1.40	.130	5.10
AUG 10...	20.0	120	15.0	47	<.10	.060	1.19	1.30	--	.130	7.50
SEP 13...	21.0	110	10.0	13	<.10	.080	1.00	1.10	--	.060	3.60

06824500 REPUBLICAN RIVER AT BENKELMAN, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
OCT 04...	1100	6	25	.8	12	207	1.1	49	358	.49
FEB 08...	0930	6	25	.8	11	213	1.1	50	366	.50
MAY 10...	1040	38	37	1.0	12	224	1.1	44	439	.60
AUG 10...	1015	23	43	1.3	13	184	1.0	52	424	.58

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
OCT 04...	59.9	.92	.050	12	.00	90.0	<1.0	<10	7.0	1800
FEB 08...	88.0	1.3	.080	--	--	80.0	--	--	--	--
MAY 10...	139	.79	.060	11	.00	.00	<1.0	<10	5.0	2300
AUG 10...	2.9	<.10	.050	--	--	.00	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
OCT 04...	1800	23	0	90	80	5	.0	3	<1.0	20
FEB 08...	--	14	--	--	--	4	--	--	--	--
MAY 10...	2300	9.0	0	90	80	6	.0	3	<1.0	20
AUG 10...	--	8.0	--	--	--	17	--	--	--	--

KANSAS RIVER BASIN

06827500 SOUTH FORK REPUBLICAN RIVER NEAR BENKELMAN, NE

LOCATION.--Lat 40°00'34", long 101°32'32", in NE1/4SW1/4 sec.31, T.1 N., R.37 W., Dundy County, Hydrologic Unit 10250003, on right bank 100 ft upstream from bridge on State Highway 61, 1 mi downstream from Kansas-Nebraska State line, 2.5 mi southwest of Benkelman, and 4 mi upstream from mouth.

DRAINAGE AREA.--2,740 mi², approximately, of which about 2,190 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to September 1895, October 1902 to November 1906, October 1930 to September 1932, August 1937 to current year. Published as South Fork of Republican River at Benkelman prior to 1906 and as Republican River at Benkelman 1931-32. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1904-6, 1931. WSP 1390: 1940, 1945, 1947. WSP 1919: 1951-52, 1954-56. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,990.91 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 10, 1947, nonrecording gages at several sites within 3.5 mi of present site at various datums. Dec. 10, 1947, to Sept. 28, 1966, water-stage recorder 130 ft downstream at datum 2.00 ft higher, and Sept. 29, 1966, to Mar. 7, 1968, at present site at datum 2.00 ft higher.

REMARKS.--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.--53 years, 50.1 ft³/s, 36,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge determined, 19,600 ft³/s Aug. 16, 1958, gage height, 8.70 ft, site and datum then in use, but may have been higher during flood of June 24, 1945; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1923, 10.1 ft May 31, 1935, from floodmarks at site 0.2 mi downstream, at datum 2.00 ft higher, discharge, 150,000 ft³/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 176 ft³/s June 5, gage height, 3.70 ft; maximum gage height, 4.43 ft Feb. 2, backwater from ice; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	12	22	14	35	51	52	65	38	18	.00	.00
2	.00	12	20	16	34	49	47	66	42	17	.00	.00
3	.00	12	19	18	32	48	46	58	41	15	.00	.00
4	.00	11	19	20	31	50	46	54	39	16	.00	.00
5	.00	12	20	22	30	65	47	52	97	13	.00	.00
6	.00	13	21	24	29	68	49	53	70	9.2	.00	.00
7	.00	13	22	27	31	61	48	54	50	4.9	.00	.00
8	.00	12	19	30	34	54	47	50	44	3.3	.00	.00
9	1.0	12	16	32	38	51	45	49	41	2.2	.00	.00
10	3.2	12	18	31	45	49	45	46	35	1.1	.00	.00
11	3.5	13	17	29	54	48	45	46	36	.84	.00	.00
12	4.6	13	18	27	66	47	57	44	31	2.8	.00	.00
13	5.7	14	19	27	57	43	62	42	38	1.3	.00	.00
14	6.2	14	18	26	55	44	56	45	53	.47	.00	.00
15	6.5	12	18	25	54	43	53	43	46	.35	.00	.00
16	6.9	13	19	24	54	48	50	41	37	.33	.00	.00
17	7.3	14	20	24	54	48	49	47	37	.30	.00	.00
18	7.5	15	21	25	53	46	47	47	36	.18	.00	.00
19	7.9	16	19	26	53	46	46	47	33	.06	.00	.00
20	8.0	17	20	27	54	47	45	46	30	.00	.00	.00
21	8.0	15	21	30	56	46	44	48	26	.00	.00	.00
22	8.3	14	22	31	56	47	45	48	21	.00	.00	.00
23	8.6	12	21	32	56	46	47	46	22	.00	.00	.00
24	8.9	11	19	34	52	45	43	42	21	.11	.00	.00
25	9.3	12	18	33	52	50	42	40	20	1.0	.00	.00
26	9.5	13	17	32	52	55	42	40	30	1.5	.00	.00
27	11	14	15	31	51	51	40	39	29	.25	.00	.00
28	12	15	14	33	52	51	40	38	32	.00	.00	.00
29	12	17	13	35	---	48	51	36	29	.00	.00	.00
30	12	19	12	38	---	47	56	36	23	.00	.00	.00
31	12	---	13	37	---	47	---	41	---	.00	.00	---
TOTAL	179.90	404	570	860	1320	1539	1432	1449	1127	109.19	.00	.00
MEAN	5.80	13.5	18.4	27.7	47.1	49.6	47.7	46.7	37.6	3.52	.000	.000
MAX	12	19	22	38	66	68	62	66	97	18	.00	.00
MIN	.00	11	12	14	29	43	40	36	20	.00	.00	.00
AC-FT	357	801	1130	1710	2620	3050	2840	2870	2240	217	.00	.00
CAL YR 1982	TOTAL	7873.14	MEAN	21.6	MAX	400	MIN	.00	AC-FT	15620		
WTR YR 1983	TOTAL	8990.09	MEAN	24.6	MAX	97	MIN	.00	AC-FT	17830		

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LOCATION.--Lat 40°08'28", long 101°13'42", in SW1/4NW1/4 sec.13, T.2 N., R.35 W., Hitchcock County, Hydrologic Unit 10250004, on right bank at downstream side of county bridge, 0.5 mi south of Stratton, 0.2 mi downstream from Muddy Creek, 10 mi upstream from Trenton Dam, and 19 mi downstream from South Fork Republican River.

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,775.49 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 1, 1967, at site 0.3 mi downstream at present datum.

REMARKS.--Records poor. Natural flow affected by irrigation development above station and by storage in Bonny Reservoir (station 06826000).

AVERAGE DISCHARGE.--33 years, 129 ft³/s, 93,460 acre-ft/yr; median of yearly mean discharges, 116 ft³/s, 84,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,800 ft³/s July 31, 1962, gage height, 9.34 ft, site then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred May 31, 1935, discharge, about 200,000 ft³/s, based on slope-area measurement at Max.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s June 5, gage height, 7.77 ft; no flow July 17 to Sept. 30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	69	103	50	160	174	214	294	141	80	.00	.00
2	66	63	99	60	135	170	228	257	158	70	.00	.00
3	60	66	91	70	125	156	193	219	166	65	.00	.00
4	61	64	98	80	115	166	195	185	162	65	.00	.00
5	61	76	101	90	105	372	203	158	219	60	.00	.00
6	59	83	94	110	100	449	215	195	408	50	.00	.00
7	56	80	95	140	110	332	210	214	237	40	.00	.00
8	67	83	110	160	115	262	198	190	198	30	.00	.00
9	65	83	115	140	160	240	192	176	180	20	.00	.00
10	60	83	113	130	200	223	185	149	140	12	.00	.00
11	62	91	100	126	230	204	171	149	130	6.0	.00	.00
12	66	92	80	120	240	196	214	153	120	3.5	.00	.00
13	68	91	75	120	230	181	279	145	115	2.3	.00	.00
14	68	81	85	120	225	175	256	149	170	1.5	.00	.00
15	65	78	95	110	220	190	204	158	180	1.0	.00	.00
16	69	74	110	110	210	212	195	162	160	.50	.00	.00
17	64	83	105	105	210	213	171	176	140	.00	.00	.00
18	62	90	110	105	210	198	162	190	135	.00	.00	.00
19	62	89	105	105	210	186	158	199	130	.00	.00	.00
20	70	82	110	110	207	184	158	190	125	.00	.00	.00
21	72	90	110	110	204	178	166	176	110	.00	.00	.00
22	73	85	110	115	212	180	171	166	90	.00	.00	.00
23	68	80	105	115	205	205	162	171	85	.00	.00	.00
24	68	75	90	120	199	200	162	176	80	.00	.00	.00
25	67	85	63	120	195	232	153	158	80	.00	.00	.00
26	69	95	67	120	189	248	138	141	90	.00	.00	.00
27	68	95	70	125	182	251	134	116	100	.00	.00	.00
28	68	100	60	130	174	226	130	116	120	.00	.00	.00
29	69	109	55	150	---	215	149	113	110	.00	.00	.00
30	69	107	50	170	---	207	185	107	90	.00	.00	.00
31	69	---	45	190	---	200	---	123	---	.00	.00	---
TOTAL	2056	2522	2819	3626	5077	6825	5551	5271	4369	506.80	.00	.00
MEAN	66.3	84.1	90.9	117	181	220	185	170	146	16.3	.000	.000
MAX	85	109	115	190	240	449	279	294	408	80	.00	.00
MIN	56	63	45	50	100	156	130	107	80	.00	.00	.00
AC-FT	4080	5000	5590	7190	10070	13540	11010	10460	8670	1010	.00	.00
CAL YR 1982	TOTAL	45496.78	MEAN	125	MAX	1220	MIN	.00	AC-FT	90240		
WTR YR 1983	TOTAL	38622.80	MEAN	106	MAX	449	MIN	.00	AC-FT	76610		

KANSAS RIVER BASIN

06829000 SWANSON LAKE NEAR TRENTON, NE

LOCATION.--Lat 40°10'10", long 101°03'35", in SE1/4NE1/4 sec.5, T.2 N., R.33 W., Hitchcock County, Hydrologic Unit 10250004, in gate-control house at right end of spillway on downstream side of Trenton Dam on Republican River, 2.5 mi west of Trenton.

DRAINAGE AREA.--8,620 mi², approximately, of which about 3,940 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1953, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began May 4, 1953. Capacity, 116,100 acre-ft between elevations 2,710.0 ft, sill of outlet gates, and 2,752.0 ft, top of storage pool. Top of flood-control pool is at elevation 2,773.0 ft, capacity, 254,000 acre-ft. Top of superstorage flood-control pool at elevation 2,785.0 ft, capacity, 361,600 acre-ft. Dead storage, 4,100 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 148,900 acre-ft Aug. 2, 3, 1962, elevation, 2,757.42 ft; minimum since operation of reservoir began, 19,950 acre-ft Oct. 24, 1954, elevation, 2,722.61 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 130,400 acre-ft June 18, elevation, 2,754.00 ft; minimum contents, 72,720 acre-ft Sept. 30-31, elevation, 2,741.29 ft.

Capacity table (elevation, in feet, and
contents, in acre-feet)

2,740	67,730	2,755	135,600
2,745	87,930	2,760	163,900
2,750	110,500		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103600	105300	109500	113900	119200	118600	124500	129000	127800	125200	98010	78140
2	103700	105400	109600	114000	119200	118500	124700	129300	127900	124100	97340	77770
3	103700	105400	109800	114100	119100	118500	125100	129400	127900	123300	96710	77770
4	103800	105500	109900	114300	119000	118500	125400	129400	128000	122500	95920	77570
5	103900	105500	110100	114400	119000	119000	125400	128700	128800	122200	95160	77210
6	103900	105700	110200	114500	119000	119600	125500	129400	129400	121300	94490	76880
7	104000	105800	110200	114500	118900	119700	125600	129400	129500	120500	93750	76520
8	104000	105800	110400	114800	118800	119800	125700	129400	129600	119500	93040	76280
9	104200	106000	110500	115000	118800	119800	125800	129300	129700	118400	92380	75920
10	104100	106100	110600	115200	118800	119800	125800	129300	129800	117000	91690	75600
11	104100	106500	110700	115500	118800	119800	125900	129200	129800	115800	90950	75320
12	104100	106500	110900	115700	119000	119800	126400	129200	129700	115000	90250	75010
13	104100	106700	111000	115900	119200	119700	126700	128900	129900	114000	89560	74690
14	104100	106700	111100	116200	119000	120300	126900	128800	129900	113100	88920	74450
15	104100	106900	111300	116500	119000	120500	127000	128700	130000	112100	88320	74250
16	104200	107000	111400	116800	119000	121000	127100	125200	130000	111300	87540	74090
17	104200	107200	111600	117000	119000	121200	127200	128800	130300	110600	86740	73940
18	104300	107300	111900	117100	119000	121400	127200	129000	130200	109500	85930	73820
19	104300	107600	112000	117300	119000	121600	127400	128900	130200	108400	85170	73580
20	104400	107700	112000	117300	119000	121900	127400	128800	130000	107300	84460	73420
21	104400	107700	112200	117400	119000	122100	127500	128800	129800	106500	83740	73300
22	104400	107900	112500	117500	119000	122200	127600	128800	129600	105700	83110	73230
23	104600	108200	112600	117700	119000	122500	127600	128700	129400	104800	82410	73110
24	104700	108200	113200	117700	119000	122600	127600	128500	129000	104000	81870	73070
25	104800	108300	113400	117900	118900	122800	127700	128400	128700	103100	81410	73070
26	104900	108400	113400	118000	118800	123100	127700	128400	128600	102300	80830	73030
27	105100	108600	113800	118200	118800	123400	127600	128400	128400	101400	80340	72910
28	105200	108800	113900	118400	118700	123700	127600	128300	128100	100700	79850	72760
29	105300	109000	113900	118500	---	123900	127800	128200	126600	99860	79400	72720
30	105300	109100	113900	118800	---	124100	127900	128000	126000	99090	78950	72720
31	105300	---	113900	119000	---	124300	---	127800	---	98420	78540	---
MAX	105300	109100	113900	119000	119200	124300	127900	129400	130300	125200	98010	78140
MIN	103600	105300	109500	113900	118700	118500	124500	125200	126000	98420	78540	72720
	2748.89	2749.72	2750.72	2751.77	2751.70	2752.82	2753.52	2753.51	2753.15	2747.39	2742.75	2741.29
	+2200	+3800	+4800	+5100	-300	+5600	+3600	-100	-1800	-27580	-19880	-5820
CAL YR 1982	MAX	145300	MIN	98550	+15570							
WTR YR 1983	MAX	130300	MIN	72720	-30380							

†Elevation, in feet, at end of month.

‡Change in contents, in acre-feet.

KANSAS RIVER BASIN

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06829500 REPUBLICAN RIVER AT TRENTON, NE

LOCATION.--Lat 40°10'00", long 101°02'40", in SE1/4 sec.4, T.2 N., R.33 W., Hitchcock County, Hydrologic Unit 10250004, on left bank 300 ft upstream from Elm Creek, 0.9 mi downstream from centerline of spillway of Trenton Dam, and 1.5 mi southwest of Trenton.

DRAINAGE AREA.--8,620 mi², approximately, of which about 3,940 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,671.06 ft 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.

AVERAGE DISCHARGE.--30 years (1954-83), 57.7 ft³/s, 41,800 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s June 16, 1948, gage height, 5.64 ft, former site and datum; no flow at times in 1947-50, 1952-54.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known since about 1826 occurred May 31, 1935, discharge, about 200,000 ft³/s. Discharge of 21,100 ft³/s was measured July 3, 1946, gage height, 6.0 ft, former site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 328 ft³/s May 13, gage height, 5.55 ft; minimum daily, 1.1 ft³/s Nov. 28 to Dec. 1, Sept. 11-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.7	1.1	1.3	118	205	86	144	84	321	121	1.4
2	2.7	1.7	1.2	1.3	119	204	87	141	85	321	105	1.4
3	2.7	1.6	1.2	1.3	150	205	86	141	85	320	103	1.5
4	2.7	1.6	1.2	1.3	174	206	121	141	85	319	101	1.4
5	2.8	1.6	1.2	1.3	159	205	143	205	86	286	100	1.3
6	2.7	1.5	1.2	1.3	158	205	141	198	87	253	100	1.3
7	2.6	1.5	1.2	1.3	157	204	142	178	87	252	99	1.3
8	2.5	1.5	1.2	1.4	156	204	142	178	88	249	99	1.3
9	2.5	1.4	1.2	1.4	155	205	142	178	89	248	98	1.2
10	2.5	1.4	1.2	1.4	155	205	142	178	90	246	97	1.2
11	2.5	1.4	1.2	1.4	155	205	143	178	89	240	101	1.1
12	2.4	1.4	1.2	1.4	155	204	140	177	90	241	98	1.1
13	2.4	1.4	1.2	1.4	155	204	142	182	90	207	98	1.1
14	2.3	1.4	1.2	1.4	177	131	142	176	90	178	96	1.1
15	2.3	1.3	1.2	1.4	196	89	141	177	90	177	95	1.1
16	2.3	1.3	1.2	1.4	197	90	141	178	131	175	95	1.1
17	2.2	1.3	1.2	1.4	197	89	141	180	173	173	94	1.1
18	2.2	1.3	1.3	18	198	89	142	179	177	171	93	1.1
19	2.1	1.3	1.3	67	200	89	141	176	170	170	92	1.1
20	2.1	1.3	1.3	67	199	89	142	173	168	169	92	1.1
21	2.0	1.3	1.3	65	199	89	141	174	167	166	91	1.1
22	2.0	1.3	1.3	65	202	89	141	174	167	163	91	1.1
23	2.0	1.3	1.3	64	202	89	141	174	167	161	90	1.1
24	1.9	1.2	1.3	63	203	88	141	174	166	160	50	1.3
25	1.9	1.2	1.3	63	205	89	141	174	165	158	4.3	1.3
26	1.9	1.2	1.3	63	205	88	141	155	165	157	3.5	1.3
27	1.9	1.2	1.3	63	205	87	141	145	165	157	3.1	1.3
28	1.9	1.1	1.3	63	205	87	141	145	165	156	2.7	1.3
29	1.8	1.1	1.3	62	---	88	141	145	226	155	2.2	1.3
30	1.8	1.1	1.3	62	---	87	141	145	321	154	1.7	1.3
31	1.8	---	1.3	98	---	87	---	107	---	154	1.5	---
TOTAL	69.8	40.9	38.5	906.1	4956	4295	4057	5170	4008	6457	2318.0	36.7
MEAN	2.25	1.36	1.24	29.2	177	139	135	167	134	208	74.8	1.22
MAX	2.8	1.7	1.3	98	205	206	143	205	321	321	121	1.5
MIN	1.8	1.1	1.1	1.3	118	87	86	107	84	154	1.5	1.1
AC-FT	138	81	76	1800	9830	8520	8050	10250	7950	12810	4600	73

CAL YR 1982 TOTAL 9141.67 MEAN 25.0 MAX 229 MIN .60 AC-FT 18130
WTR YR 1983 TOTAL 32353.00 MEAN 88.6 MAX 321 MIN 1.1 AC-FT 64170

KANSAS RIVER BASIN

06829500 REPUBLICAN RIVER AT TRENTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water year 1967 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 04...	1440	2.8	735	8.3	20.0	8.9
DEC 01...	1340	1.0	680	8.3	8.0	--
JAN 20...	1100	66	600	8.2	2.0	12.9
JUN 22...	1400	27	645	8.2	19.0	10.3
JUL 13...	1030	210	--	7.9	22.0	3.8
AUG 10...	0940	3.3	645	8.1	24.5	5.9
SEP 13...	1450	1.0	815	8.4	22.0	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)
JAN 20...	1100	<1	210	11	48	23	48	1.5	15	204	110
JUL 13...	1030	<1	220	10	50	22	49	1.5	15	206	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)
JAN 20...	14	1.3	6.9	389	.53	69.3	<.10	.020	130	7	4
JUL 13...	17	1.2	11	399	.54	226	<.10	.060	130	13	26

06831500 FRENCHMAN CREEK NEAR IMPERIAL, NE

LOCATION.--Lat 40°25'45", long 101°37'25", in SW1/4NW1/4 sec.3, T.5 N., R.38 W., Chase County, Hydrologic Unit 10250005, on right bank 0.2 mi downstream from bridge on county highway, 5.8 mi upstream from Enders Dam, and 6.1 miles south of Imperial.

DRAINAGE AREA.--880 mi², approximately, of which about 720 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to current year. Published as Frenchman River near Imperial October 1965 to September 1972.

REVISED RECORDS.--WSP 976: 1942(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,130 ft, from topographic map. Prior to Mar. 7, 1941, nonrecording gage at bridge 0.2 mi upstream at different datum. Mar. 7, 1941, to Sept. 30, 1958, water-stage recorder at site 0.2 mi downstream at datum 4.35 ft lower.

REMARKS.--Records good. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--43 years, 62.6 ft³/s, 45,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,340 ft³/s Mar. 22, 1960, gage height, 8.43 ft; minimum daily, 4.8 ft³/s Mar. 12, 1977, backwater from ice.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1940, reached a stage of 12.4 ft, from floodmarks, site and datum in use Mar. 7, 1941, to Sept. 30, 1958 (discharge not determined but believed greater than that of Mar. 22, 1960).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62 ft³/s Mar. 6, gage height, 1.52 ft, no peak above base of 150 ft³/s; maximum gage height, 1.54 ft Apr. 14; minimum daily discharge, 13 ft³/s Dec. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	28	34	43	44	36	37	48	37	31	29	26
2	28	28	35	43	43	35	35	44	39	30	28	25
3	27	28	33	41	36	35	35	44	43	29	28	25
4	26	28	33	42	41	35	37	41	42	27	28	27
5	27	29	34	43	42	54	39	38	48	26	29	27
6	26	29	33	45	43	55	38	40	46	24	29	26
7	27	29	32	46	41	44	38	47	43	24	29	27
8	27	29	32	44	43	41	37	40	41	22	29	26
9	29	29	33	44	41	38	36	37	41	22	29	26
10	27	30	33	43	43	37	36	36	39	22	28	26
11	27	33	34	42	44	36	34	36	38	22	26	26
12	28	37	34	43	45	36	42	37	39	22	25	26
13	28	32	34	43	46	35	47	36	40	22	25	27
14	28	31	33	43	46	35	43	37	40	21	27	28
15	28	31	33	43	46	35	44	37	40	22	26	29
16	28	31	33	41	46	37	40	38	39	23	25	29
17	28	31	34	41	47	39	38	45	40	24	24	28
18	28	31	35	42	46	37	36	47	40	25	23	27
19	28	32	33	42	45	37	36	46	40	24	22	27
20	28	32	34	42	42	36	36	44	40	22	24	27
21	28	30	34	42	41	36	35	42	40	23	26	27
22	28	31	34	42	40	36	35	41	36	23	25	28
23	28	32	34	42	39	35	35	39	35	25	28	27
24	28	30	30	42	37	35	35	39	33	27	27	26
25	28	32	13	42	35	39	34	37	35	26	27	25
26	28	33	33	42	36	42	35	37	37	26	27	25
27	29	38	40	42	37	39	33	36	39	26	28	25
28	29	38	21	43	36	42	35	37	35	30	29	25
29	27	35	37	44	---	43	38	35	34	28	28	25
30	28	34	44	44	---	44	42	36	33	27	27	25
31	28	---	42	44	---	41	---	36	---	29	26	---
TOTAL	860	941	1031	1325	1171	1205	1121	1233	1172	774	831	793
MEAN	27.7	31.4	33.3	42.7	41.8	38.9	37.4	39.8	39.1	25.0	26.8	26.4
MAX	29	38	44	46	47	55	47	48	48	31	29	29
MIN	26	28	13	41	35	35	33	35	33	21	22	25
AC-FT	1710	1870	2040	2630	2320	2390	2220	2450	2320	1540	1650	1570
CAL YR 1982	TOTAL	12030	MEAN 33.0	MAX 65	MIN 13	AC-FT	23860					
WTR YR 1983	TOTAL	12457	MEAN 34.1	MAX 55	MIN 13	AC-FT	24710					

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 southeast of Enders.

DRAINAGE AREA.--950 mi², approximately, of which about 790 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 3, 1960, mercury-column pressure gage at same datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Oct. 23, 1950. Capacity, 36,010 acre-ft between elevations 3,080.0 ft, sill of outlet gates, and 3,112.3 ft, top of storage pool. Top of flood-control pool at elevation 3,127.0 ft, capacity, 74,520 acre-ft. Top of superstorage flood-control pool at elevation 3,129.5 ft, capacity, 80,730 acre-ft. Dead storage, 8,470 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,330 acre-ft Mar. 25, 1960, elevation, 3,118.20 ft; minimum since operation of reservoir began, 8,870 acre-ft Aug. 28, 1978, elevation, 3,080.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 37,340 acre-ft June 30, elevation, 3,107.87 ft; minimum, 15,070 ft/s Sept. 14, elevation, 3,089.14 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

3,085	11,770	3,100	26,540
3,090	15,830	3,110	40,660

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19750	21570	23590	25800	28270	30290	32250	34230	36160	37240	26970	18860
2	19810	21610	23660	25880	28360	30350	32320	34300	36290	37130	26700	18700
3	19870	21670	23710	25970	28430	30410	32360	34390	36380	36900	26380	18520
4	19950	21710	23780	26070	28500	30590	32430	34430	36470	36690	26090	18240
5	20000	21790	23850	26190	28570	30740	32500	34530	36470	36440	25800	17880
6	20050	21870	23890	26290	28640	30830	32550	34660	36510	36170	25510	17480
7	20110	21920	23930	26370	28750	30870	32620	34710	36560	35770	25220	17100
8	20210	21960	24000	26450	28820	30900	32680	34750	36660	35330	24960	16720
9	20240	22040	24060	26540	28890	30920	32730	34840	36710	34810	24700	16380
10	20260	22120	24130	26620	28950	30990	32800	34930	36720	34300	24440	15970
11	20330	22220	24190	26690	29020	31040	32900	34940	36810	33750	24180	15650
12	20390	22290	24290	26770	29110	31100	33010	34960	36830	33320	23930	15400
13	20440	22330	24350	26860	29190	31150	33070	34990	36810	32960	23760	15190
14	20510	22410	24420	26920	29250	31190	33130	35050	36900	32550	23420	15100
15	20570	22490	24500	26980	29330	31190	33200	35110	36930	32190	23180	15200
16	20640	22550	24560	27070	29410	31290	33280	35140	36990	31830	22880	15320
17	20750	22620	24660	27130	29530	31340	33320	35310	37040	31510	22560	15430
18	20760	22680	24720	27220	29610	31380	33380	35370	37080	31210	22210	15460
19	20780	22780	24780	27300	29650	31440	33450	35460	37140	30860	21840	15490
20	20860	22810	24840	27360	29740	31480	33520	35600	37220	30480	21530	15530
21	20930	22880	24900	27450	29820	31550	33540	35660	37280	30100	21230	15620
22	21000	22920	24960	27540	29890	31590	33590	35700	37270	29700	20920	15700
23	21070	22980	25020	27610	29950	31630	33640	35770	37280	29320	20630	15780
24	21120	23040	25190	27690	29960	31680	33690	35940	37280	28950	20390	15890
25	21190	23120	25220	27740	30020	31830	33760	35940	37240	28620	20210	15970
26	21260	23190	25290	27840	30100	31890	33820	36030	37280	28300	20010	16070
27	21300	23270	25420	27930	30160	31940	33860	36110	37190	28040	19790	16140
28	21320	23380	25470	27980	30230	32030	33920	36130	37180	27810	19590	16180
29	21390	23440	25540	28070	---	32110	34080	36110	37270	27620	19370	16250
30	21440	23520	25620	28130	---	32210	34190	36140	37340	27380	19160	16350
31	21520	---	25740	28210	---	32250	---	36130	---	27210	18990	---
MAX	21520	23520	25710	28210	30230	32250	34190	36140	37340	37240	26970	18860
MIN	19750	21570	23590	25800	28270	30290	32250	34230	36160	27210	18990	15100
	3095.70	3097.48	3099.33	3101.32	3102.87	3104.36	3105.74	3107.06	3107.87	3100.53	3093.30	3090.57
	+1850	+2000	+2190	+2500	+2020	+2020	+1940	+1940	+1210	-10130	-8220	-2640
CAL YR 1982	MAX	34210	MIN	18200	+2740							
WTR YR 1983	MAX	37340	MIN	15100	-3320							

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

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LOCATION.--Lat 40°25'05", long 101°30'35", in NW1/4NW1/4 sec.10, T.5 N., R.37 W., Chase County, Hydrologic Unit 10250005, on left bank 0.2 mi downstream from Enders Dam and 2.5 mi southeast of Enders.

PERIOD OF RECORD.--February 1946 to current year. Published as Frenchman River near Enders October 1965 to September 1972.

GAGE.--Water-stage recorder. Datum of gage is 3,026.22 ft National Geodetic Vertical Datum of 1929. Prior to June 14, 1948, at site 800 ft upstream at datum 6.03 ft higher. June 14, 1948, to Sept. 14, 1972, at present site at datum 5.00 ft higher.

REMARKS.--Records good except those below 5.0 ft³/s, which are poor. Flow regulated by Enders Reservoir (station 06832000).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 763 ft³/s Aug. 20, 1953, gage height, 11.31 ft, present datum; maximum gage height, 11.65 ft, present datum, July 18, 1958, backwater from downstream tributary; no flow for many days in 1972-83.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 310 ft³/s July 11, gage height, 8.29 ft; no flow for many days.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	1.7	1.6	1.6	2.2	2.3	52	144	96
2	.00	.00	.00	.00	1.7	1.6	1.8	1.9	2.1	66	168	91
3	.00	.00	.00	.00	1.9	1.6	2.1	1.7	2.3	81	196	120
4	.00	.00	.00	.00	1.8	1.8	2.2	1.8	2.7	101	197	155
5	.00	.00	.25	.00	1.7	2.6	2.1	1.8	2.8	137	171	183
6	.00	.00	.06	.00	1.9	1.9	2.0	2.4	2.2	176	176	208
7	.12	.00	.00	.35	1.8	1.5	1.9	2.3	2.2	222	174	215
8	.18	.00	.00	.47	1.7	1.3	2.0	2.3	2.4	251	158	210
9	.00	.00	.00	1.0	1.7	8.6	2.0	2.1	2.6	288	156	202
10	.00	.00	.00	1.6	1.7	3.9	2.2	1.8	2.6	303	147	195
11	.00	.00	.00	1.4	2.0	3.1	2.5	1.8	2.4	287	138	173
12	.00	.00	.00	1.6	1.9	2.8	4.2	1.9	2.6	252	141	149
13	.00	.00	.00	1.6	2.1	2.6	2.1	2.0	3.3	222	143	127
14	.00	.00	.00	1.6	2.3	2.6	1.7	2.8	3.0	212	141	79
15	.00	.00	.00	1.7	1.6	2.7	1.4	2.1	2.8	195	154	1.9
16	.00	.00	.00	1.6	1.5	2.7	1.6	2.1	2.8	195	174	1.4
17	.25	.00	.00	1.8	1.6	2.6	1.7	3.0	3.1	194	182	1.4
18	.42	.00	.00	1.8	1.5	2.7	1.4	2.6	2.7	196	187	1.4
19	.08	.00	.00	1.7	1.5	2.5	1.5	2.2	3.0	199	187	1.2
20	.00	.00	.00	1.4	1.9	2.4	1.6	2.2	2.6	206	187	1.2
21	.00	.00	.00	1.4	1.7	2.5	1.7	2.3	2.7	211	186	1.2
22	.00	.00	.00	1.4	1.7	2.4	1.8	2.3	2.5	210	187	1.8
23	.00	.00	.00	1.6	1.8	2.1	1.7	2.2	2.6	209	181	1.6
24	.00	.00	.00	1.5	1.8	2.0	1.7	2.1	2.4	205	160	1.4
25	.00	.00	.00	1.6	1.8	2.2	1.7	2.2	2.7	186	133	1.5
26	1.3	.00	.00	1.7	1.7	2.0	1.6	2.3	4.3	173	114	1.4
27	2.5	.00	.00	1.6	1.6	1.8	1.7	2.2	2.7	168	128	1.2
28	1.6	.00	.00	1.6	1.6	1.7	1.9	2.2	2.9	132	137	1.4
29	.00	.00	.00	1.5	---	1.7	2.4	2.3	2.8	116	132	1.1
30	.00	.00	.00	1.5	---	1.5	2.3	2.5	28	117	127	1.6
31	.00	---	.00	1.6	---	1.5	---	2.3	---	120	107	---
TOTAL	6.45	.00	.31	36.62	49.2	74.5	58.1	67.9	106.1	5682	4913	2225.7
MEAN	.21	.000	.010	1.18	1.76	2.40	1.94	2.19	3.54	183	158	74.2
MAX	2.5	.00	.25	1.8	2.3	8.6	4.2	3.0	28	303	197	215
MIN	.00	.00	.00	.00	1.5	1.3	1.4	1.7	2.1	52	107	1.1
AC-FT	13	.00	.6	73	98	148	115	135	210	11270	9740	4410
CAL YR 1982	TOTAL	11199.27		MEAN 30.7	MAX 320	MIN .00	AC-FT 22210					
WTR YR 1983	TOTAL	13219.88		MEAN 36.2	MAX 303	MIN .00	AC-FT 26220					

KANSAS RIVER BASIN

06834000 FRENCHMAN CREEK AT PALISADE, NE

LOCATION.--Lat 40°21'12", long 101°07'35", in SW1/4SE1/4 sec.36, T.5 N., R.34 W., Hayes County, Hydrologic Unit 10250005, on right bank at upstream side of bridge on U.S. Highway 6, 0.7 mi west of Palisade, and 1.5 mi upstream from Stinking Water Creek.

DRAINAGE AREA.--1,110 mi², approximately, of which about 950 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1894 to October 1896, June 1950 to current year. Published as Frenchman River at Palisade, October 1965 to September 1972.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,743.49 ft National Geodetic Vertical Datum of 1929. October 1894 to October 1896, nonrecording gage at railroad bridge 0.4 mi downstream at different datum; June 1950 to Feb. 7, 1977, recording gage at site 2,000 ft upstream at datum 4.0 ft higher.

REMARKS.--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.--35 years, 83.4 ft³/s, 60,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft³/s June 17, 1956, gage height, 8.79 ft, site and datum then in use; minimum daily, 11 ft³/s Sept. 11, 12, 14, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 223 ft³/s July 12, gage height, 5.05 ft; minimum daily, 18 ft³/s Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	28	27	19	30	31	35	42	31	25	141	137
2	33	28	26	19	31	30	34	37	32	40	145	127
3	30	28	26	19	30	30	34	34	31	55	176	119
4	29	29	27	20	28	31	34	33	31	65	192	128
5	29	29	26	20	29	42	33	31	35	78	198	155
6	28	28	26	21	30	48	33	32	37	99	184	176
7	27	28	26	22	31	41	33	53	34	123	183	198
8	28	27	26	23	30	39	32	41	33	158	185	210
9	29	28	27	24	30	38	32	39	32	182	171	212
10	29	28	27	25	30	37	31	42	31	200	169	207
11	28	30	27	26	30	41	30	41	31	213	165	205
12	28	30	28	28	30	38	36	40	30	215	157	189
13	28	29	28	28	31	37	44	38	31	210	154	172
14	28	31	27	28	31	36	38	37	32	192	158	156
15	27	31	26	27	31	36	35	36	31	188	157	132
16	26	32	27	26	30	37	33	39	30	179	158	82
17	26	30	27	26	30	38	32	35	32	182	172	63
18	26	28	27	26	30	36	31	40	40	183	176	54
19	26	28	28	26	31	36	30	38	35	185	179	48
20	26	28	28	26	31	36	31	36	33	185	179	41
21	27	27	29	27	31	35	33	35	30	190	181	38
22	27	27	28	28	31	35	35	34	28	197	182	36
23	28	27	27	29	31	35	37	33	26	198	188	35
24	27	26	26	30	30	34	34	33	25	207	188	35
25	27	26	20	31	30	36	34	33	24	209	175	34
26	27	26	21	31	31	39	36	32	34	196	162	32
27	27	27	22	32	31	37	35	33	30	189	146	30
28	28	27	21	32	31	36	36	32	28	185	147	29
29	30	28	20	33	---	36	37	31	26	166	158	29
30	30	27	19	31	---	35	38	30	25	145	156	29
31	28	---	18	30	---	35	---	30	---	141	151	---
TOTAL	872	846	788	813	850	1131	1026	1120	928	4980	5233	3138
MEAN	28.1	28.2	25.4	26.2	30.4	36.5	34.2	36.1	30.9	161	169	105
MAX	35	32	29	33	31	48	44	53	40	215	198	212
MIN	26	26	18	19	28	30	30	30	24	25	141	29
AC-FT	1730	1680	1560	1610	1690	2240	2040	2220	1840	9880	10380	6220
CAL YR 1982	TOTAL	21434	MEAN 58.7	MAX 378	MIN 18	AC-FT	42510					
WTR YR 1983	TOTAL	21725	MEAN 59.5	MAX 215	MIN 18	AC-FT	43090					

KANSAS RIVER BASIN

239

06835000 STINKING WATER CREEK NEAR PALISADE, NE

LOCATION.--Lat 40°22'10", long 101°06'50", in SW1/4NW1/4 sec.30, T.5 N., R.33 W., Hayes County, Hydrologic Unit 10250006, on right bank 25 ft downstream from county bridge, 1.2 mi upstream from mouth, and 1.8 mi northwest of Palisade.

DRAINAGE AREA.--1,500 mi², approximately, of which about 380 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 1730: 1952(M). WSP 1919: 1951(P), 1955. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,740.99 ft 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.--34 years, 40.2 ft³/s, 29,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,030 ft³/s June 17, 1956, gage height, 11.30 ft, from rating curve extended above 1,200 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 6.0 ft³/s Aug. 4, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 111 ft³/s Mar. 7, gage height, 4.43 ft, no peak above base of 150 ft³/s; minimum daily, 10 ft³/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	26	29	22	40	34	39	54	32	30	14	12
2	26	26	29	23	39	34	38	72	34	27	13	12
3	26	26	28	23	39	34	37	69	35	26	13	12
4	25	25	28	25	40	34	37	57	35	24	13	12
5	24	25	27	26	35	43	36	48	41	23	13	12
6	24	26	27	28	36	78	38	44	51	23	13	12
7	24	26	27	30	31	96	40	51	46	22	14	12
8	24	26	27	31	32	72	40	55	40	21	13	11
9	27	27	26	37	34	59	39	46	38	20	13	11
10	28	27	24	39	34	49	38	43	36	19	13	11
11	28	28	28	39	35	43	37	42	34	18	12	11
12	28	30	27	41	36	40	41	40	33	18	12	11
13	27	31	25	41	39	38	62	38	34	18	12	11
14	26	32	26	40	41	37	77	37	35	18	12	11
15	26	30	26	41	41	36	59	38	35	17	12	11
16	26	29	26	36	42	36	54	38	34	16	12	12
17	26	28	27	37	40	37	51	42	33	16	11	12
18	26	28	28	32	39	38	47	48	35	16	11	12
19	26	29	28	32	39	40	42	52	37	16	11	12
20	26	28	27	34	39	40	39	50	35	15	10	12
21	26	29	28	37	39	39	38	47	33	15	11	12
22	26	28	28	35	38	38	38	45	33	14	11	12
23	26	28	29	35	39	38	38	41	32	14	12	13
24	26	25	28	34	38	39	37	38	30	15	13	14
25	26	28	26	35	37	40	37	36	29	16	14	14
26	26	28	25	37	36	46	35	34	32	16	13	15
27	26	27	22	36	35	54	34	33	31	16	13	14
28	26	27	24	37	34	51	34	33	30	15	13	14
29	26	29	22	37	---	49	36	33	30	15	13	15
30	26	29	20	38	---	47	41	32	30	15	12	16
31	26	---	21	40	---	43	---	32	---	14	12	---
TOTAL	804	831	813	1058	1047	1402	1259	1368	1043	568	384	371
MEAN	25.9	27.7	26.2	34.1	37.4	45.2	42.0	44.1	34.8	18.3	12.4	12.4
MAX	28	32	29	41	42	96	77	72	51	30	14	16
MIN	24	25	20	22	31	34	34	32	29	14	10	11
AC-FT	1590	1650	1610	2100	2080	2780	2500	2710	2070	1130	762	736
CAL YR 1982	TOTAL	11603	MEAN	31.8	MAX	167	MIN	18	AC-FT	23010		
WTR YR 1983	TOTAL	10948	MEAN	30.0	MAX	96	MIN	10	AC-FT	21720		

KANSAS RIVER BASIN

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 upstream from bridge on U.S. Highways 6 and 34, 2 mi west of Culbertson, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--2,770 mi², approximately, of which about 1,470 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1913 to September 1915 (gage heights and discharge measurements only), October 1930 to current year. Published as Frenchman River at Culbertson October 1965 to September 1972. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1931, 1933, 1934(M), 1938(M). WSP 2119: Drainage area. WDR NE-82-1: 1981(M).

GAGE.--Water-stage recorder. Datum of gage is 2,583.44 ft 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 fair. Natural flow affected by irrigation development above station and, since Oct. 23, 1950, by storage in Enders Reservoir (station 06832000). Principal diversion is by Culbertson Canal, 20,800 acres.

AVERAGE DISCHARGE.--53 years, 103 ft³/s, 74,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, estimated, May 31, 1935, gage height, 14.8 ft, from floodmarks, present site and datum; no flow Aug. 7, 8, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 156 ft³/s June 18, gage height, 3.68 ft; maximum gage height, 3.70 ft Jan. 9, backwater from ice; minimum daily discharge, 3.4 ft³/s Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	65	72	58	85	83	101	116	41	23	9.0	4.5
2	74	67	71	54	83	82	96	112	40	21	8.2	4.2
3	70	66	70	52	73	83	96	113	39	20	7.8	4.3
4	63	65	70	56	67	85	94	109	36	20	9.8	3.7
5	63	65	70	60	68	109	93	103	43	19	11	3.4
6	61	72	70	76	70	160	94	105	39	18	8.6	4.1
7	61	68	70	90	72	163	95	125	43	17	8.2	5.7
8	65	64	67	80	77	144	94	120	37	16	7.8	5.8
9	69	66	66	84	79	130	94	105	34	15	7.5	4.1
10	67	68	69	88	79	119	92	99	33	14	7.1	3.8
11	62	71	69	87	80	111	91	100	34	14	6.4	3.8
12	63	73	67	85	82	109	100	98	33	15	6.4	4.3
13	64	74	67	88	87	105	108	92	33	14	6.1	4.4
14	65	72	69	88	90	103	126	96	33	12	6.4	4.1
15	64	68	70	86	92	100	119	90	32	12	6.3	4.5
16	68	77	70	84	91	100	107	87	31	12	6.8	32
17	66	71	71	79	90	100	104	72	34	12	6.4	55
18	63	71	72	78	90	99	100	103	64	14	6.1	43
19	65	70	70	72	90	99	93	105	50	12	6.2	46
20	65	71	70	78	89	99	84	102	39	12	6.3	43
21	64	70	71	85	87	97	89	108	34	11	5.9	43
22	65	70	72	86	87	96	89	99	32	11	5.3	45
23	70	69	72	83	87	95	94	89	31	11	5.6	45
24	68	65	76	84	87	96	89	65	30	12	4.9	46
25	64	61	52	85	85	101	83	60	28	11	4.7	46
26	66	70	39	83	84	122	81	57	27	10	4.7	45
27	67	70	42	84	84	116	81	52	30	11	3.9	42
28	66	72	50	85	83	118	81	54	28	11	3.6	40
29	67	72	42	86	---	113	83	54	26	11	3.9	40
30	72	72	40	88	---	110	93	51	24	9.8	4.0	43
31	69	---	38	85	---	108	---	45	---	9.4	4.2	---
TOTAL	2058	2075	1984	2457	2318	3355	2844	2786	1058	430.2	199.1	718.7
MEAN	66.4	69.2	64.0	79.3	82.8	108	94.8	89.9	35.3	13.9	6.42	24.0
MAX	82	77	76	90	92	163	126	125	64	23	11	55
MIN	61	61	38	52	67	82	81	45	24	9.4	3.6	3.4
AC-FT	4080	4120	3940	4870	4600	6650	5640	5530	2100	853	395	1430

CAL YR 1982 TOTAL 22266.2 MEAN 61.0 MAX 581 MIN 3.4 AC-FT 44160
WTR YR 1983 TOTAL 22283.0 MEAN 61.0 MAX 163 MIN 3.4 AC-FT 44200

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 04...	1520	--	550	8.0	19.0	9.2
NOV 09...	1310	62	560	8.0	8.0	11.7
DEC 01...	1415	65	540	8.0	5.0	10.8
JAN 20...	0900	78	535	7.9	1.0	10.7
JUN 22...	1530	148	850	7.9	27.5	8.4
JUL 14...	1500	14	690	8.2	30.0	5.9
AUG 10...	0900	1.6	720	8.0	17.5	7.8
SEP 13...	1500	4.5	725	8.6	21.0	6.5

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- LINITY LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
JAN 20...	0900	10	230	0	63	18	23	.7	13	239	41
JUL 14...	1500	5	290	30	73	25	41	1.1	19	256	95

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)
JAN 20...	9.2	1.0	52	364	.49	76.6	2.9	.110	90	20	2
JUL 14...	18	1.0	54	480	.65	18.1	5.5	.040	160	3	2

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 upstream from bridge on U.S. Highways 6 and 34, 0.2 mi north of Burlington Northern Inc. bridge, 1 mi east of Culbertson, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--320 mi², approximately, of which about 270 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,555.25 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1967, at site 0.2 mile downstream at present datum and Oct. 1, 1967, to Aug. 28, 1968, at site 0.8 mi downstream at datum 8.96 ft lower.

REMARKS.--Records good except for periods of backwater from beaver dams Oct. 1 to Dec. 10 and Sept. 27-30, which are poor. Natural flow affected by irrigation development above station, return flow from irrigated areas, and waste from Culbertson Canal.

AVERAGE DISCHARGE.--37 years, 6.13 ft³/s, 4,440 acre-ft/yr; median of yearly mean discharges, 5.4 ft³/s, 3,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft³/s June 17, 1955, gage height, 14.64 ft, site then in use; no flow Jan. 4-6, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 31, 1935, reached a stage of 24.0 ft, at site 0.2 mi downstream, at present datum, from floodmarks, discharge, about 5,300 ft³/s, from information by Nebraska Department of Roads.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55 ft³/s Sept. 17, gage height, 2.81 ft; no peak above base of 150 ft³/s; minimum daily, 0.66 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	.81	.88	.95	.86	.72	.84	2.3	1.0	3.7	1.6	2.7
2	2.2	.80	.98	.95	.75	.75	.75	1.4	.95	2.8	1.9	2.3
3	1.7	.80	.98	.95	.72	.79	.83	1.1	.95	4.8	2.1	5.1
4	1.3	.78	.95	.95	.72	.84	.86	1.0	.94	6.7	1.5	4.1
5	1.2	.76	.95	.95	.75	1.4	.92	1.0	1.4	5.9	2.6	1.8
6	1.2	.78	.95	.86	.75	5.0	.95	1.3	1.0	5.5	6.3	3.8
7	1.1	.80	.90	.95	.75	1.5	.92	2.3	.95	4.7	6.0	2.3
8	1.1	.82	.86	1.0	.75	.88	.75	1.3	.95	3.5	6.3	.86
9	1.1	.82	.86	1.0	.75	.75	.82	1.1	.89	2.2	6.8	.72
10	1.1	.84	.90	1.1	.78	.82	.86	1.0	.86	1.4	3.3	3.6
11	1.1	.85	.95	1.0	.86	.86	.87	1.1	.86	2.4	2.6	5.8
12	1.0	.84	.95	.95	.89	.75	1.1	4.2	.89	4.0	3.2	7.0
13	1.0	.82	.95	1.1	.99	.75	1.0	1.4	1.2	6.1	3.3	7.4
14	.99	.78	.95	1.1	1.0	.75	.75	1.0	1.2	8.1	3.4	11
15	.98	.76	.95	1.1	1.0	.75	.79	.95	1.6	8.3	2.0	18
16	.97	.76	.95	1.1	.95	.82	.75	1.0	2.0	8.8	1.9	26
17	.96	.78	.95	1.0	.86	.95	.83	7.0	3.1	9.5	4.1	39
18	.95	.80	1.0	1.0	.88	.86	.89	2.5	7.2	5.0	3.7	27
19	.94	.82	1.1	.95	.86	.86	.86	1.3	4.6	1.8	3.5	2.2
20	.93	.83	1.1	.95	.72	.86	.86	1.1	3.5	3.8	5.2	.81
21	.92	.84	1.1	.86	.72	.82	.86	1.1	3.3	3.6	4.5	.75
22	.91	.86	1.0	.86	.75	.86	.86	1.0	.92	2.8	3.8	.72
23	.90	.84	.98	.86	.75	.86	.82	1.0	.72	2.4	2.4	.66
24	.89	.76	.75	.86	.75	.86	.75	1.0	.69	9.3	5.2	.69
25	.88	.72	1.0	.86	.72	1.1	.83	.95	.69	8.6	3.5	.72
26	.87	.73	1.1	.75	.75	1.1	.81	.95	.69	8.0	2.4	.72
27	.86	.74	1.0	.75	.75	.93	.83	.95	.75	8.6	1.6	.72
28	.85	.78	.80	.86	.75	.75	.86	.95	7.4	5.4	4.8	.75
29	.84	.80	1.0	.86	---	.75	1.1	4.5	5.9	4.0	4.2	.75
30	.83	.84	1.0	.86	---	.75	.99	2.6	6.6	2.5	5.3	.75
31	.82	---	1.0	.86	---	.80	---	2.2	---	1.8	3.9	---
TOTAL	33.59	23.96	29.79	29.15	22.53	31.24	25.91	52.55	63.70	156.0	112.9	178.72
MEAN	1.08	.80	.96	.94	.80	1.01	.86	1.70	2.12	5.03	3.64	5.96
MAX	2.2	.86	1.1	1.1	1.0	5.0	1.1	7.0	7.4	9.5	6.8	39
MIN	.82	.72	.75	.75	.72	.72	.75	.95	.69	1.4	1.5	.66
AC-FT	67	48	59	58	45	62	51	104	126	309	224	354
CAL YR 1982	TOTAL	1392.16	MEAN	3.81	MAX	167	MIN	.70	AC-FT	2760		
WTR YR 1983	TOTAL	760.04	MEAN	2.08	MAX	39	MIN	.66	AC-FT	1510		

06836500 DRIFTWOOD CREEK NEAR MCCOOK, NE

LOCATION (REVISED).--Lat 40°09'41", long 100°39'35", in SE1/4SW1/4 sec.1, T.2 N., R.30 W., Red Willow County, Hydrologic Unit 10250004, on right bank downstream from county road bridge, 3.0 mi downstream from siphon and wasteway on Meeker-Driftwood Canal, 3.5 mi southwest of McCook, and 2.6 miles upstream from mouth.

DRAINAGE AREA.--360 mi², approximately, of which about 350 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 1210: 1950.

GAGE.--Water-stage recorder. Datum of gage is 2,485.23 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 12, 1962, at site 1.7 mi upstream in old channel at datum 8.55 ft higher, Oct. 12, 1962, to Apr. 11, 1963, at site 1.4 mi upstream at datum 4.80 ft higher, and Apr. 12, 1963 to Apr. 22, 1982 at site 1.9 mi upstream at datum 8.55 ft higher.

REMARKS.--Records fair. Natural flow affected by waste from Meeker-Driftwood Canal and by irrigation development above station.

AVERAGE DISCHARGE.--37 years, 10.4 ft³/s, 7,530 acre-ft/yr; median of yearly mean discharges, 8.2 ft³/s, 5,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,740 ft³/s Aug. 7, 1950, gage height, 25.43 ft, at site then in use, from floodmark, from rating curve extended above 3,000 ft³/s; no flow at times in 1946-50, 1952-56.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 460 ft³/s June 18 at 1630, gage height, 7.89 ft, no other peak above base of 300 ft³/s; minimum daily, 2.4 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	6.3	5.9	5.0	6.0	8.1	9.1	11	9.0	6.4	19	11
2	10	5.3	6.1	4.5	6.2	8.1	8.8	12	8.9	6.3	15	7.9
3	8.6	5.4	6.1	4.4	5.8	8.0	8.3	8.0	8.9	6.1	14	4.5
4	8.1	5.7	6.1	4.5	5.8	8.4	8.3	13	8.6	5.5	9.5	4.4
5	5.9	5.7	6.1	4.8	6.0	23	8.6	19	9.7	5.1	9.2	5.0
6	7.7	6.2	6.1	6.4	5.8	28	8.7	12	9.3	3.7	9.8	5.9
7	8.5	6.1	6.1	6.0	6.0	26	8.4	12	11	3.2	10	7.8
8	8.9	5.9	5.6	5.6	6.4	15	8.1	8.5	21	3.0	9.7	9.7
9	14	6.1	5.9	5.8	6.7	10	8.4	7.1	22	4.9	12	11
10	8.6	6.1	6.6	6.2	7.9	9.5	8.2	6.7	18	5.4	12	11
11	7.4	6.2	6.0	5.7	9.0	9.2	7.8	6.2	9.9	9.2	12	11
12	6.4	6.0	6.5	5.4	9.8	9.0	7.8	49	8.6	11	11	11
13	6.9	5.8	6.3	5.7	9.7	8.9	8.1	19	8.6	13	11	9.9
14	6.3	6.1	6.1	5.6	9.8	8.6	7.6	13	17	22	12	9.1
15	6.1	5.7	5.6	5.7	9.3	8.3	7.3	7.5	33	19	13	6.5
16	6.2	6.1	5.5	5.6	8.9	8.4	7.2	6.5	7.5	17	9.2	6.5
17	6.9	6.1	5.7	4.8	8.4	9.1	7.1	51	9.9	17	7.3	8.2
18	6.5	5.9	6.0	5.0	8.1	8.9	7.0	148	195	13	6.3	6.2
19	6.8	6.2	5.4	5.2	7.9	8.7	7.0	62	141	7.5	6.6	5.9
20	8.8	5.8	5.3	5.6	8.1	8.6	7.1	29	24	7.3	5.9	5.1
21	9.7	5.2	5.5	5.4	8.9	8.0	6.8	25	12	9.6	6.6	6.9
22	9.7	5.2	6.1	5.0	8.7	8.3	7.3	17	8.6	9.5	6.6	10
23	9.4	5.3	5.8	5.8	8.8	8.3	7.3	14	6.3	7.6	7.6	6.7
24	8.9	5.0	5.8	6.4	8.1	8.1	6.8	12	5.2	9.4	10	5.4
25	8.2	5.4	5.4	6.2	8.3	11	6.9	11	4.8	9.1	11	4.4
26	7.8	5.4	4.0	5.6	8.8	15	6.6	11	4.7	9.1	11	3.4
27	7.7	5.3	4.2	6.0	8.6	11	6.1	11	4.5	7.7	12	2.6
28	7.8	6.0	4.8	7.2	8.1	9.6	6.0	10	4.5	15	16	2.4
29	7.2	6.4	3.9	6.8	---	9.4	6.9	9.6	4.6	11	13	2.7
30	7.0	6.1	4.0	6.6	---	9.3	7.1	9.2	4.6	14	19	3.3
31	7.1	---	3.7	6.2	---	8.9	---	9.2	---	20	17	---
TOTAL	249.1	174.0	172.2	174.7	219.9	338.7	226.7	639.5	640.7	307.6	344.3	205.4
MEAN	8.04	5.80	5.55	5.64	7.85	10.9	7.56	20.6	21.4	9.92	11.1	6.85
MAX	14	6.4	6.6	7.2	9.8	28	9.1	148	195	22	19	11
MIN	5.9	5.0	3.7	4.4	5.8	8.0	6.0	6.2	4.5	3.0	5.9	2.4
AC-FT	494	345	342	347	436	672	450	1270	1270	610	683	407
CAL YR 1982	TOTAL	3973.2	MEAN 10.9	MAX 499	MIN 3.6	AC-FT 7880						
WTR YR 1983	TOTAL	3692.8	MEAN 10.1	MAX 195	MIN 2.4	AC-FT 7320						

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 downstream from bridge on U.S. Highway 83 at south edge of McCook, 2.5 mi downstream from Driftwood Creek, and 10.5 mi upstream from Red Willow Creek.

DRAINAGE AREA.--12,310 mi², approximately, of which about 6,260 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to June 1932, October 1954 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,456.37 ft National Geodetic Vertical Datum of 1929. October 1930 to June 1932, nonrecording gage on former highway bridge 325 ft upstream at different datum and October 1954 to Mar. 13, 1959, on highway bridge 25 ft upstream at present datum.

REMARKS.--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.--30 years, 182 ft³/s, 131,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,890 ft³/s Mar. 21, 1960, gage height, 9.14 ft; no flow for several days in July and August 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred May 31, 1935, discharge, about 245,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 633 ft³/s June 18, gage height, 5.22 ft; minimum daily, 28 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	106	106	100	214	299	235	364	202	372	175	38
2	124	106	105	90	225	297	228	356	185	379	185	36
3	107	104	101	80	216	298	226	317	177	376	159	35
4	104	103	101	86	229	304	223	314	170	376	156	35
5	100	103	103	96	253	389	264	309	196	383	156	35
6	97	104	104	100	248	427	281	416	177	346	154	32
7	98	108	102	110	243	414	280	423	172	298	149	32
8	108	107	101	104	243	389	281	390	179	289	145	30
9	128	111	102	106	247	358	286	382	166	283	143	29
10	113	111	103	116	251	346	289	361	168	280	128	28
11	106	113	106	130	259	338	287	355	161	280	130	31
12	102	110	105	125	264	331	301	438	159	292	128	29
13	102	109	105	145	270	325	303	372	165	292	126	32
14	101	108	105	150	272	321	305	369	171	245	134	34
15	102	106	104	130	295	256	306	347	178	221	136	33
16	101	111	103	114	306	223	297	340	156	218	128	36
17	101	109	103	110	307	223	295	441	216	216	125	63
18	103	110	103	116	306	223	291	529	381	214	125	61
19	101	108	105	125	309	223	290	475	372	204	125	54
20	104	108	105	135	311	225	280	401	243	197	125	49
21	104	108	105	140	307	223	286	379	223	197	125	47
22	105	108	105	140	307	221	288	358	210	197	125	51
23	107	110	103	150	303	219	292	344	205	201	125	55
24	107	104	98	170	302	217	287	319	203	228	110	54
25	106	100	90	180	299	243	284	296	199	224	79	53
26	106	99	80	170	301	252	270	293	203	212	64	51
27	106	105	84	190	303	245	271	260	204	214	60	48
28	107	107	88	215	302	239	269	242	211	235	57	44
29	106	107	76	208	---	234	283	250	211	200	55	46
30	107	106	74	202	---	233	285	247	283	180	65	54
31	107	---	70	194	---	234	---	244	---	160	51	---
TOTAL	3281	3209	3045	4227	7692	8769	8363	10931	6146	8009	3748	1255
MEAN	106	107	98.2	136	275	283	279	353	205	258	121	41.8
MAX	128	113	106	215	311	427	306	529	381	383	185	63
MIN	97	99	70	80	214	217	223	242	156	160	51	28
AC-FT	6510	6370	6040	8380	15260	17390	16590	21680	12190	15890	7430	2490
CAL YR 1982	TOTAL	46100	MEAN 126	MAX 869	MIN 45	AC-FT	91440					
WTR YR 1983	TOTAL	68675	MEAN 188	MAX 529	MIN 28	AC-FT	136200					

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 106 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 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	15.5	9.5	9.0	5.5	4.0	---	---	1.5	1.0	8.5	6.0
2	---	---	9.5	7.0	5.0	3.0	---	---	1.5	1.0	9.5	7.0
3	---	---	7.0	4.5	4.5	1.0	---	---	1.5	.5	9.5	7.0
4	---	---	5.0	3.0	4.5	.5	.0	.0	1.5	.0	9.5	9.0
5	15.0	13.5	5.0	3.0	5.5	3.0	.0	.0	1.5	1.0	10.0	9.5
6	15.0	13.0	6.0	3.5	4.5	4.0	.0	.0	2.0	.5	---	---
7	14.0	11.0	6.5	5.0	4.5	1.0	.0	.0	---	---	---	---
8	14.0	13.0	5.5	4.5	2.0	.5	.5	.0	5.0	4.0	---	---
9	13.0	10.5	5.0	4.0	2.0	.5	.5	.0	5.5	3.0	---	---
10	10.5	9.5	6.5	4.5	2.0	1.0	.5	.0	6.5	4.0	---	---
11	10.5	8.5	10.0	5.0	2.0	.5	.0	.0	7.0	4.5	---	---
12	10.0	8.5	5.0	1.0	2.0	.5	.0	.0	8.0	4.5	---	---
13	10.5	9.0	5.0	.5	1.0	.0	.0	.0	8.5	5.5	---	---
14	11.0	8.5	4.0	.0	1.0	.0	.0	.0	9.0	7.0	11.0	11.0
15	12.0	10.0	4.0	.0	1.0	.0	---	---	9.5	8.0	11.0	9.5
16	12.0	10.0	5.0	.0	1.0	.0	---	---	9.0	6.5	9.5	7.0
17	13.0	10.5	5.0	.0	4.0	.0	---	---	8.0	7.0	8.0	6.0
18	13.5	11.0	4.5	1.0	4.0	.0	---	---	7.0	4.5	8.0	6.5
19	11.5	9.5	---	---	3.0	.0	---	---	8.5	5.5	8.0	6.5
20	9.5	7.0	---	---	3.0	.0	.0	.0	7.0	4.0	8.0	6.0
21	9.0	6.5	---	---	3.5	.0	.0	.0	5.0	3.5	8.0	6.0
22	9.5	7.0	---	---	3.0	.0	.0	.0	6.5	3.5	5.5	4.5
23	10.5	8.5	---	---	2.0	.0	.0	.0	7.0	6.0	4.5	3.5
24	---	---	---	---	---	---	.0	.0	6.0	4.5	4.5	4.0
25	---	---	---	---	---	---	.0	.0	4.5	4.0	6.0	4.0
26	---	---	---	---	---	---	.0	.0	5.5	3.5	6.0	4.5
27	---	---	---	---	---	---	1.5	.5	6.5	5.0	5.5	3.5
28	---	---	---	---	---	---	3.0	1.0	8.0	5.0	6.0	4.0
29	---	---	---	---	---	---	4.0	2.0	---	---	13.0	5.5
30	---	---	---	---	---	---	3.5	2.0	---	---	14.0	11.0
31	---	---	---	---	---	---	2.0	1.5	---	---	14.5	12.0

KANSAS RIVER BASIN

06837000 REPUBLICAN RIVER AT MC COOK, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

06837300 RED WILLOW CREEK ABOVE HUGH BUTLER LAKE, NE

LOCATION.--Lat 40°24'05", long 100°46'45", in NE1/4SE1/4 sec.13, T.5 N., R.31 W., Hayes County, Hydrologic Unit 10250007, on right bank 1,000 ft above county road bridge, 7.2 mi upstream from Red Willow Dam, and 12 mi northeast of Culbertson.

DRAINAGE AREA.--600 mi², approximately, of which about 200 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Artificial control since March 1961. Datum of gage is 2,594.80 ft 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.--23 years, 28.1 ft³/s, 20,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft³/s June 16, 1972, gage height, 13.27 ft, from rating curve extended above 1,000 ft³/s on basis of slope-conveyance study; minimum daily, 4.0 ft³/s July 4, 5, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 139 ft³/s Mar. 5, gage height, 2.29 ft, no peak above base of 150 ft³/s; minimum daily, 5.8 ft³/s Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	21	25	26	34	30	27	42	19	19	9.5	8.3
2	36	21	27	27	34	31	26	48	20	19	6.9	8.3
3	31	20	28	25	30	30	25	64	21	17	8.7	7.8
4	28	21	28	25	27	31	25	64	23	16	8.9	7.0
5	23	21	27	27	29	81	26	46	30	16	7.4	9.5
6	20	21	27	28	25	88	29	39	45	15	8.8	9.6
7	19	21	27	31	21	79	33	45	40	15	9.5	10
8	19	21	26	29	25	75	36	42	34	12	10	11
9	19	22	26	30	27	54	37	37	27	12	9.8	11
10	20	24	26	32	28	43	34	30	22	12	8.6	9.9
11	21	26	23	32	26	37	33	28	19	11	8.5	11
12	22	28	21	33	30	24	38	28	20	10	8.1	11
13	23	29	22	34	35	26	40	27	22	11	8.7	11
14	23	29	24	35	38	27	49	26	29	10	9.2	11
15	22	30	27	32	41	28	51	25	26	9.4	8.9	11
16	21	28	28	32	43	28	44	26	25	8.6	8.5	12
17	20	26	24	31	44	29	45	31	40	9.5	8.1	11
18	20	25	23	25	43	31	39	39	76	9.3	8.4	11
19	20	24	23	26	41	32	34	58	58	12	7.7	11
20	20	24	25	27	39	32	30	60	45	12	6.2	11
21	20	25	25	26	38	31	29	47	37	10	5.8	11
22	20	26	25	26	37	30	26	39	30	8.8	6.3	11
23	21	26	25	28	35	28	31	36	25	18	8.5	12
24	21	22	22	29	34	26	29	34	22	31	11	12
25	21	23	15	28	33	27	29	30	20	14	11	13
26	22	24	21	28	32	33	27	27	18	13	8.6	13
27	22	25	23	29	30	47	26	23	18	12	7.7	13
28	21	26	17	30	29	56	25	20	18	15	7.2	12
29	21	24	20	31	---	44	26	20	18	13	8.7	14
30	21	24	27	32	---	37	28	19	18	10	7.7	15
31	21	---	26	33	---	32	---	19	---	9.3	7.3	---
TOTAL	684	727	753	907	928	1227	977	1119	865	409.9	260.2	329.4
MEAN	22.1	24.2	24.3	29.3	33.1	39.6	32.6	36.1	28.8	13.2	8.39	11.0
MAX	36	30	28	35	44	88	51	64	76	31	11	15
MIN	19	20	15	25	21	24	25	19	18	8.6	5.8	7.0
AC-FT	1360	1440	1490	1800	1840	2430	1940	2220	1720	813	516	653

CAL YR 1982 TOTAL 9221.3 MEAN 25.3 MAX 224 MIN 8.0 AC-FT 18290
WTR YR 1983 TOTAL 9186.5 MEAN 25.2 MAX 88 MIN 5.8 AC-FT 18220

KANSAS RIVER BASIN

06837390 HUGH BUTLER LAKE NEAR MCCOOK, NE

LOCATION.--Lat 40°21'35", long 100°39'55", in SW1/4NW1/4 sec.31, T.5 N., R.29 W., Frontier County, Hydrologic Unit 10250007, in gate-control house at outlet tube of Red Willow Dam on Red Willow Creek, 12 mi north of McCook.

DRAINAGE AREA.--730 mi², approximately, of which about 310 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1961 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 10, 1962, nonrecording gage at present datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Sept. 5, 1961. Capacity, 31,470 acre-ft between elevations 2,522.0 ft, sill of outlet works, and 2,581.8 ft, top of irrigation pool. Top of flood-control pool and crest of main spillway at elevation 2,604.9 ft, capacity, 86,360 acre-ft. Top of superstorage flood control pool at elevation 2,627.8 ft, capacity, 162,600 acre-ft. Dead storage, 6,310 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 41,680 acre-ft July 15, 16, 1967, elevation, 2,584.14 ft; minimum since operation of reservoir began, 16,930 acre-ft Sept. 8, 1978, elevation, 2,565.31 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 37,400 acre-ft June 20, elevation, 2,581.57 ft; minimum, 25,840 acre-ft Sept. 23, elevation, 2,573.44 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,570	21,800	2,580	34,910
2,575	27,800	2,585	43,170

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26620	27220	27960	28740	30110	31450	33870	35600	36870	36640	33050	28420
2	26630	27250	28000	28740	30150	31520	33850	35520	36870	36590	32920	28260
3	26640	27250	28000	28780	30150	31580	33880	35640	36870	36450	32820	28120
4	26660	27240	28010	28800	30150	31730	33930	35690	36950	36340	32710	27920
5	26680	27240	28080	28830	30240	32050	33990	35820	36930	36240	32520	27670
6	26690	27290	28080	28880	30250	32310	34020	35880	36950	36150	32360	27430
7	26710	27310	28090	28920	30400	32650	34050	35940	37000	36040	32230	27200
8	26720	27360	28080	28990	30430	32740	34080	36010	37000	35880	32060	27010
9	26730	27400	28100	29040	30450	32760	34190	36070	37010	35750	31910	26880
10	26760	27430	28140	29110	30470	32800	34220	36130	37010	35630	31790	26710
11	26770	27490	28140	29190	30480	32860	34290	36200	37010	35410	31650	26560
12	26780	27510	28160	29240	30510	32910	34390	36260	37000	35250	31540	26440
13	26810	27530	28240	29300	30470	32940	34450	36290	37000	35160	31440	26330
14	26820	27530	28280	29320	30520	32970	34430	36320	37000	35020	31340	26230
15	26830	27540	28280	29350	30570	33000	34540	36350	37000	34850	31240	26170
16	26850	27600	28300	29380	30640	33080	34560	36350	37110	34590	31130	26100
17	26860	27610	28370	29420	30650	33100	34650	36560	37230	34620	30960	26060
18	26880	27650	28410	29460	30830	33130	34660	36610	37310	34530	30770	25980
19	26900	27710	28380	29500	30880	33130	34680	36660	37390	34400	30520	25980
20	26910	27740	28390	29560	30910	33130	34730	36760	37390	34230	30320	25890
21	27010	27720	28420	29640	31000	33130	34730	36820	37340	34120	30100	25870
22	27050	27720	28460	29680	31080	33160	34760	36840	37270	33960	29840	25860
23	27080	27750	28470	29730	31170	33190	34790	36870	37190	33820	29620	25850
24	27120	27750	28540	29750	31230	33170	34830	36900	37100	33790	29510	25870
25	27160	27770	28550	29800	31300	33260	34890	36900	37000	33640	29450	25890
26	27170	27770	28580	29830	31420	33430	34960	36900	36930	33500	29320	25890
27	27220	27810	28610	29900	31440	33440	34940	36920	36890	33410	29280	25890
28	27210	27890	28620	29960	31440	33550	34940	36920	36840	33400	29090	25900
29	27210	27890	28620	30000	---	33670	34990	36900	36760	33320	28920	25950
30	27210	27920	28660	30090	---	33780	35020	36890	36710	33220	28760	25970
31	27240	---	28710	30100	---	33850	---	36850	---	33140	28580	---
MAX	27240	27920	28710	30100	31440	33850	35020	36920	37390	36640	33050	28420
MIN	26620	27220	27960	28740	30110	31450	33850	35520	36710	33140	28580	25850
	2574.56	2575.09	2575.69	2576.72	2577.67	2579.31	2580.07	2581.23	2581.14	2578.84	2575.69	2573.55
	+630	+680	+790	+1390	+1340	+2410	+1170	+1830	-140	-3570	-4560	-2610
CAL YR 1982	MAX	33900	MIN	26410	+1200							
WTR YR 1983	MAX	37390	MIN	25850	-640							

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

06837500 RED WILLOW CREEK NEAR MCCOOK, NE

LOCATION.--Lat 40°20'50", long 100°38'35", in SW1/4NW1/4 sec.6, T.4 N., R.29 W., Red Willow County, Hydrologic Unit 10250007, on left bank 45 ft downstream from bridge on U.S. Highway 83, 3 mi downstream from Red Willow Dam and 10 mi north of McCook.

DRAINAGE AREA.--740 mi², approximately, of which about 320 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1940 to September 1947. Annual maximums, water years 1958-60. October 1960 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder, concrete control since Dec. 23, 1965. Datum of gage is 2,485.97 ft National Geodetic Vertical Datum of 1929. October 1940 to September 1947, water-stage recorder at site 45 ft upstream at datum 9.55 ft higher. Nov. 22, 1957, to Sept. 30, 1960, crest-stage gage, Oct. 1, 1960, to Apr. 5, 1961, nonrecording gage, and Apr. 6, 1961, to Sept. 26, 1974, water-stage recorder at site 45 ft upstream, present datum.

REMARKS.--Records good. Natural flow affected by irrigation development above station and, since Sept. 5, 1961, by storage in Hugh Butler Lake (station 06837390).

AVERAGE DISCHARGE.--22 years (1962-83), 20.7 ft³/s, 15,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s June 22, 1947, gage height, 31.95 ft, present datum, from rating curve extended above 2,500 ft³/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.60 ft³/s Sept. 22, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1935, reached a stage of 33.45 ft, from floodmarks, discharge, 45,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 126 ft³/s Aug. 22, 23, gage height, 9.61 ft; minimum daily, 3.5 ft³/s Sept. 23, 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.7	4.3	4.5	4.5	4.5	5.1	7.8	4.4	36	43	92
2	4.9	4.7	4.3	4.5	4.5	4.5	5.4	4.9	4.6	36	53	83
3	4.7	4.5	4.3	4.5	4.5	4.3	5.5	4.7	4.7	36	53	74
4	4.7	4.5	4.3	4.7	4.5	4.7	5.5	4.9	4.3	36	55	87
5	4.5	4.3	4.4	4.7	4.5	6.3	5.5	5.5	4.0	38	72	105
6	4.5	4.3	4.5	4.7	4.5	6.4	5.5	5.4	4.1	47	72	111
7	4.7	4.3	4.5	4.7	4.5	4.9	5.5	4.8	4.3	56	71	105
8	5.5	4.3	4.4	4.7	4.5	4.6	5.5	4.6	5.6	64	71	96
9	5.8	4.3	4.3	4.7	4.5	4.5	5.6	4.5	4.6	64	68	78
10	4.9	4.3	4.3	4.7	4.5	4.7	5.4	4.5	4.3	66	60	65
11	4.9	4.3	4.3	4.6	4.5	4.7	5.2	4.5	4.2	68	54	64
12	4.9	3.9	4.3	4.5	4.3	4.7	5.5	16	11	64	46	60
13	4.9	4.0	4.3	4.5	4.3	4.7	5.5	5.0	25	57	41	52
14	4.9	4.1	4.3	4.5	4.3	4.6	5.5	4.7	6.2	52	42	44
15	4.9	4.1	4.3	4.3	4.3	4.6	5.4	4.7	5.4	57	48	34
16	4.7	4.1	4.3	4.3	4.3	5.0	5.2	4.7	3.9	57	56	30
17	4.7	4.1	4.3	4.3	4.3	5.2	5.2	7.0	4.5	57	61	30
18	4.7	4.1	4.3	4.3	4.3	5.0	5.5	5.6	4.2	57	71	29
19	4.5	4.1	4.3	4.3	4.3	4.9	5.5	4.8	12	58	91	18
20	4.7	4.0	4.3	4.3	4.4	4.9	5.2	4.9	42	67	92	4.4
21	4.9	3.9	4.5	4.3	4.5	4.9	5.3	4.8	43	66	108	4.1
22	4.9	3.9	4.5	4.3	4.5	4.9	5.2	4.9	45	62	125	3.9
23	5.0	3.9	4.5	4.3	4.5	4.9	5.2	4.7	45	58	105	3.5
24	4.8	3.9	5.9	4.3	4.5	4.9	5.2	4.7	41	63	65	3.7
25	4.9	3.9	5.0	4.5	4.5	5.4	5.2	4.7	36	72	60	3.5
26	4.6	4.1	4.5	4.5	4.5	5.2	5.2	4.7	36	71	57	3.5
27	4.7	4.1	4.8	4.5	4.5	5.2	5.2	4.6	36	63	54	3.5
28	4.5	4.3	4.9	4.5	4.5	4.9	5.0	4.5	36	54	54	3.5
29	4.5	4.3	4.5	4.5	---	4.9	5.3	4.4	36	43	73	3.6
30	4.7	4.3	4.3	4.5	---	4.9	5.0	4.4	35	38	93	3.8
31	4.6	---	4.5	4.5	---	4.9	---	4.6	---	38	93	---
TOTAL	149.6	125.6	138.5	139.0	124.3	152.7	160.0	164.5	552.3	1701	2107	1298.0
MEAN	4.83	4.19	4.47	4.48	4.44	4.93	5.33	5.31	18.4	54.9	68.0	43.3
MAX	5.8	4.7	5.9	4.7	4.5	6.4	5.6	16	45	72	125	111
MIN	4.5	3.9	4.3	4.3	4.3	4.3	5.0	4.4	3.9	36	41	3.5
AC-FT	297	249	275	276	247	303	317	326	1100	3370	4180	2570

CAL YR 1982 TOTAL 6735.7 MEAN 18.5 MAX 101 MIN 3.4 AC-FT 13360
WTR YR 1983 TOTAL 6812.5 MEAN 18.7 MAX 125 MIN 3.5 AC-FT 13510

KANSAS RIVER BASIN

06838000 RED WILLOW CREEK NEAR RED WILLOW, NE

LOCATION.--Lat 40°14'10", long 100°30'00", in NE1/4NE1/4 sec.17, T.3 N., R.28 W., Red Willow County, Hydrologic Unit 10250007, on left bank near downstream side of bridge on U.S. Highways 6 and 34, 0.8 mi north of Red Willow and 2.5 mi upstream from mouth.

DRAINAGE AREA.--830 mi², approximately, of which about 410 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--September 1939 to current year.

REVISED RECORDS.--WSP 1510: 1945(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,398.64 ft National Geodetic Vertical Datum of 1929. Prior to May 26, 1945, nonrecording gage at bridge 1.2 mi upstream at datum 11.16 ft higher, May 26, 1945, to Aug. 2, 1974, water-stage recorder at present site and datum, and Aug. 3, 1974, to June 27, 1980, on right bank at downstream side of bridge, present datum.

REMARKS.--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 above station for irrigation of about 4,150 acres.

AVERAGE DISCHARGE.--21 years (1963-83), 15.1 ft³/s, 10,940 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s June 22, 1947, gage height, 18.36 ft, from rating curve extended above 6,800 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.33 ft³/s Sept. 8, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 86 ft³/s May 12, gage height, 5.10 ft; minimum daily, 1.8 ft³/s Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	9.0	8.6	9.6	11	11	12	18	10	21	1.8	23
2	8.4	8.9	9.0	9.0	11	11	14	13	10	22	7.8	29
3	8.4	8.8	8.7	8.6	9.6	11	14	10	11	21	7.5	22
4	8.2	8.9	8.7	9.0	10	12	16	9.6	10	21	6.3	21
5	8.2	9.3	8.7	10	11	18	15	8.7	11	18	9.4	49
6	8.0	9.0	8.9	12	10	17	14	10	10	18	7.3	65
7	8.0	8.8	9.4	13	11	14	12	10	11	16	6.7	70
8	7.8	8.7	9.3	12	12	13	11	8.4	11	10	8.1	59
9	7.6	8.4	9.0	11	11	11	10	8.4	11	7.0	11	52
10	7.6	8.4	8.4	11	11	11	11	8.4	8.3	6.2	11	29
11	7.4	9.1	8.4	11	11	11	11	8.2	4.1	8.6	12	29
12	7.4	10	8.0	10	11	11	11	38	4.2	9.6	11	29
13	7.8	9.4	7.6	11	12	11	10	14	28	15	6.9	24
14	9.3	9.7	8.2	11	12	11	10	10	17	8.7	6.2	22
15	9.6	11	8.0	9.0	11	10	10	9.0	11	6.3	7.5	16
16	8.4	10	7.8	9.2	11	10	10	9.0	9.7	4.6	8.4	9.8
17	8.4	9.4	8.2	9.0	11	11	9.9	21	12	4.7	6.3	9.3
18	11	9.4	9.0	9.4	11	9.2	9.8	33	9.0	4.0	13	9.5
19	11	10	9.5	10	11	8.9	9.6	12	8.7	3.6	20	14
20	10	12	9.8	11	12	8.3	9.6	11	14	6.7	16	7.7
21	9.6	9.2	9.5	11	12	8.6	11	11	18	8.6	17	6.1
22	10	9.3	9.3	10	12	11	12	10	23	10	55	14
23	9.0	9.5	9.4	11	12	11	13	10	25	9.1	73	6.3
24	9.6	9.0	9.7	13	11	10	12	10	25	11	25	6.1
25	9.3	8.8	5.7	12	11	12	14	9.6	20	12	10	6.1
26	8.1	9.4	5.4	11	11	11	13	10	20	8.4	10	5.6
27	8.4	9.2	6.6	11	12	11	12	10	21	9.0	8.0	5.3
28	8.4	9.2	8.6	11	11	11	13	10	22	15	9.1	5.2
29	8.1	8.6	5.6	12	---	12	14	10	22	8.8	11	5.3
30	8.4	8.4	5.8	12	---	11	15	10	21	2.5	29	7.2
31	8.4	---	5.4	12	---	11	---	10	---	2.5	25	---
TOTAL	268.2	278.8	254.2	331.8	312.6	350.0	358.9	380.3	438.0	328.9	456.3	656.5
MEAN	8.65	9.29	8.20	10.7	11.2	11.3	12.0	12.3	14.6	10.6	14.7	21.9
MAX	11	12	9.8	13	12	18	16	38	28	22	73	70
MIN	7.4	8.4	5.4	8.6	9.6	8.3	9.6	8.2	4.1	2.5	1.8	5.2
AC-FT	532	553	504	658	620	694	712	754	869	652	905	1300
CAL YR 1982	TOTAL	4623.0	MEAN	12.7	MAX	67	MIN	5.4	AC-FT	9170		
WTR YR 1983	TOTAL	4414.5	MEAN	12.1	MAX	73	MIN	1.8	AC-FT	8760		

KANSAS RIVER BASIN

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06840000 FOX CREEK AT CURTIS, NE

LOCATION.--Lat 40°38'00", long 100°29'20", in SE1/4NW1/4 sec.27, T.8 N., R.28 W., Frontier County, Hydrologic Unit 10250008, on left bank 15 ft upstream from bridge on State Highway 23, 0.5 mi upstream from mouth, and 1 mi east of Curtis.

DRAINAGE AREA.--74 mi², approximately.

PERIOD OF RECORD.--March 1951 to September 1958. Annual maximums, water years 1960-70. October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,519.58 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--13 years (1952-58, 1978-83), 6.95 ft³/s, 5,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft³/s May 31, 1951, gage height, 15.35 ft; minimum daily, 0.71 ft³/s July 26, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 27.3 ft June 21, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45 ft³/s July 27, gage height, 5.03 ft; minimum daily, 1.8 ft³/s July 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.2	4.9	5.3	5.4	5.8	6.0	8.6	5.8	6.1	4.4	3.9
2	5.6	5.2	4.7	5.2	5.2	5.8	5.7	6.7	6.3	5.8	3.1	3.2
3	5.4	5.1	4.7	5.2	4.7	5.8	5.7	5.8	5.9	5.7	2.7	2.8
4	4.8	5.0	4.7	5.3	5.7	5.9	5.9	5.5	5.3	5.4	4.1	2.6
5	4.3	5.2	4.8	5.5	5.7	9.0	5.9	5.4	7.0	5.3	3.5	2.9
6	4.0	5.4	4.7	5.7	5.4	9.4	6.1	5.8	6.5	5.3	3.9	2.7
7	3.8	6.1	4.7	5.8	5.5	7.0	6.0	6.0	5.5	5.2	3.1	2.5
8	4.0	5.2	4.5	5.7	5.7	6.2	5.8	5.4	5.3	5.1	3.6	2.7
9	4.3	5.3	4.8	5.8	5.6	5.8	5.9	5.2	5.3	4.7	3.0	3.0
10	4.3	6.7	5.2	5.7	5.5	5.6	6.0	5.2	5.2	3.1	3.1	3.0
11	4.4	6.4	4.6	5.6	5.6	5.7	5.9	5.1	5.4	2.6	3.7	3.1
12	4.3	6.8	5.0	5.6	6.0	5.7	13	5.1	5.4	2.6	3.7	3.0
13	4.1	5.3	5.1	5.7	6.8	5.7	7.6	5.1	7.7	2.4	3.7	2.5
14	4.2	4.9	5.2	5.7	6.8	5.7	7.1	5.0	6.3	3.0	4.1	2.9
15	4.3	4.8	5.1	5.4	7.4	5.8	6.8	5.0	5.8	2.1	4.2	3.3
16	4.2	4.6	5.1	5.4	6.7	5.7	6.6	5.0	5.7	3.6	4.2	3.2
17	4.4	4.5	5.2	5.1	6.2	6.0	6.6	9.6	11	2.1	3.0	3.1
18	4.4	4.4	5.3	5.4	6.0	5.8	6.6	15	7.0	3.5	2.9	3.2
19	4.5	4.4	5.2	5.4	6.1	5.7	6.7	7.2	6.7	2.2	2.7	3.2
20	4.5	4.3	5.3	5.6	6.0	5.7	6.6	6.3	6.7	1.8	3.1	3.1
21	4.3	4.2	5.4	5.4	5.9	5.6	6.3	6.0	6.9	1.8	2.2	3.1
22	5.0	4.1	5.5	5.5	5.9	5.4	6.3	6.1	6.5	2.2	1.9	3.3
23	5.1	3.9	5.4	5.6	6.0	5.5	6.5	5.9	6.3	3.8	8.6	3.3
24	5.2	4.2	5.3	5.7	6.0	5.5	6.1	6.2	6.2	5.3	5.7	3.9
25	5.2	4.4	4.8	5.7	5.8	6.1	6.5	5.9	6.2	5.2	3.8	4.0
26	5.4	4.2	5.8	5.5	5.7	6.7	6.5	5.8	6.4	5.1	3.6	3.8
27	5.4	4.5	5.5	5.3	5.6	6.3	5.4	6.4	6.3	21	3.4	4.0
28	5.2	4.8	5.5	5.5	5.7	5.9	5.4	5.8	6.4	6.2	3.8	5.0
29	5.0	4.6	6.2	5.6	---	5.8	5.6	5.7	6.6	4.7	3.5	5.9
30	5.2	4.7	5.6	5.8	---	5.7	5.8	5.5	6.4	4.6	3.7	6.5
31	5.1	---	5.3	5.4	---	5.8	---	5.5	---	4.8	4.0	---
TOTAL	143.9	148.4	159.1	171.1	164.6	188.1	192.9	192.8	190.0	142.3	114.0	102.7
MEAN	4.64	4.95	5.13	5.52	5.88	6.07	6.43	6.22	6.33	4.59	3.68	3.42
MAX	5.6	6.8	6.2	5.8	7.4	9.4	13	15	11	21	8.6	6.5
MIN	3.8	3.9	4.5	5.1	4.7	5.4	5.4	5.0	5.2	1.8	1.9	2.5
AC-FT	285	294	316	339	326	373	383	382	377	282	226	204

CAL YR 1982 TOTAL 2005.3 MEAN 5.49 MAX 48 MIN 2.3 AC-FT 3980
WTR YR 1983 TOTAL 1909.9 MEAN 5.23 MAX 21 MIN 1.8 AC-FT 3790 *

KANSAS RIVER BASIN

06841000 MEDICINE CREEK ABOVE HARRY STRUNK LAKE, NE

LOCATION.--Lat 40°30'10", long 100°19'20", in SW1/4 sec.7, T.6 N., R.26 W., Frontier County, Hydrologic Unit 10250008, on right bank 0.3 mi downstream from top of Harry Strunk Lake flood-control pool, 2.5 mi upstream from top of irrigation pool, 3.8 mi southeast of Stockville, and 13.5 mi upstream from Medicine Creek Dam.

DRAINAGE AREA.--770 mi², approximately, of which about 530 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--January 1950 to current year. Prior to October 1950, published as "above Medicine Creek Reservoir."

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Concrete control since November 1950. Datum of gage is 2,380.94 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark).

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--33 years, 65.9 ft³/s, 47,740 acre-ft/yr; median of yearly mean discharges, 58 ft³/s, 42,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft³/s June 21, 1967, gage height, 20.05 ft; minimum daily, 9.1 ft³/s Aug. 9, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1874, 24.4 ft June 22, 1947, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 248 ft³/s May 17, gage height, 6.27 ft, no peak above base of 1,200 ft³/s; minimum daily, 16 ft³/s Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	47	53	54	60	58	62	97	52	49	33	23
2	50	47	54	52	59	59	60	131	54	47	30	23
3	56	47	54	48	56	59	58	61	52	44	30	21
4	53	47	53	48	54	59	57	78	52	42	34	20
5	47	48	53	54	58	72	58	66	60	40	27	19
6	43	49	53	58	56	114	61	63	70	38	28	19
7	40	49	52	62	58	106	63	64	60	37	26	19
8	40	51	52	58	60	85	62	68	54	37	25	19
9	43	51	51	58	57	72	59	62	60	34	27	18
10	44	52	52	56	55	61	58	59	54	33	27	18
11	44	55	51	54	57	54	58	56	52	32	24	18
12	44	56	48	54	60	56	59	57	52	30	22	20
13	44	58	49	60	63	57	78	58	60	29	23	20
14	43	56	52	64	67	58	82	57	58	27	23	21
15	42	55	52	56	68	58	74	54	56	27	25	22
16	42	52	50	52	70	58	68	54	54	27	25	22
17	41	51	49	48	68	58	63	105	80	29	22	23
18	41	51	50	46	65	60	60	168	70	30	18	22
19	41	52	50	48	64	61	57	128	60	31	16	22
20	40	53	51	52	63	60	55	87	56	29	17	22
21	41	54	52	50	61	59	54	70	55	24	19	23
22	41	54	52	56	61	58	53	60	53	22	18	25
23	42	53	52	62	61	58	53	58	51	22	34	26
24	43	48	53	70	61	59	53	56	47	29	30	27
25	44	49	50	64	60	60	53	54	45	30	27	28
26	44	52	45	61	58	68	51	52	45	30	24	29
27	45	52	46	59	57	77	50	58	49	43	23	28
28	45	51	48	59	58	75	50	56	48	53	22	28
29	44	52	46	60	---	74	53	54	50	37	23	33
30	45	53	45	60	---	68	54	52	51	34	23	56
31	46	---	44	62	---	64	---	52	---	34	23	---
TOTAL	1355	1545	1562	1745	1695	2045	1776	2195	1660	1050	768	714
MEAN	43.7	51.5	50.4	56.3	60.5	66.0	59.2	70.8	55.3	33.9	24.8	23.8
MAX	56	58	54	70	70	114	82	168	80	53	34	56
MIN	37	47	44	46	54	54	50	52	45	22	16	18
AC-FT	2690	3060	3100	3460	3360	4060	3520	4350	3290	2080	1520	1420
CAL YR 1982	TOTAL	18294	MEAN	50.1	MAX	175	MIN	23	AC-FT	36290		
WTR YR 1983	TOTAL	18110	MEAN	49.6	MAX	168	MIN	16	AC-FT	35920		

06842000 HARRY STRUNK LAKE NEAR CAMBRIDGE, NE

LOCATION.--Lat 40°22'40", long 100°13'00", in NE1/4 sec.25, T.5 N., R.26 W., Frontier County, Hydrologic Unit 10250008, near right bank in control house at outlet tube of Medicine Creek Dam on Medicine Creek, 7 mi northwest of Cambridge.

DRAINAGE AREA.--880 mi², approximately, of which about 640 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 18, 1960, nonrecording gage at present datum.

REMARKS.--Reservoir is formed by earthfill dam; storage began Aug. 8, 1949. Capacity, 32,230 acre-ft between elevation 2,335.0 ft, sill of outlet gates, and 2,366.1 ft, top of storage pool and crest of slot in spillway. Top of flood-control pool and crest of main spillway at elevation 2,386.2 ft, capacity, 89,310 acre-ft. Top of superstorage flood-control pool at elevation 2,400.0 ft, capacity, 147,400 acre-ft. Maximum water-surface elevation, 2,408.9 ft, 196,000 acre-ft. Dead storage, 4,910 acre-ft. Figures given herein represent total contents. Water used for irrigation in Frenchman-Cambridge irrigation project.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,750 acre-ft Mar. 23, 1960, elevation, 2,374.10 ft; minimum since operation of reservoir began, 7,840 acre-ft Sept. 7, 1978, elevation, 2,340.39 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,620 acre-ft May 22, elevation, 2,367.92 ft; minimum, 21,280 acre-ft Sept. 21, elevation, 2,355.61 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,355	20,550	2,365	35,140
2,360	27,100	2,370	44,890

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29950	32600	35180	36500	36500	36610	38750	39720	39800	39680	34410	24450
2	30040	32640	35270	36450	36500	36610	38740	39780	39800	39700	34030	24170
3	30170	32690	35360	36410	36500	36610	38750	39860	39880	39550	33610	23870
4	30280	32740	35450	36410	36500	36810	38850	39880	39960	39370	33250	23530
5	30410	32800	35600	36370	36480	37100	38910	39980	39740	39370	32920	23220
6	30380	32900	35690	36370	36460	37210	38930	40000	39700	39370	32670	22840
7	30460	32970	35670	36360	36430	37340	38950	39980	39700	39370	32370	22550
8	30690	33050	35700	36340	36430	37460	38930	39900	39860	39300	32030	22300
9	30820	33150	35830	36300	36430	37460	39060	39900	39980	39260	31620	22170
10	30820	33230	35890	36270	36430	37480	39120	39880	39840	39220	31190	21900
11	30930	33540	35940	36230	36430	37550	39240	39860	39880	38970	30690	21780
12	31010	33430	36030	36250	36430	37630	39080	39940	39840	38950	30200	21610
13	31070	33630	36090	36280	36410	37660	39410	39880	39640	38830	29640	21460
14	31170	33590	36190	36300	36410	37610	39350	39840	39660	38620	29260	21410
15	31250	33630	36270	36300	36410	37680	39350	39800	39740	38270	28870	21470
16	31330	33710	36280	36320	36410	37720	39350	39720	39860	37890	28450	21450
17	31410	33800	36360	36320	36410	37760	39470	39980	39840	37680	28000	21530
18	31520	33920	36370	36370	36450	37800	39410	40430	39840	37550	27500	21410
19	31570	34080	36320	36450	36450	37910	39410	40540	39940	37380	27000	21470
20	31600	34110	36320	36500	36410	37930	39410	40560	40000	37160	26530	21290
21	31670	34180	36320	36500	36410	37930	39410	40600	39940	36860	26150	21290
22	31760	34240	36360	36500	36450	37930	39410	40560	39940	36460	26090	21320
23	31850	34300	36360	36500	36570	37970	39450	40510	39860	36070	25750	21370
24	31930	34300	36410	36520	36410	37980	39430	40540	39740	35690	25610	21350
25	32020	34440	36460	36550	36410	37970	39550	40350	39660	35450	25540	21560
26	32100	34480	36460	36550	36550	38270	39490	40390	39720	35230	25480	21630
27	32230	34600	36630	36550	36550	38270	39410	40350	39630	35050	25350	21690
28	32250	34710	36630	36550	36610	38380	39410	40310	39490	34880	25270	21760
29	32350	34860	36630	36540	---	38470	39430	40130	39610	34710	25150	21880
30	32400	35000	36590	36520	---	38620	39450	39960	39720	34370	24940	22000
31	32490	---	36500	36500	---	38740	---	39900	---	34480	24660	---
MAX	32490	35000	36630	36550	36610	38740	39550	40600	40000	39700	34410	24450
MIN	29950	32600	35180	36230	36410	36610	38740	39720	39490	34370	24660	21290
	2363.45	2364.92	2365.75	2365.75	2365.81	2366.95	2367.32	2367.55	2367.46	2364.62	2358.25	2356.20
	+2680	+2510	+1500	0	+110	+2130	+710	+450	-180	-5240	-9820	-2660
CAL YR 1982	MAX	40150	MIN	28580	+250							
WTR YR 1983	MAX	40600	MIN	21290	-7810							

†Elevation, in feet, at end of month.

‡Change in contents, in acre-feet.

KANSAS RIVER BASIN

06842500 MEDICINE CREEK BELOW HARRY STRUNK LAKE, NE

LOCATION.--Lat 40°22'20", long 100°13'20", at center of sec.25, T.5 N., R.26 W., Frontier County, Hydrologic Unit 10250008, on right bank 0.5 mi downstream from Medicine Creek Dam and 6.5 mi northwest of Cambridge.

DRAINAGE AREA.--880 mi², approximately, of which about 640 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1950, published as "below Medicine Creek Dam." Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Concrete control since August 1950. Datum of gage is 2,295.26 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Apr. 24, 1950, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--Records good except those below 1.0 ft³/s, which are fair. Flow regulated by Harry Strunk Lake (station 06842000).

AVERAGE DISCHARGE.--34 years, 61.7 ft³/s, 44,700 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s Mar. 23, 1960, gage height, 5.97 ft; minimum daily, 0.10 ft³/s Nov. 13, 1952, Sept. 19, 1963, Sept. 27-29, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 246 ft³/s Aug. 10, gage height, 2.77 ft; minimum daily, 0.59 ft³/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.80	1.1	55	58	63	33	61	61	51	68	129
2	1.5	.78	1.1	55	60	63	31	64	60	51	166	140
3	1.5	.75	1.1	56	62	63	31	66	60	50	225	149
4	1.6	.75	1.1	56	63	63	34	68	58	48	190	149
5	1.8	.77	1.1	56	63	64	35	68	58	46	152	149
6	1.6	.79	1.1	55	63	63	36	70	57	44	140	159
7	1.4	.78	1.0	56	63	43	36	71	57	42	145	154
8	2.0	.78	1.0	56	63	30	38	69	56	41	164	136
9	1.5	.78	1.2	56	63	30	40	68	57	39	189	97
10	.93	.75	1.2	56	62	30	39	68	56	38	215	79
11	.90	.83	1.2	56	63	31	39	68	55	37	237	79
12	.83	.69	1.2	55	63	31	44	70	54	38	228	68
13	.91	.75	1.2	50	63	33	47	69	55	82	227	49
14	.91	.71	1.1	48	63	34	48	69	55	90	226	32
15	.88	.80	1.2	47	63	35	48	67	54	164	226	24
16	.84	.80	27	47	63	37	49	66	53	145	213	23
17	.91	.80	41	47	63	38	50	72	58	132	222	23
18	.91	.86	43	47	63	39	50	88	58	112	230	23
19	.92	.87	44	49	63	40	50	92	57	95	214	23
20	.88	1.0	42	52	63	40	50	92	56	109	213	23
21	.86	.95	42	53	63	41	50	92	56	138	214	9.8
22	.72	.94	42	53	63	41	53	89	56	158	233	.66
23	.77	.98	42	53	63	42	54	86	54	158	212	.62
24	.63	.92	43	53	63	43	52	85	53	158	116	.63
25	.63	.98	45	53	63	45	52	83	53	142	60	.62
26	.63	.98	45	53	63	51	53	80	53	136	50	.61
27	.64	1.1	45	57	63	52	52	79	55	135	49	.59
28	.64	1.1	48	58	63	35	52	77	54	126	49	.60
29	.66	1.1	55	59	---	21	53	71	52	84	76	.98
30	.68	1.1	55	58	---	24	53	67	52	60	126	.86
31	.74	---	55	56	---	26	---	65	---	58	140	---
TOTAL	31.72	25.99	730.9	1661	1754	1291	1352	2300	1673	2807	5215	1723.97
MEAN	1.02	.87	23.6	53.6	62.6	41.6	45.1	74.2	55.8	90.5	168	57.5
MAX	2.0	1.1	55	59	63	64	54	92	61	164	237	159
MIN	.63	.69	1.0	47	58	21	31	61	52	37	49	.59
AC-FT	63	52	1450	3290	3480	2560	2680	4560	3320	5570	10340	3420
CAL YR 1982	TOTAL	16900.27	MEAN	46.3	MAX	292	MIN	.49	AC-FT	33520		
WTR YR 1983	TOTAL	20565.58	MEAN	56.3	MAX	237	MIN	.59	AC-FT	40790		

KANSAS RIVER BASIN

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06843500 REPUBLICAN RIVER AT CAMBRIDGE, NE

LOCATION.--Lat 40°17'05", long 100°08'35", in NW1/4SE1/4 sec.28, T.4 N., R.25 W., Furnas County, Hydrologic Unit 10250004, on left bank 400 ft south of U.S. Highways 6 and 34, 0.5 mi downstream from Medicine Creek, 1 mi east of Cambridge, and 1.3 mi upstream from Cambridge diversion dam.

DRAINAGE AREA.--14,520 mi², approximately, of which about 7,810 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,239.07 ft National Geodetic Vertical Datum of 1929. Prior to July 13, 1948, nonrecording gage at site 150 ft upstream at same datum and July 13, 1948, to Sept. 25, 1950, at present site and datum.

REMARKS.--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.--38 years, 307 ft³/s, 222,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft³/s June 22, 1947, gage height, 16.7 ft, from floodmarks, from rating curve extended above 12,000 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 0.07 ft³/s Sept. 27, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1826, 17.6 ft May 31 to June 1, 1935, from information by local resident, discharge, about 280,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,810 ft³/s June 13, gage height, 7.65 ft; minimum daily, 48 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	123	134	160	270	403	326	523	366	366	234	165
2	123	120	132	155	300	403	310	575	323	422	270	149
3	117	120	131	145	295	406	300	491	306	426	334	168
4	109	119	131	150	320	398	300	443	290	435	300	155
5	109	118	130	155	355	465	313	435	293	430	249	151
6	104	117	125	160	350	514	359	456	303	414	234	165
7	101	117	125	165	345	500	374	611	283	359	237	180
8	121	114	123	160	350	452	374	532	286	313	249	160
9	157	117	124	170	365	430	382	509	290	277	249	133
10	138	122	119	185	420	414	378	491	274	258	267	108
11	126	126	119	200	400	386	363	482	274	249	290	100
12	122	126	119	195	395	374	366	632	280	249	280	95
13	117	129	121	200	389	370	382	693	1370	280	274	88
14	115	134	130	205	384	370	355	561	514	283	277	78
15	115	135	131	180	382	370	359	514	327	313	270	76
16	117	136	135	150	396	355	370	491	293	327	252	73
17	116	136	160	150	403	350	363	643	386	303	234	69
18	118	137	167	155	405	336	363	1250	394	290	237	76
19	121	136	165	175	404	330	363	1010	528	261	240	81
20	118	136	163	195	412	325	352	716	447	234	237	79
21	116	135	161	215	415	321	352	638	374	249	243	73
22	120	134	159	215	422	322	363	600	320	270	246	63
23	123	131	160	220	423	326	363	570	327	274	300	66
24	123	130	155	235	415	325	366	542	293	280	219	61
25	121	135	150	250	413	350	370	491	290	300	131	58
26	114	131	116	245	414	384	378	465	283	261	100	55
27	113	128	120	265	408	378	374	452	300	267	87	52
28	116	140	125	285	399	363	378	402	310	286	85	48
29	116	135	118	275	---	334	406	374	303	316	84	54
30	120	133	114	270	---	326	406	366	300	252	118	63
31	121	---	110	265	---	325	---	370	---	237	158	---
TOTAL	3674	3850	4172	6150	10649	11705	10808	17328	10927	9481	6985	2942
MEAN	119	128	135	198	380	378	360	559	364	306	225	98.1
MAX	157	140	167	285	423	514	406	1250	1370	435	334	180
MIN	101	114	110	145	270	321	300	366	274	234	84	48
AC-FT	7290	7640	8280	12200	21120	23220	21440	34370	21670	18810	13850	5840
CAL YR 1982	TOTAL	65124	MEAN 178	MAX 769	MIN 70	AC-FT 129200						
WTR YR 1983	TOTAL	98671	MEAN 270	MAX 1370	MIN 48	AC-FT 195700						

KANSAS RIVER BASIN

06844000 MUDDY CREEK AT ARAPAHOE, NE

LOCATION.--Lat 40°18'20", long 99°54'40", in NW1/4NW1/4 sec.22, T.4 N., R.23 W., Furnas County, Hydrologic Unit 10250009, on left bank 10 ft upstream from bridge on U.S. Highways 6 and 34, 0.2 mi west of Arapahoe, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--246 mi².

PERIOD OF RECORD.--December 1950 to September 1972, and October 1977 to current year.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,143.92 ft, National Geodetic Vertical Datum of 1929. December 1950 to Jan. 11, 1951, nonrecording gage, and Jan. 12, 1951, to Sept. 30, 1972, recording gage at site on left bank 20 ft downstream from bridge at present datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow affected by irrigation development above station and return flow from irrigated areas.

AVERAGE DISCHARGE.--27 years (1951-72, 1978-83), 14.6 ft³/s, 10,580 acre-ft/yr; median of yearly mean discharges, 11 ft³/s, 8,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,280 ft³/s June 16, 1957, gage height, 24.62 ft; no flow Aug. 26 to Sept. 2, 1953, July 23, 29, Aug. 4, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 31 ft occurred June 22, 1947, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,330 ft³/s Aug. 23 at 2045, gage height, 14.89 ft from hydrographer's reading, no other peak above base of 750 ft³/s; minimum daily, 4.6 ft³/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	6.3	5.8	7.3	7.9	10	7.3	16	7.3	11	7.6	10
2	12	6.0	6.2	7.2	8.3	9.8	7.0	31	7.9	11	8.6	8.7
3	9.6	6.1	5.9	7.3	8.3	9.4	7.0	23	7.8	9.9	8.7	7.6
4	7.9	6.2	5.4	7.0	7.0	9.4	7.1	11	7.6	9.2	7.2	7.5
5	7.9	6.0	5.9	6.9	7.8	16	7.3	9.0	7.6	8.9	6.1	7.4
6	7.6	6.4	5.5	7.3	7.1	15	7.3	8.6	7.8	9.6	6.1	8.0
7	7.6	6.1	5.3	7.6	7.1	69	7.1	9.3	7.5	8.9	4.7	9.7
8	7.9	6.1	4.8	7.6	7.8	15	6.9	8.2	7.3	7.9	5.5	10
9	92	6.4	4.7	8.2	8.4	9.5	7.2	7.8	7.2	7.6	7.4	8.2
10	87	6.4	5.9	8.3	7.8	7.7	7.0	7.5	6.9	7.0	8.5	5.8
11	18	6.7	5.4	7.2	8.5	7.2	6.9	7.3	6.9	7.9	9.3	6.7
12	9.3	6.9	5.6	7.2	9.4	7.0	7.2	14	42	9.9	9.0	8.2
13	7.1	6.9	5.7	7.3	9.6	7.1	7.7	13	99	11	8.5	7.2
14	6.5	6.2	5.8	7.2	9.8	7.5	7.3	12	13	9.6	8.4	6.0
15	5.9	6.1	6.0	7.8	10	6.9	7.7	9.3	10	8.2	6.3	5.8
16	5.6	6.5	5.3	6.6	9.9	7.2	7.3	7.4	9.1	9.2	5.9	5.8
17	5.4	6.4	5.1	6.2	9.4	7.3	7.1	16	13	8.2	6.7	5.5
18	5.5	6.9	4.9	6.4	9.0	7.3	7.2	150	12	7.6	7.1	5.3
19	5.2	7.1	4.8	6.6	9.8	7.3	7.6	93	10	7.6	7.6	5.0
20	5.4	6.6	5.6	6.6	9.6	7.4	7.7	21	10	7.9	8.5	5.0
21	5.6	6.4	5.4	6.7	9.9	7.2	7.5	14	9.2	7.7	8.6	5.3
22	5.8	6.1	5.7	8.0	9.5	7.3	7.8	11	8.4	7.2	9.4	5.4
23	5.9	5.9	5.9	7.6	9.9	7.0	8.2	9.8	8.2	9.1	404	5.5
24	5.7	5.8	6.3	7.6	9.2	7.2	8.1	8.9	23	9.4	316	5.7
25	5.8	5.8	5.2	7.8	8.9	7.7	7.9	8.6	24	8.8	32	5.1
26	5.8	5.8	7.2	7.8	8.5	10	7.6	8.5	35	8.6	15	4.6
27	5.9	5.9	5.4	7.4	8.7	10	7.9	8.3	46	9.2	12	5.3
28	5.7	6.4	4.7	7.6	8.9	8.7	7.9	8.1	61	7.7	11	5.3
29	5.9	5.8	5.8	7.8	---	8.6	8.5	7.8	20	7.7	10	7.6
30	6.1	6.4	8.4	8.5	---	8.1	8.8	7.0	12	5.4	10	6.9
31	5.8	---	7.9	8.3	---	7.6	---	7.5	---	7.4	11	---
TOTAL	386.0	188.6	177.5	227.9	246.0	332.4	225.1	573.9	546.7	266.3	986.7	200.1
MEAN	12.5	6.29	5.73	7.35	8.79	10.7	7.50	18.5	18.2	8.59	31.8	6.67
MAX	92	7.1	8.4	8.5	10	69	8.8	150	99	11	404	10
MIN	5.2	5.8	4.7	6.2	7.0	6.9	6.9	7.0	6.9	5.4	4.7	4.6
AC-FT	766	374	352	452	488	659	446	1140	1080	528	1960	397
CAL YR 1982	TOTAL	3574.7	MEAN	9.79	MAX	211	MIN	3.2	AC-FT	7090		
WTR YR 1983	TOTAL	4357.2	MEAN	11.9	MAX	404	MIN	4.6	AC-FT	8640		

KANSAS RIVER BASIN

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06844210 TURKEY CREEK AT EDISON, NE

LOCATION.--Lat 40°16'15", long 99°44'00", in the center of sec.31, T.4 N., R.21 W., Furnas County, Hydrologic Unit 10250009, on left bank 10 ft downstream from bridge on State Highway 136, 2 mi east of Edison and 5 mi upstream from mouth.

DRAINAGE AREA.--74.9 mi².

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

REVISED RECORDS.--WDR NE-81-1: 1978-80(m).

GAGE.--Water-stage recorder. Altitude of gage is 2,090 ft, 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.

AVERAGE DISCHARGE.--6 years, 5.57 ft³/s, 4,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft³/s July 18, 1981, gage height, 11.95 ft, from floodmark; minimum daily, 0.74 ft³/s Sept. 9, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 500 ft³/s June 13, gage height, 10.07 ft; minimum daily, 2.0 ft³/s Aug. 29, 30, Sept. 2, 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	4.1	5.7	6.0	7.0	7.9	6.8	9.1	7.5	7.3	5.8	2.2
2	4.0	4.1	5.7	5.4	6.1	7.9	6.5	9.8	7.7	7.3	5.3	2.0
3	3.8	3.9	5.4	5.2	5.2	7.9	6.3	8.0	7.9	7.3	5.1	2.5
4	3.3	3.9	5.1	5.0	4.9	8.1	6.4	7.3	7.9	7.3	4.9	2.4
5	2.8	3.5	5.4	5.2	5.8	9.8	6.6	7.4	7.5	7.0	5.6	2.5
6	2.6	4.6	5.3	5.4	6.0	13	6.6	7.5	7.9	6.8	4.5	2.9
7	2.6	4.1	4.9	5.7	6.2	9.5	6.6	7.7	7.7	6.8	4.8	2.9
8	2.8	4.1	3.8	5.8	4.9	8.2	6.6	7.4	7.9	6.8	4.8	2.7
9	3.1	4.1	4.7	5.9	7.6	7.6	6.2	7.1	7.9	7.0	4.8	3.1
10	3.9	4.2	6.0	5.8	9.6	7.4	6.3	7.1	8.1	6.9	5.5	2.5
11	3.9	4.5	4.6	5.9	8.4	7.4	6.4	7.2	8.1	7.4	5.2	2.3
12	3.4	4.3	4.4	5.8	8.8	7.5	7.1	7.8	18	7.5	4.6	2.7
13	3.1	4.4	4.0	4.7	9.8	7.5	7.1	10	310	7.5	4.8	2.8
14	3.1	4.1	5.1	5.6	10	7.9	7.2	8.3	21	7.7	5.1	2.7
15	3.2	3.8	6.3	5.6	13	7.9	7.1	8.2	11	7.5	4.9	2.3
16	3.4	4.0	5.6	3.5	13	7.8	7.2	7.4	11	7.8	3.7	2.2
17	3.2	4.3	5.7	4.4	11	7.4	7.1	12	14	7.7	3.8	2.2
18	3.3	5.0	5.8	4.6	9.5	7.1	7.1	28	15	7.3	4.0	2.2
19	3.0	5.7	5.3	4.3	9.7	7.1	7.1	17	11	6.9	4.4	2.1
20	2.8	5.1	4.9	5.0	9.2	6.7	7.1	9.1	11	7.6	4.7	2.0
21	2.9	5.1	5.1	5.4	9.3	6.2	7.1	8.3	11	7.8	4.6	2.0
22	3.1	4.9	5.4	5.9	8.8	6.9	7.1	8.0	11	8.0	4.0	2.2
23	3.3	3.9	5.7	6.5	8.5	6.6	7.1	7.8	11	8.3	8.8	2.4
24	3.6	3.7	5.9	6.5	8.3	6.6	7.1	7.7	11	7.7	8.6	2.5
25	3.6	4.5	4.6	6.4	8.0	6.7	6.8	7.5	10	7.2	5.0	2.8
26	3.7	5.3	4.6	6.4	7.9	7.5	6.8	7.6	27	6.4	3.2	2.9
27	3.8	4.7	5.7	6.6	7.9	7.9	7.0	7.5	15	6.7	2.4	2.7
28	3.9	4.4	4.5	6.6	7.9	7.6	7.1	7.5	9.1	7.3	2.1	2.7
29	3.8	5.5	3.2	6.6	---	7.2	7.2	7.5	12	7.2	2.0	19
30	3.7	5.9	3.0	7.0	---	7.1	7.3	7.5	8.8	7.1	2.0	13
31	4.0	---	4.0	7.1	---	7.0	---	7.5	---	6.6	2.2	---
TOTAL	104.1	133.7	155.4	175.8	232.3	238.9	206.0	277.8	634.0	225.7	141.2	101.4
MEAN	3.36	4.46	5.01	5.67	8.30	7.71	6.87	8.96	21.1	7.28	4.55	3.38
MAX	4.0	5.9	6.3	7.1	13	13	7.3	28	310	8.3	8.8	19
MIN	2.6	3.5	3.0	3.5	4.9	6.2	6.2	7.1	7.5	6.4	2.0	2.0
AC-FT	206	265	308	349	461	474	409	551	1260	448	280	201

CAL YR 1982 TOTAL 2001.5 MEAN 5.48 MAX 41 MIN 1.9 AC-FT 3970
WTR YR 1983 TOTAL 2626.3 MEAN 7.20 MAX 310 MIN 2.0 AC-FT 5210

KANSAS RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE

LOCATION.--Lat 40°07'53", long 99°30'08", in NE1/4NE1/4 sec.19, T.2 N., R.19 W., Harlan County, Hydrologic Unit 10250009, on right bank 18 ft downstream from bridge on State Highway 89, 200 ft downstream from Burlington Northern Inc. bridge, 2 mi west of Orleans, 2.8 mi upstream from Sappa Creek, and 23 mi upstream from Harlan County Dam.

DRAINAGE AREA.--15,640 mi², approximately, of which about 8,910 mi² contributes directly to surface runoff.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,972.57 ft 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.--36 years, 300 ft³/s, 217,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft³/s June 22, 1948, gage height, 11.25 ft, from rating curve extended above 29,000 ft³/s; maximum gage height, 12.60 ft Mar. 22, 1960, backwater from ice; no flow at times in 1952-57, 1963, 1978-80. 0 ft Mar. 22, 1960, backwater from ice; no flow at times in 1952-57, 1963, 1978-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1, 1935. Flood of June 23, 1947, reached a stage of 14.00 ft, from floodmark (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,220 ft³/s June 13, gage height, 10.28 ft; minimum daily, 32 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	118	155	175	270	456	447	565	445	315	76	54
2	95	115	150	180	320	456	434	644	440	309	68	50
3	112	115	145	175	310	456	430	674	432	361	61	48
4	120	110	140	170	300	457	421	616	404	356	55	39
5	115	115	135	185	340	520	420	547	386	353	70	42
6	108	118	134	190	350	644	420	527	372	351	69	39
7	108	120	125	200	340	656	430	531	371	337	67	34
8	112	120	123	180	400	678	440	615	371	314	64	35
9	116	126	123	200	420	593	441	616	366	265	59	45
10	172	126	123	230	420	552	445	572	364	221	53	51
11	249	131	123	220	450	525	450	552	357	195	50	50
12	178	134	125	185	480	509	444	548	342	179	48	59
13	149	134	125	190	470	500	440	621	3000	157	48	73
14	140	136	128	200	490	498	453	747	3280	129	50	50
15	134	138	140	180	500	545	464	650	1120	118	52	49
16	129	130	151	180	550	523	467	598	647	113	52	43
17	132	129	153	175	520	506	470	621	561	121	48	43
18	131	130	158	170	482	474	464	837	595	117	42	38
19	126	135	178	220	475	458	461	1690	533	106	39	34
20	129	138	184	230	465	450	455	1360	503	103	35	32
21	127	139	186	240	466	437	450	920	534	105	40	47
22	127	139	184	210	474	427	441	778	440	105	42	55
23	125	139	184	220	479	427	442	696	406	105	65	55
24	128	139	186	270	483	427	444	648	358	105	438	53
25	126	141	173	280	474	430	441	614	352	96	521	50
26	128	145	150	270	470	456	441	586	364	89	228	45
27	127	146	160	270	467	510	431	556	361	98	142	38
28	125	157	160	320	460	514	430	535	384	96	109	33
29	127	178	130	330	---	506	435	503	413	118	87	311
30	125	165	125	290	---	476	442	469	358	96	71	268
31	123	---	160	275	---	458	---	454	---	84	56	---
TOTAL	4027	4006	4616	6810	12125	15524	13293	20890	18859	5617	2905	1863
MEAN	130	134	149	220	433	501	443	674	629	181	93.7	62.1
MAX	249	178	186	330	550	678	470	1690	3280	361	521	311
MIN	84	110	123	170	270	427	420	454	342	84	35	32
AC-FT	7990	7950	9160	13510	24050	30790	26370	41440	37410	11140	5760	3700

CAL YR 1982 TOTAL 65039 MEAN 178 MAX 615 MIN 35 AC-FT 129000
WTR YR 1983 TOTAL 110535 MEAN 303 MAX 3280 MIN 32 AC-FT 219200

KANSAS RIVER BASIN

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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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)
OCT										
13...	1000	190	645	8.2	4.0	13.4	46	K9000	3200	240
20...	1050	126	640	8.2	5.0	11.6	--	--	--	--
NOV										
01...	0930	117	725	8.2	9.0	11.2	30	62	1100	290
15...	1100	135	720	8.1	.0	9.9	--	--	--	--
DEC										
06...	1000	140	710	8.2	1.5	11.2	22	K110	K480	290
20...	1350	186	650	7.9	.0	7.5	--	--	--	--
JAN										
05...	1000	200	730	7.7	.0	13.0	14	K28	280	280
31...	1030	274	590	8.0	.0	12.2	15	67	4500	230
MAR										
01...	0915	451	740	8.3	6.0	12.1	16	K20	2800	240
APR										
07...	1450	430	746	8.3	9.0	12.3	28	K38	1100	270
MAY										
27...	1325	546	--	8.4	23.5	8.3	35	--	2700	260
JUN										
09...	1430	363	--	8.4	24.0	8.5	91	150	280	270
28...	1015	348	615	8.2	22.5	6.9	53	K4900	4500	260
AUG										
01...	1045	80	--	8.4	28.5	7.1	47	600	K84000	190
SEP										
06...	1050	32	605	8.4	22.5	7.9	--	440	1100	--
21...	1415	48	670	8.7	15.0	8.8	34	--	--	240

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

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT										
13...	66	19	71	18	226	1.9	.140	2.0	2.10	4.0
20...	--	--	--	--	--	--	--	--	--	--
NOV										
01...	78	24	83	22	47	1.9	<.060	--	1.40	3.3
15...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	78	23	83	25	32	2.5	<.060	--	1.50	4.0
20...	--	--	--	--	--	--	--	--	--	--
JAN										
05...	74	23	71	21	25	2.4	.110	1.1	1.20	3.6
31...	59	19	63	16	54	1.9	.070	1.3	1.40	3.3
MAR										
01...	60	21	83	19	125	1.2	.060	1.4	1.50	2.7
APR										
07...	70	23	90	23	9	1.6	.160	1.2	1.40	3.0
MAY										
27...	68	23	97	23	158	1.2	<.060	--	1.60	2.8
JUN										
09...	71	23	97	21	84	1.8	<.060	--	1.10	2.9
28...	68	21	88	20	468	1.3	<.060	--	2.50	3.8
AUG										
01...	42	21	88	19	84	<.10	.060	2.2	2.30	--
SEP										
06...	--	--	--	--	--	--	--	--	--	--
21...	60	22	82	21	63	.50	.020	1.6	1.60	2.1

KANSAS RIVER BASIN

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, 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)
OCT									
13...	.510	--	--	--	--	--	--	--	0
20...	--	--	--	--	--	--	--	--	--
NOV									
01...	.230	--	--	--	--	--	--	--	0
15...	--	--	--	--	--	--	--	--	--
DEC									
06...	.210	--	--	--	--	--	--	--	10
20...	--	--	--	--	--	--	--	--	--
JAN									
05...	.220	--	--	--	--	--	--	--	0
31...	.200	7	100	<1	<10	0	1200	1200	0
MAR									
01...	.240	--	--	--	--	--	--	--	0
APR									
07...	.210	--	--	--	--	--	--	--	0
MAY									
27...	.300	9	<100	2	--	20	--	--	30
JUN									
09...	.280	--	--	--	--	--	--	--	10
28...	.550	--	--	--	--	--	--	--	20
AUG									
01...	.270	10	<100	1	<10	10	2300	2300	0
SEP									
06...	--	--	--	--	--	--	--	--	--
21...	.230	--	--	--	--	--	--	--	0

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	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)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT									
13...	--	--	--	3	--	--	--	--	10
20...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	4	--	--	--	--	4.8
15...	--	--	--	--	--	--	--	--	--
DEC									
06...	--	--	--	3	--	--	--	--	4.6
20...	--	--	--	--	--	--	--	--	--
JAN									
05...	--	--	--	4	--	--	--	--	3.7
31...	0	40	40	2	.0	3	<0	20	4.4
MAR									
01...	--	--	--	5	--	--	--	--	6.3
APR									
07...	--	--	--	6	--	--	--	--	11
MAY									
27...	0	--	--	5	.0	3	<0	--	11
JUN									
09...	--	--	--	9	--	--	--	--	30
28...	--	--	--	<1	--	--	--	--	16
AUG									
01...	0	140	140	2	.5	2	<0	40	12
SEP									
06...	--	--	--	--	--	--	--	--	--
21...	--	--	--	6	--	--	--	--	7.8

06844500 REPUBLICAN RIVER NEAR ORLEANS, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT							
13...	1000	0	38	1.1	15	248	.70
NOV							
01...	0930	0	48	1.3	15	294	1.0
DEC							
06...	1000	4	46	1.2	15	286	.80
JAN							
05...	1000	0	41	1.1	16	294	.80
31...	1030	0	35	1.0	15	231	.80
MAR							
01...	0915	0	41	1.2	15	242	.90
APR							
07...	1450	0	46	1.3	16	270	.80
MAY							
27...	1325	0	48	1.3	16	264	<.10
JUN							
09...	1430	0	48	1.3	16	274	.90
28...	1015	0	43	1.2	15	259	.80
AUG							
01...	1045	0	45	1.5	17	192	.80
SEP							
21...	1415	0	45	1.3	19	257	.80

DATE	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)
OCT							
13...	37	414	.56	212	1.9	.280	130
NOV							
01...	42	489	.67	155	1.9	.160	150
DEC							
06...	44	486	.66	184	2.5	.150	140
JAN							
05...	43	466	.63	252	2.4	.200	130
31...	34	380	.52	281	1.8	.140	110
MAR							
01...	29	414	.56	504	1.2	.130	120
APR							
07...	34	465	.63	540	1.7	.110	130
MAY							
27...	29	462	.63	682	1.3	.140	140
JUN							
09...	30	471	.64	462	1.7	.130	140
28...	28	439	.60	413	1.3	.210	130
AUG							
01...	32	380	.52	82.1	<.10	.030	140
SEP							
21...	30	434	.59	56.3	.46	.100	140

KANSAS RIVER BASIN

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 north of Cedar Bluffs, 1.0 mi south of Kansas-Nebraska State line, and at mi 107.4.

DRAINAGE AREA.--1,618 mi², of which 294 mi² 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 National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1971, at site 0.1 mi upstream at same datum. Aug. 19, 1971, to July 12, 1972, at site 0.8 mi downstream at datum 5.00 ft lower.

REMARKS.--Records fair except those above 250 ft³/s and period of no gage-height record June 19 to July 25, which are poor.

AVERAGE DISCHARGE.--38 years, 17.8 ft³/s, 12,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,940 ft³/s June 11, 1960, gage height, 18.71 ft at site 0.1 mi upstream at same datum; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1944 reached a stage of 18.16 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,830 ft³/s June 12, gage height, 16.94 ft, no other peak above base of 300 ft³/s; no flow most days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	2.6	4.0	10	5.7	9.5	.59	.00
2	.00	.00	.00	.00	.00	2.3	3.8	11	5.7	9.0	.63	.00
3	.00	.00	.00	.00	.00	1.9	3.4	16	6.2	9.0	.58	.00
4	.00	.00	.00	.00	.00	1.7	3.2	8.6	11	9.0	.46	.00
5	.00	.00	.00	.00	.00	3.6	3.4	7.3	7.7	8.0	.16	.00
6	.00	.00	.00	.00	.00	1.7	3.6	7.2	55	7.0	.04	.00
7	.00	.00	.00	.00	.00	1.1	3.8	7.2	67	6.0	.00	.00
8	.00	.00	.00	.00	.00	.99	4.0	6.8	75	5.5	.00	.00
9	.00	.00	.00	.00	.00	1.5	4.0	6.5	21	5.0	.00	.00
10	.00	.00	.00	.00	.00	1.5	4.0	5.9	18	5.0	.00	.00
11	.00	.00	.00	.00	.00	1.4	4.0	5.7	15	4.5	.00	.00
12	.00	.00	.00	.00	.00	1.7	3.9	12	262	4.0	.00	.00
13	.00	.00	.00	.00	.00	1.6	3.9	15	1080	3.5	.00	.00
14	.00	.00	.00	.00	.00	1.6	3.8	16	245	3.0	.00	.00
15	.00	.00	.00	.00	.00	1.5	3.7	7.7	25	2.7	.00	.00
16	.00	.00	.00	.00	.00	1.4	3.7	7.0	6.9	2.5	.00	.00
17	.00	.00	.00	.00	.00	1.4	4.2	29	49	2.3	.00	.00
18	.00	.00	.00	.00	.00	1.4	4.1	112	100	2.1	.00	.00
19	.00	.00	.00	.00	.00	1.4	4.1	111	90	2.0	.00	.00
20	.00	.00	.00	.00	.00	1.7	4.2	29	40	1.7	.00	.00
21	.00	.00	.00	.00	.00	1.7	3.9	12	27	1.7	.00	.00
22	.00	.00	.00	.00	.00	1.8	3.6	10	19	1.5	.00	.00
23	.00	.00	.00	.00	.00	1.9	3.4	10	17	1.2	.00	.00
24	.00	.00	.00	.00	1.6	1.8	3.1	9.8	15	.90	.00	.00
25	.00	.00	.00	.00	2.2	2.4	2.9	8.7	17	.90	.00	.00
26	.00	.00	.00	.00	2.2	3.5	2.9	7.8	17	.85	.00	.00
27	.00	.00	.00	.00	2.7	3.9	2.8	7.2	14	.77	.00	.00
28	.00	.00	.00	.00	2.6	4.1	2.7	6.9	12	.70	.00	.00
29	.00	.00	.00	.00	---	4.0	2.8	6.5	11	.65	.00	.00
30	.00	.00	.00	.00	---	4.0	2.9	5.9	10	.48	.00	.00
31	.00	---	.00	.00	---	3.9	---	5.8	---	.43	.00	---
TOTAL	.00	.00	.00	.00	11.30	66.99	107.8	521.5	2344.2	111.38	2.46	.00
MEAN	.000	.000	.000	.000	.40	2.16	3.59	16.8	78.1	3.59	.079	.000
MAX	.00	.00	.00	.00	2.7	4.1	4.2	112	1080	9.5	.63	.00
MIN	.00	.00	.00	.00	.00	.99	2.7	5.7	5.7	.43	.00	.00
AC-FT	.00	.00	.00	.00	22	133	214	1030	4650	221	4.9	.00
CAL YR 1982	TOTAL	1237.70	MEAN	3.39	MAX	214	MIN	.00	AC-FT	2450		
WTR YR 1983	TOTAL	3165.63	MEAN	8.67	MAX	1080	MIN	.00	AC-FT	6280		

KANSAS RIVER BASIN

263

06847000 BEAVER CREEK NEAR BEAVER CITY, NE

LOCATION.--Lat 40°07'12", long 99°53'35", in SW1/4SW1/4 sec.23, T.2 N., R.23 W., Furnas County, Hydrologic Unit 10250014, on left bank 400 ft downstream from bridge on U.S. Highway 283, 3.5 mi west of Beaver City, and at mi 24.7.

DRAINAGE AREA.--1,950 mi², approximately, of which about 1,650 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1340: 1937-38(M), 1939, 1940-41(M), 1943(M). WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,162.96 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1947, nonrecording gages and Aug. 13, 1947, to Nov. 14, 1957, water-stage recorder, at site 400 ft upstream at datum 2.0 ft higher. Nov. 15, 1957, to Sept. 22, 1958, at site 3.6 mi upstream at different datum.

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

AVERAGE DISCHARGE.--47 years, 23.9 ft³/s, 17,320 acre-ft/yr; median of yearly mean discharges, 14 ft³/s, 10,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,510 ft³/s June 14, 1983, gage height, 15.68 ft; no flow at times in 1937-40, 1946, 1953-57, 1959, 1969-74, 1976, 1978-81.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,510 ft³/s June 14 at 0130, gage height, 15.68 ft; no other peak above base of 400 ft³/s; minimum daily discharge, 0.10 ft³/s Dec. 31 to Jan. 6, Jan. 15-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.19	.26	.10	.60	.90	1.1	12	2.5	20	2.5	.46
2	.28	.19	.31	.10	.60	.90	1.0	8.0	2.4	19	2.3	.42
3	.19	.21	.31	.10	.70	.90	1.0	1.8	2.2	17	2.0	.38
4	.15	.21	.26	.10	.83	1.0	1.0	1.6	2.0	16	1.8	.36
5	.13	.31	.26	.10	1.2	2.0	1.2	1.4	2.0	15	1.7	.46
6	.17	.26	.26	.10	1.1	2.8	1.2	1.6	1.9	15	1.6	.49
7	.17	.21	.26	.20	1.4	1.6	1.2	1.8	1.8	15	1.5	.52
8	.21	.19	.31	.20	1.2	1.0	1.0	1.7	1.8	15	1.4	.46
9	.39	.26	.36	.20	1.0	.97	1.0	1.6	1.8	14	1.4	.39
10	.43	.26	.26	.20	.90	.90	1.1	1.6	1.6	13	1.2	.35
11	.40	.31	.41	.20	.65	.90	1.1	1.6	1.7	12	1.2	.37
12	.40	.31	.50	.20	.65	.97	1.1	1.6	28	11	1.1	.34
13	.40	.31	.55	.20	.70	.97	1.1	1.6	655	11	1.1	.34
14	.40	.31	.50	.20	.70	1.0	1.0	1.9	5130	10	1.1	.34
15	.40	.31	.50	.10	.83	1.0	1.0	1.8	2040	9.6	1.1	.35
16	.40	.36	.46	.10	.77	1.0	1.0	1.6	993	9.0	.94	.33
17	.40	.36	.41	.10	.70	1.0	1.1	9.0	655	8.6	.85	.33
18	.36	.26	.26	.10	.77	1.0	1.1	30	372	8.3	.77	.29
19	.35	.21	.41	.10	.83	1.0	1.1	28	108	7.7	.71	.30
20	.26	.26	.46	.10	.90	1.2	1.1	90	59	7.4	.68	.40
21	.26	.26	.36	.10	.83	1.2	1.0	88	54	6.5	.71	.35
22	.26	.21	.36	.10	1.0	.97	1.0	62	86	5.3	.66	.47
23	.31	.31	.36	.10	1.0	1.0	.97	48	88	4.5	1.0	.47
24	.31	.50	.50	.20	.90	1.0	.97	28	47	4.5	.87	.47
25	.26	.46	.40	.20	.83	1.2	.97	18	34	4.5	.69	.47
26	.26	.36	.30	.30	.77	1.5	1.0	12	28	3.9	.56	.47
27	.26	.50	.30	.40	.90	1.5	.97	8.0	26	4.0	.56	.47
28	.21	1.5	.30	.50	.90	1.3	.97	5.2	28	3.5	.54	.44
29	.21	.70	.20	.60	---	1.2	1.0	3.8	27	3.4	.52	1.6
30	.26	.21	.20	.50	---	1.2	1.3	3.1	22	3.2	.45	.83
31	.26	---	.10	.50	---	1.1	---	2.6	---	2.8	.46	---
TOTAL	8.99	10.30	10.69	6.30	24.16	36.18	31.65	478.9	10501.7	299.7	33.97	13.72
MEAN	.29	.34	.34	.20	.86	1.17	1.06	15.4	350	9.67	1.10	.46
MAX	.43	1.5	.55	.60	1.4	2.8	1.3	90	5130	20	2.5	1.6
MIN	.13	.19	.10	.10	.60	.90	.97	1.4	1.6	2.8	.45	.29
AC-FT	18	20	21	12	48	72	63	950	20830	594	67	27
CAL YR 1982	TOTAL	244.93	MEAN	.67	MAX	13	MIN	.06	AC-FT	486		
WTR YR 1983	TOTAL	11456.26	MEAN	31.4	MAX	5130	MIN	.10	AC-FT	22720		

KANSAS RIVER BASIN

06847500 SAPPA CREEK NEAR STAMFORD, NE

LOCATION.--Lat 40°07'53", long 99°33'15", in NW1/4NW1/4 sec.23, T.2 N., R.20 W., Harlan County, Hydrologic Unit 10250011, on left bank 40 ft south of Burlington Northern Inc. track, 500 ft downstream from bridge on county highway, 2 mi east of Stamford, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--3,740 mi², approximately, of which about 3,280 mi² contributes directly to surface runoff.

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

REVISED RECORDS.--WSP 1919: 1960. WSP 2119: Drainage area. WDR NE-71-1: Calendar year totals. WRD NE-82-1: 1979 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,981.31 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--38 years, 57.3 ft³/s, 41,510 acre-ft/yr; median of yearly mean discharges, 36 ft³/s, 26,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,400 ft³/s June 24, 1966, gage height, 22.13 ft, from floodmark, from contracted opening and flow-over-road measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,660 ft³/s June 16 at 0030, gage height, 15.88 ft, no other peak above base of 1,000 ft³/s; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	57	25	60	3.3	.03
2	.00	.00	.00	.00	.00	.00	.00	101	23	52	3.3	.00
3	.00	.00	.00	.00	.00	.00	.00	91	21	48	2.7	.00
4	.00	.00	.00	.00	.00	.00	.00	75	19	44	2.1	.00
5	.00	.00	.00	.00	.00	.00	.00	63	17	38	1.6	.00
6	.00	.00	.00	.00	.00	2.1	.00	38	16	32	1.1	.00
7	.00	.00	.00	.00	.00	.15	.00	40	15	29	.89	.00
8	.00	.00	.00	.00	.00	.00	.00	28	14	27	.94	.00
9	.00	.00	.00	.00	.00	.00	.00	35	13	27	.98	.00
10	.00	.00	.00	.00	.00	.00	.00	35	51	26	.92	.00
11	.00	.00	.00	.00	.00	.00	.00	29	47	24	1.0	.00
12	.00	.00	.00	.00	.00	.00	.00	23	31	22	.87	.00
13	.00	.00	.00	.00	.00	.00	.00	18	41	21	.84	.00
14	.00	.00	.00	.00	.00	.00	.00	18	229	20	.78	.00
15	.00	.00	.00	.00	.00	.00	.00	16	1630	20	.66	.00
16	.00	.00	.00	.00	.00	.00	.00	13	2450	20	.60	.00
17	.00	.00	.00	.00	.00	.00	.00	36	1910	21	.43	.00
18	.00	.00	.00	.00	.00	.00	.00	203	1350	20	.35	.00
19	.00	.00	.00	.00	.00	.00	.00	381	676	17	.20	.00
20	.00	.00	.00	.00	.00	.00	.00	262	394	15	.17	.00
21	.00	.00	.00	.00	.00	.00	.00	136	235	14	.20	.00
22	.00	.00	.00	.00	.00	.00	.00	160	179	10	.43	.00
23	.00	.00	.00	.00	.00	.00	.00	130	182	8.4	.53	.00
24	.00	.00	.00	.00	.00	.00	.00	100	189	7.8	.26	.00
25	.00	.00	.00	.00	.00	.00	.00	80	156	8.5	.18	.00
26	.00	.00	.00	.00	.00	.29	.00	70	124	7.3	.14	.00
27	.00	.00	.00	.00	.00	.40	.00	59	94	6.1	.10	.00
28	.00	.00	.00	.00	.00	.22	.00	64	86	5.5	.10	.00
29	.00	.00	.00	.00	---	.00	.00	53	88	6.4	.26	7.6
30	.00	.00	.00	.00	---	.00	.00	39	82	5.6	.13	1.8
31	.00	---	.00	.00	---	.00	---	30	---	3.2	.06	---
TOTAL	.00	.00	.00	.00	.00	3.16	.00	2483	10387	665.8	26.12	9.43
MEAN	.000	.000	.000	.000	.000	.10	.000	80.1	346	21.5	.84	.31
MAX	.00	.00	.00	.00	.00	2.1	.00	381	2450	60	3.3	7.6
MIN	.00	.00	.00	.00	.00	.00	.00	13	13	3.2	.06	.00
AC-FT	.00	.00	.00	.00	.00	6.3	.00	4930	20600	1320	52	19
CAL YR 1982	TOTAL	2099.57	MEAN	5.75	MAX	192	MIN	.00	AC-FT	4160		
WTR YR 1983	TOTAL	13574.51	MEAN	37.2	MAX	2450	MIN	.00	AC-FT	26930		

KANSAS RIVER BASIN

265

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 south of Kansas-Nebraska State line, 2.5 mi west of Woodruff, and at mi 26.5.

DRAINAGE AREA.--1,007 mi².

PERIOD OF RECORD.--October 1928 to September 1932, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 2,016.20 ft National Geodetic Vertical Datum of 1929. See WSP 1919 for history of changes prior to Oct. 7, 1955.

REMARKS.--Records poor. Flow regulated to some extent since 1964 by Keith Sebelius Lake 48.4 mi upstream and by irrigation development above station.

AVERAGE DISCHARGE.--43 years (water years 1929-32, 1945-83), 34.7 ft³/s, 25,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s June 23, 1947, gage height, 21.04 ft, site and datum then in use, from rating curve extended above 6,500 ft³/s on basis of contracted-opening measurement of 11,300 ft³/s; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 810 ft³/s May 19, gage height, 11.14 ft; no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.05	6.5	1.1	1.5	.00	.00
2	.00	.00	.00	.00	.00	.00	.04	14	.79	1.1	.00	.00
3	.00	.00	.00	.00	.00	.00	.01	4.4	.63	.72	.00	.00
4	.00	.00	.00	.00	.00	.00	.02	2.9	.68	.29	.00	.00
5	.00	.00	.00	.00	.00	.00	.04	2.3	.73	.07	.00	.00
6	.00	.00	.00	.00	.00	.20	.06	2.5	.78	.04	.00	.00
7	.00	.00	.00	.00	.00	.04	.02	1.6	.90	.02	.00	.00
8	.00	.00	.00	.00	.00	.01	.01	.83	.99	.01	.00	.00
9	.00	.00	.00	.00	.00	.01	.02	.35	.85	.01	.00	.00
10	.00	.00	.00	.00	.00	.01	.01	.29	.66	.01	.00	.00
11	.00	.00	.00	.00	.00	.01	.02	.23	.59	.00	.00	.00
12	.00	.00	.00	.00	.00	.01	.03	.16	.46	.00	.00	.00
13	.00	.00	.00	.00	.00	.01	.03	.19	1.4	.00	.00	.00
14	.00	.00	.00	.00	.00	.01	.03	.23	2.0	.00	.00	.00
15	.00	.00	.00	.00	.00	.01	.04	.25	8.3	.00	.00	.00
16	.00	.00	.00	.00	.00	.01	.03	.49	23	.00	.00	.00
17	.00	.00	.00	.00	.00	.01	.03	1.8	15	.00	.00	.00
18	.00	.00	.00	.00	.00	.01	.02	221	7.6	.00	.00	.00
19	.00	.00	.00	.00	.00	.01	.03	737	4.9	.00	.00	.00
20	.00	.00	.00	.00	.00	.02	.03	334	17	.00	.00	.00
21	.00	.00	.00	.00	.00	.02	.03	68	9.8	.00	.00	.00
22	.00	.00	.00	.00	.00	.02	.05	21	2.2	.00	.00	.00
23	.00	.00	.00	.00	.00	.03	.06	7.1	.96	.00	.00	.00
24	.00	.00	.00	.00	.00	.02	.03	3.8	.40	.00	.00	.00
25	.00	.00	.00	.00	.00	.04	.05	2.9	.21	.00	.00	.00
26	.00	.00	.00	.00	.00	.15	.03	2.3	.14	.00	.00	.00
27	.00	.00	.00	.00	.00	.11	.01	1.8	.07	.00	.00	.00
28	.00	.00	.00	.00	.00	.09	.01	2.0	.04	.00	.00	.00
29	.00	.00	.00	.00	---	.07	.04	2.2	.04	.00	.00	3.0
30	.00	.00	.00	.00	---	.03	.04	1.8	1.8	.00	.00	4.1
31	.00	---	.00	.00	---	.04	---	1.3	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	1.00	.92	1445.22	104.02	3.77	.00	7.10
MEAN	.000	.000	.000	.000	.000	.032	.031	46.6	3.47	.12	.000	.24
MAX	.00	.00	.00	.00	.00	.20	.06	737	23	1.5	.00	4.1
MIN	.00	.00	.00	.00	.00	.00	.01	.16	.04	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	2.0	1.8	2870	206	7.5	.00	14
CAL YR 1982	TOTAL	722.82	MEAN	1.98	MAX	161	MIN	.00	AC-FT	1430		
WTR YR 1983	TOTAL	1562.03	MEAN	4.28	MAX	737	MIN	.00	AC-FT	3100		

KANSAS RIVER BASIN

06849000 HARLAN COUNTY LAKE NEAR REPUBLICAN CITY, NE

Water year 1982 (Revised)

LOCATION.--Lat 40°04'10", long 99°12'30", in sec.11, T.1 N., R.17 W., Harlan County, Hydrologic Unit 10250009, at left end of spillway on upstream side of Harlan County Dam on Republican River, 2 mi southeast of Republican City and 8 mi southeast of Alma.

DRAINAGE AREA.--20,750 mi², approximately, of which about 13,530 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1965 published as Harlan County Reservoir near Republican City.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS (REVISED).--Reservoir is formed by earthfill dam with gravity-type concrete spillway section; storage began Nov. 14, 1952. Capacity, 327,600 acre-ft between elevations 1,885.0 ft, sill of outlet gates, and 1,946.0 ft, top of storage pool. Top of flood-control pool at elevation 1,973.5 ft, capacity, 825,800 acre-ft. Top of superstorage flood-control pool at elevation 1,975.5 ft, capacity, 872,700 acre-ft. Figures given herein represent total contents. Water used for irrigation in the Bostwick irrigation project.

COOPERATION.--Capacity table furnished by Corps of Engineers (revised Jan. 1, 1982).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 497,700 acre-ft Apr. 6, 1960, elevation, 1,955.67 ft; minimum since operation of reservoir began, 110,300 acre-ft Oct. 22 to Nov. 6, 1953, elevation, 1,922.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 354,700 acre-ft July 6, elevation, 1,947.98 ft; minimum, 232,800 acre-ft Oct. 7-11, elevation, 1,938.94 ft.

Capacity table, revised, (elevation, in feet, and contents, in acre-feet)

1,935	203,900	1,945	314,600
1,940	255,200	1,950	383,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233000	234800	243600	264900	272600	288100	302700	311000	330300	353200	325500	297700
2	232900	235100	244200	265200	272800	288800	302900	311500	331700	353900	323900	297400
3	233200	235600	244500	265600	273100	289700	302700	311900	332500	354300	322800	297000
4	233100	235800	244600	265900	273600	290200	303200	312200	333300	354300	321300	296300
5	233000	236100	245100	266100	273900	290800	303400	313700	334100	354600	319700	295800
6	233000	236200	245400	266200	274100	291300	303200	313900	335300	354500	317900	295400
7	232800	236600	245900	266400	274300	291700	303700	314200	335800	354000	316500	295000
8	232800	236600	246200	266700	274800	292100	303800	314400	336400	353800	314600	294200
9	232900	236800	246300	266900	275000	292600	304100	314800	336700	353600	312700	294200
10	232800	236800	246800	267000	275500	293200	304400	315600	337100	354200	311000	293700
11	232800	237100	247300	267100	275900	293600	304800	316500	337800	353600	309400	293200
12	232900	237300	247600	267600	276300	294100	305200	316800	338000	354600	308200	292700
13	233400	237500	248100	267800	276600	294600	305500	318300	338300	354200	306800	292300
14	233400	237900	248300	268000	276800	295200	305800	319100	339700	353500	306000	291800
15	233400	238000	248500	268100	277100	295800	306000	319600	339900	352900	305000	291700
16	233400	238300	249200	268100	277500	295900	306500	320000	340800	351500	303800	291500
17	233600	238500	249200	268400	277800	296400	306500	320500	341500	350100	303700	291700
18	233400	238600	249300	268500	278400	297200	307000	321000	342300	348900	302900	291800
19	233600	238800	249400	268700	279600	298000	307400	321400	342700	347200	301900	291800
20	233400	238800	249800	269200	280700	298800	307000	322600	343000	345600	301200	291800
21	233400	239100	250200	269400	281700	299000	307100	322800	343600	343600	300300	291700
22	233400	239400	250800	270000	283000	299500	307200	322900	343800	342100	299000	291700
23	233400	239600	251500	270100	283900	299800	307400	323200	344200	340100	298800	292000
24	233600	239600	252100	270400	284600	300200	307500	325400	346000	338300	298800	292000
25	233600	240200	252600	270400	285300	300300	307700	325800	346400	336400	298600	291900
26	233700	240400	253200	270600	286000	300400	307700	326500	347300	335000	298600	291800
27	233800	240300	253600	270900	287000	300900	308400	326600	349700	333300	298500	291700
28	234000	240600	253900	271000	287600	301200	310000	327800	350100	331800	298000	291700
29	234000	240800	254000	271300	---	302000	310400	328000	351000	330500	298000	291500
30	234400	243600	254500	271600	---	302300	310500	329500	351500	328700	298200	291500
31	234400	---	254600	271800	---	302300	---	330200	---	327200	297900	---
MAX	234400	243600	254600	271800	287600	302300	310500	330200	351500	354600	325500	297700
MIN	232800	234800	243600	264900	272600	288100	302700	311000	330300	327200	297900	291500
	1939.09	1939.90	1940.85	1941.47	1942.82	1944.03	1944.68	1946.19	1947.75	1948.97	1943.67	1943.15
	+1000	+9200	+11000	+7100	+15800	+14700	+8200	+19700	+21300	-24300	-29300	-6400
CAL YR 1981	MAX	254600	MIN	202500	+52400							
WTB YR 1982	MAX	354600	MIN	232800	+47100							

†Elevation, in feet, at end of month.

‡Change in contents, in acre-feet.

KANSAS RIVER BASIN

267

06849000 HARLAN COUNTY LAKE NEAR REPUBLICAN CITY, NE

LOCATION.--Lat 40°04'10", long 99°12'30", in sec.11, T.1 N., R.17 W., Harlan County, Hydrologic Unit 10250009, at left end of spillway on upstream side of Harlan County Dam on Republican River, 2 mi southeast of Republican City and 8 mi southeast of Alma.

DRAINAGE AREA.--20,750 mi², approximately, of which about 13,530 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1965 published as Harlan County Reservoir near Republican City.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam with gravity-type concrete spillway section; storage began Nov. 14, 1952. Capacity, 327,600 acre-ft between elevations 1,885.0 ft, sill of outlet gates, and 1,946.0 ft, top of storage pool. Top of flood-control pool at elevation 1,973.5 ft, capacity, 825,800 acre-ft. Top of superstorage flood-control pool at elevation 1,975.5 ft, capacity, 872,700 acre-ft. Figures given herein represent total contents. Sater used for irrigation is the Bostwick irrigation project.

COOPERATION.--Capacity table furnished by Corps of Engineers (revised Jan. 1, 1982).

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 497,700 acre-ft Apr. 6, 1960, elevation, 1,955.67 ft; minimum since operation of reservoir began, 110,300 acre-ft Oct. 22 to Nov. 6, 1953, elevation, 1,922.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 368,600 acre-ft June 19, elevation, 1,948.95 ft; minimum, 246,900 acre-ft Sept. 27-28, elevation 1,939.23 ft.

Capacity table, revised, (elevation, in feet, and contents, in acre-feet)

1,935	203,900	1,945	314,600
1,940	255,200	1,950	383,900

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292100	296500	302600	311400	324300	338600	346000	342400	355400	353800	300000	255100
2	292400	296600	302900	311500	325000	339100	344600	342800	354700	352600	297600	254100
3	292600	296600	303300	311800	325300	339400	343800	343200	353600	351500	295500	253100
4	293000	296500	303400	312000	325800	340200	342800	343900	352200	350500	293500	252300
5	293100	296500	303700	312400	326300	341500	342100	344600	351700	349600	291400	251500
6	293700	296600	303700	312700	326800	342700	340900	345800	350100	348300	289700	251100
7	293200	297000	303800	312900	327500	343000	339500	345700	349300	347200	287300	250100
8	293500	297000	303800	313200	328000	343400	338600	346000	349000	346100	285300	249600
9	293600	297400	304200	313900	328700	343200	338400	346400	348700	344700	283900	249000
10	293800	297400	304400	314100	329100	343200	337600	346900	349300	343100	281900	248700
11	294000	297600	304700	314300	329200	343000	337100	347200	349400	341600	279700	248500
12	294100	297600	304800	314700	329500	343000	338200	348200	350500	340200	277700	249200
13	294000	298000	305200	315200	330300	342800	338700	349400	352600	338400	276000	249100
14	294200	298000	305300	315600	331000	344500	337900	349800	358900	336400	274000	249000
15	294300	298100	305500	316000	331700	345800	337900	*350300	361500	334500	272200	248900
16	294300	298200	305700	316400	332100	346900	337900	350500	363600	333300	270800	248700
17	294600	298500	306200	316600	332600	346900	337900	352200	366700	331700	268900	248700
18	294600	298800	306600	317200	333000	346800	337600	355000	367900	329600	266900	248500
19	295200	299300	306600	317700	333700	346500	337900	357400	368300	327900	265200	248500
20	294800	299500	306700	317900	334300	346400	337900	360800	368200	325900	263600	247800
21	294900	299600	307100	318300	334700	345800	338000	362400	367400	323900	261900	247500
22	294900	300000	307600	318700	335300	345300	338600	363100	367100	321600	260100	247300
23	295000	300200	307900	319100	335700	345000	338600	363300	365900	319400	260000	247000
24	295200	300100	309500	319500	336000	344500	338400	362800	364600	317200	259600	247100
25	295200	300300	309600	320100	336100	344600	338900	362700	362800	314700	259800	247100
26	295300	300300	309600	320400	336700	345700	338900	361800	362100	312400	259700	247100
27	295800	300900	310900	321000	337100	345200	339000	361100	361500	310600	259100	246900
28	295900	301400	311000	321600	337800	344900	339100	360000	358600	308400	258600	247300
29	295900	301700	310900	322100	---	345000	339800	359600	356600	306500	257800	250400
30	296000	301900	311000	322600	---	345200	339800	357900	354700	304400	256800	251300
31	296300	---	311100	323300	---	345700	---	356400	---	302200	256100	---
MAX	296300	301900	311100	323300	337800	346900	346000	363300	368300	353800	300000	255100
MIN	292100	296500	302600	311400	324300	338600	337100	342400	348700	302200	256100	246900
	1943.54	1944.00	1944.73	1945.67	1946.75	1947.33	1946.90	1948.10	1947.98	1944.02	1940.08	1939.64
	+4800	+5600	+9200	+12200	+14500	+7900	-5900	+16600	-1700	-52500	-46100	-4800
CAL YR 1982	MAX	354600	MIN	264900	+56500							
WTR YR 1983	MAX	368300	MIN	246900	-40200							

†Elevation, in feet, at end of month.

‡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 west of Naponee, 1.4 mi upstream from Turkey Creek, and 2.8 mi downstream from Harlan County Dam.

DRAINAGE AREA.--20,760 mi², approximately, of which about 13,550 mi² contributes directly to surface runoff.

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

GAGE.--Water-stage recorder. Datum of gage is 1,863.38 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good. Flow completely regulated by Harlan County Lake (station 06849000) and partially regulated by six upstream reservoirs.

AVERAGE DISCHARGE.--30 years (1953-83), 261 ft³/s, 189,100 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,320 ft³/s June 25, 1957, gage height, 8.65 ft; minimum daily, 1.5 ft³/s Apr. 28, 29, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1, 1935, discharge, about 260,000 ft³/s, from slope-area measurement near Bloomington.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,790 ft³/s June 26, gage height, 4.84 ft; minimum daily, 4.8 ft³/s Jan. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	5.5	5.7	5.5	17	87	431	340	1120	758	823	247
2	7.6	5.5	5.9	5.1	19	205	1010	326	1120	757	783	244
3	7.0	6.0	5.9	5.5	23	269	970	315	1110	755	744	243
4	7.0	6.4	5.9	5.5	21	271	1010	312	1110	752	750	241
5	7.0	6.4	5.4	5.3	17	276	1150	312	1120	643	748	238
6	7.0	6.4	5.2	5.1	19	279	1140	314	1120	561	740	215
7	7.0	5.7	5.2	5.1	20	313	1140	311	796	561	742	168
8	6.8	15	5.5	5.1	16	368	1020	308	421	572	725	106
9	7.1	8.0	5.5	5.1	16	501	685	309	338	606	687	74
10	8.7	6.3	5.5	5.5	111	569	681	308	231	603	670	75
11	8.8	5.8	5.5	5.2	203	570	584	314	229	600	661	73
12	7.6	5.8	5.6	6.1	194	570	390	318	229	599	658	70
13	6.9	6.4	5.9	5.4	174	571	382	318	248	594	652	12
14	6.9	5.8	6.1	4.8	174	571	382	317	383	592	639	9.5
15	6.9	5.9	6.4	5.0	171	598	377	315	1110	591	630	8.8
16	6.9	5.9	6.9	5.1	222	604	378	314	1670	608	592	8.5
17	6.9	5.9	7.0	5.6	269	607	377	329	1650	617	562	8.5
18	6.4	5.9	6.9	18	271	605	377	470	1650	624	560	7.8
19	6.8	5.5	7.4	17	273	602	377	463	1640	635	535	7.3
20	7.7	5.5	7.7	17	278	605	377	658	1270	655	509	6.7
21	7.0	5.2	7.5	16	279	600	368	658	1190	708	509	6.3
22	12	5.4	8.0	17	277	593	313	660	1150	728	473	6.5
23	8.0	5.9	8.0	16	276	595	311	822	1180	797	379	6.4
24	6.9	5.9	9.2	16	276	591	314	1140	1290	855	257	6.6
25	7.4	5.9	8.7	16	276	587	314	1140	1620	852	235	6.4
26	6.4	5.9	7.1	16	276	599	317	1130	1660	851	235	6.4
27	6.4	5.9	6.6	16	274	599	317	1130	1600	854	234	6.8
28	6.9	5.9	8.5	16	183	589	318	1130	1600	853	239	6.9
29	6.9	5.9	7.6	16	---	592	321	1130	1590	854	247	136
30	6.4	5.9	5.9	16	---	495	317	1130	1130	840	251	29
31	6.4	---	5.5	16	---	241	---	1120	---	822	247	---
TOTAL	226.0	187.4	203.7	319.0	4625	15122	16448	18161	32575	21697	16716	2280.4
MEAN	7.29	6.25	6.57	10.3	165	488	548	586	1086	700	539	76.0
MAX	12	15	9.2	18	279	607	1150	1140	1670	855	823	247
MIN	6.4	5.2	5.2	4.8	16	87	311	308	229	561	234	6.3
AC-FT	448	372	404	633	9170	29990	32620	36020	64610	43040	33160	4520
CAL YR 1982	TOTAL	28722.0	MEAN	78.7	MAX	1300	MIN	5.2	AC-FT	56970		
WTR YR 1983	TOTAL	128560.5	MEAN	352	MAX	1670	MIN	4.8	AC-FT	255000		

06851000 CENTER CREEK AT FRANKLIN, NE

LOCATION.--Lat 40°06'12", long 98°58'45", in NW1/4NE1/4 sec.35, T.2 N., R.15 W., Franklin County, Hydrologic Unit 10250016, on right bank at downstream side of bridge on State Highway 136, 1 mi northwest of Franklin and 3 mi upstream from mouth.

DRAINAGE AREA.--74 mi², approximately, of which about 56 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956. Annual maximums and occasional low-flow measurements, water years 1961-68. October 1968 to September 1975, October 1977 to current year.

REVISED RECORDS.--WSP 2119: 1963(M), 1965(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,858.34 ft National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). Prior to Dec. 19, 1952, nonrecording gage at site 1.5 mi downstream at datum 30.27 ft lower and Dec. 19, 1952, to Sept. 30, 1956, at present site at datum 0.84 ft higher. Sept. 7, 1961, to Sept. 30, 1968, crest-stage gage and Oct. 1, 1968, to Sept. 30, 1975, recording gage at present site and datum.

REMARKS.--Records fair except those for winter period, which are poor. Two small diversions above station for irrigation.

AVERAGE DISCHARGE.--21 years (1948-56, 1968-75, 1978-83) 7.87 ft³/s, 5,700 acre-/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft³/s Sept. 20, 1950, gage height, 6.8 ft, from floodmark, site and datum then in use, from rating curve extended above 420 ft³/s on basis of slope-area measurement of peak flow; no flow at times during 1948-50.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 16	0130	128	2.55	June 13	0045	155	2.72
May 1	0730	160	2.74	Aug. 23	unknown	320	a3.64
May 18	1645	150	2.68	Sept. 29	0730	*611	5.25
June 11	0200	460	4.39				

a From highwater mark (crest stage gage).

Minimum daily discharge, 2.5 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.6	8.1	7.4	7.2	7.6	9.6	41	7.9	5.8	4.0	4.9
2	8.8	6.2	7.9	7.7	6.8	6.6	7.1	6.7	9.0	3.4	4.8	4.8
3	9.6	6.2	7.8	7.2	6.6	6.5	8.8	7.1	8.1	2.8	4.8	4.6
4	8.8	6.6	6.6	7.0	5.8	7.6	9.1	7.1	8.8	4.1	3.6	4.3
5	7.4	7.4	7.0	6.9	6.5	10	11	7.3	9.4	4.2	3.4	5.6
6	6.7	8.0	6.7	6.7	6.4	9.4	10	13	6.7	4.7	3.9	4.6
7	6.7	8.8	5.9	6.4	6.0	7.9	8.2	13	6.7	5.6	4.1	4.5
8	9.4	8.1	5.4	6.9	6.1	8.4	9.6	9.7	6.6	5.9	3.6	3.8
9	9.3	8.2	5.3	7.4	7.0	8.2	11	9.6	7.5	4.7	4.0	3.8
10	9.6	7.2	6.1	7.7	6.8	8.4	8.2	9.5	8.6	5.5	4.5	3.5
11	9.2	8.4	5.6	7.2	7.1	8.2	7.6	8.8	64	4.4	5.0	3.3
12	8.8	7.5	5.6	6.9	7.3	7.5	9.1	8.7	5.0	4.1	6.0	3.7
13	7.1	6.5	6.0	7.5	9.4	7.3	9.6	9.1	28	4.1	8.0	3.2
14	8.2	6.6	5.9	7.0	6.8	9.1	10	7.8	4.3	5.2	20	3.7
15	6.5	6.7	5.8	7.0	5.9	40	8.8	7.7	4.1	5.4	7.0	3.6
16	5.9	7.0	5.5	6.7	5.6	60	8.1	7.4	4.6	4.6	5.0	3.1
17	6.7	7.0	5.4	6.7	13	6.7	7.4	10	6.6	5.3	4.0	3.3
18	6.9	6.6	5.6	6.0	12	7.4	6.1	76	5.7	4.1	3.8	3.2
19	7.1	6.3	5.7	6.6	8.6	7.4	6.7	58	6.1	3.0	3.8	3.5
20	7.1	6.8	5.4	6.3	8.2	8.1	6.1	13	6.8	3.2	4.2	3.7
21	5.5	6.8	4.6	6.0	7.8	7.4	6.1	8.8	7.0	3.1	6.0	3.4
22	7.5	6.1	4.2	6.2	7.3	6.7	6.7	9.5	7.5	2.9	15	2.8
23	6.2	6.5	4.2	6.1	7.8	6.1	6.1	10	7.0	2.8	50	2.5
24	6.6	6.2	5.3	6.4	7.6	6.1	5.0	10	5.8	2.7	9.4	2.6
25	6.1	6.6	4.6	7.0	7.8	5.5	5.5	8.7	6.3	3.8	6.1	2.8
26	5.6	6.2	4.2	7.0	8.5	8.1	5.5	8.0	6.6	5.6	5.9	2.7
27	6.5	6.4	5.1	7.6	8.1	8.1	5.5	7.8	6.1	4.7	4.9	2.8
28	7.1	6.1	4.4	7.3	7.8	7.4	4.0	7.1	6.4	6.0	3.4	5.5
29	7.7	5.4	4.0	8.2	---	12	5.0	6.7	5.0	8.0	3.6	501
30	7.2	6.0	5.2	7.4	---	17	5.5	6.2	5.8	15	4.8	140
31	6.8	---	6.9	7.1	---	7.9	---	8.0	---	7.0	5.1	---
TOTAL	234.6	205.0	176.0	215.5	211.8	334.6	227.0	421.3	278.0	151.7	221.7	744.8
MEAN	7.57	6.83	5.68	6.95	7.56	10.8	7.57	13.6	9.27	4.89	7.15	24.8
MAX	12	8.8	8.1	8.2	13	60	11	76	64	15	50	501
MIN	5.5	5.4	4.0	6.0	5.6	5.5	4.0	6.2	4.1	2.7	3.4	2.5
AC-FT	465	407	349	427	420	664	450	836	551	301	440	1480

CAL YR 1982 TOTAL 3625.9 MEAN 9.93 MAX 111 MIN 2.9 AC-FT 7190
WTR YR 1983 TOTAL 3422.0 MEAN 9.38 MAX 501 MIN 2.5 AC-FT 6790

KANSAS RIVER BASIN

06851000 CENTER CREEK AT FRANKLIN, NE--Continued

REVISIONS.--The annual maximum discharges (*) and some of the other peak discharges for water years 1981 and 1982 have been revised as shown in the following table. They supersede figures published in the reports for 1981 and 1982.

Water year	Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Water year	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
1981	May 21, 1981	2300	*900	a 5.20	1982	May 30, 1982	0645	240	2.94
	May 28, 1981	0530	490	3.80		June 24, 1982	1945	208	2.78
	July 26, 1981	0300	510	a 3.95		June 26, 1982	1615	*430	3.95
	Aug. 6, 1981	0900	550	a 4.20		Aug. 10, 1982	0100	390	3.70
1982	May 11, 1982	0145	400	3.74		Aug. 23, 1982	0245	210	2.80
	May 24, 1982	0130	210	2.80					

a From highwater mark (crest-stage gage).

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 downstream from bridge on State Highway 136, at west edge of Riverton, 240 ft upstream from Burlington Northern Inc. bridge, and 0.5 mi upstream from mouth. Non-recording gage only, June 27 to Sept. 30 at Burlington Northern bridge at same datum.

DRAINAGE AREA.--279 mi², of which about 190 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--April 1948 to September 1956, October 1968 to September 1975. Annual maximums, water years 1962-68 and occasional low-flow measurements, water years 1961-68. October 1977 to current year.

REVISED RECORDS.--WRD Nebr. 1972: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,753.38 ft National Geodetic Vertical Datum of 1929. Apr. 1 to Oct. 1, 1948, nonrecording gage 240 ft downstream at datum 2.32 ft higher. Oct. 1, 1948, to July 11, 1950, water-stage recorder at present site at datum 1.32 ft higher, July 12, 1950, to Sept. 30, 1956, and Oct. 1, 1968, to Sept. 30, 1975, at present site and datum. Sept. 7, 1961, to Sept. 30, 1968, crest-stage gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--21 years (1948-56, 1968-75, 1978-83), 31.2 ft³/s, 22,600 acre-ft/yr; median of yearly mean discharges, 28 ft³/s, 20,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s July 9, 1950, gage height, 13.22 ft, present datum, by slope-area measurement; minimum daily, 8.1 ft³/s Dec. 19, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 8	2230	365	5.28	July 2	----	358	b5.61
Mar. 5	----	892	a7.12	Sept. 12	1000	1780	c8.55
Mar. 16	1100	286	a5.47	Sept. 29	0915	*5300	a12.62

a From highwater mark at gage.

b From highwater mark at RR bridge downstream.

c Observer reading at RR bridge.

Minimum daily discharge, 12 ft³/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	22	26	24	22	22	26	125	23	25	20	16
2	28	22	25	23	23	22	22	61	24	106	14	15
3	23	22	24	24	27	22	22	25	24	41	16	12
4	23	22	24	23	24	24	22	42	24	22	15	14
5	23	23	25	22	21	33	22	38	24	21	14	17
6	22	23	25	22	22	210	22	39	23	24	20	14
7	22	23	26	22	25	98	22	88	23	24	16	16
8	65	23	26	22	21	31	22	66	23	25	17	17
9	100	23	25	24	22	24	22	36	23	24	18	16
10	24	24	26	26	22	23	22	27	24	23	16	15
11	24	25	26	24	23	23	22	26	33	24	16	16
12	24	23	26	23	24	23	22	24	46	23	19	482
13	25	23	26	24	40	23	22	21	250	22	20	57
14	25	24	25	23	35	23	23	22	70	21	20	19
15	25	24	25	22	45	150	24	21	30	22	17	17
16	25	24	26	23	35	216	25	20	26	23	17	15
17	24	24	26	22	83	67	25	34	50	24	15	15
18	24	25	26	22	53	26	25	138	200	21	14	16
19	24	24	25	23	31	21	24	179	30	21	14	17
20	23	24	25	23	28	19	23	101	25	21	18	30
21	23	23	25	22	26	19	21	58	24	21	18	17
22	24	23	25	22	26	19	20	38	23	18	17	17
23	24	23	25	22	24	19	20	29	23	20	31	17
24	24	23	27	22	24	19	21	27	23	24	26	17
25	23	24	26	22	22	20	21	56	23	24	22	17
26	23	24	25	22	23	24	21	51	23	24	24	17
27	23	24	24	23	23	22	20	38	23	23	77	16
28	23	25	24	23	22	22	24	30	23	25	14	16
29	22	25	24	25	---	27	24	27	24	25	13	2630
30	22	25	23	24	---	48	20	25	23	31	13	261
31	22	---	24	23	---	32	---	24	---	26	14	---
TOTAL	851	706	780	711	816	1371	671	1536	1227	818	605	3861
MEAN	27.5	23.5	25.2	22.9	29.1	44.2	22.4	49.5	40.9	26.4	19.5	129
MAX	100	25	27	26	83	216	26	179	250	106	77	2630
MIN	22	22	23	22	21	19	20	20	23	18	13	12
AC-FT	1690	1400	1550	1410	1620	2720	1330	3050	2430	1620	1200	7660
CAL YR 1982	TOTAL	16973	MEAN 46.5	MAX 1630	MIN 17	AC-FT 33670						
WTR YR 1983	TOTAL	13953	MEAN 38.2	MAX 2630	MIN 12	AC-FT 27680						

KANSAS RIVER BASIN

06852000 ELM CREEK AT AMBOY, NE

LOCATION.--Lat 40°05'20", long 98°26'07", in NE1/4NW1/4 sec.3, T.1 N., R.10 W., Webster County, Hydrologic Unit 10250016, on left bank at downstream side of bridge on State Highway 136 at east edge of Amboy, 2.5 mi upstream from mouth, and 4.5 mi east of Red Cloud.

DRAINAGE AREA.--39.2 mi².

PERIOD OF RECORD.--April 1948 to December 1953. Annual maximums, water years 1959, 1961-77 and occasional low flow measurements, water years 1954-77. October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,659.07 ft National Geodetic Vertical Datum of 1929. Prior to July 17, 1952, nonrecording gage at upstream side of bridge at datum 7.26 ft higher, and July 17, 1952, to Jan. 4, 1954, water-stage recorder, present site, at datum 6.26 ft higher, and Sept. 6, 1961, to Sept. 30, 1977, crest-stage gage at present site and datum.

REMARKS.--Records good. Natural flow affected by pump irrigation development above station.

AVERAGE DISCHARGE.--11 years (1949-53, 1978-83), 22.3 ft³/s, 16,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,800 ft³/s Sept. 29, 1983, gage height, 16.96 ft, from floodmark, present datum from rating curve extended above 6,400 ft³/s on basis of velocity-area study; maximum gage height, 17.05 ft July 4, 1959; minimum daily discharge, 9.4 ft³/s June 29, July 1, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,800 ft³/s Sept. 29, gage height, 16.96 ft, from floodmark from rating curve extended above 6,400 ft³/s on basis of velocity-area study; minimum daily, 7.8 ft³/s Aug. 19.

REVISIONS.--The maximum discharge for the water year 1982 has been revised to 5,400 ft³/s May 11, 1982, gage height, 16.18 ft, from floodmark, superseding figure published in report for 1982.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	15	16	16	17	18	16	20	16	16	9.8	11
2	45	15	16	16	17	18	16	39	16	16	9.6	10
3	20	15	15	16	17	18	16	24	16	16	9.1	10
4	16	15	15	16	17	18	16	22	16	16	9.1	10
5	15	15	15	16	17	18	16	21	16	16	9.3	11
6	15	15	15	16	16	60	16	21	16	16	9.8	10
7	15	15	15	16	17	30	16	24	16	15	10	10
8	15	15	15	16	17	19	16	26	16	15	9.8	10
9	15	15	15	17	17	16	16	21	16	14	9.6	11
10	15	15	16	17	17	16	16	20	17	14	9.0	10
11	14	16	16	17	17	16	16	20	17	14	9.2	11
12	14	15	16	16	17	16	16	19	17	14	9.1	15
13	14	15	16	17	18	16	16	19	41	14	8.5	16
14	15	15	16	16	20	16	16	22	110	14	8.7	12
15	15	15	16	16	24	16	16	22	27	15	8.5	11
16	15	15	16	16	29	16	16	20	18	15	7.9	10
17	15	15	16	16	29	16	16	23	39	15	7.9	10
18	15	15	16	16	23	16	16	118	299	14	8.0	10
19	15	15	16	16	21	16	16	55	65	14	7.8	11
20	15	15	16	16	20	16	16	23	22	12	8.7	69
21	15	15	16	16	19	16	16	19	18	13	10	20
22	15	15	16	16	18	16	16	18	17	13	8.4	12
23	15	15	16	16	18	16	16	17	17	13	227	11
24	15	15	16	16	18	16	16	17	17	14	22	10
25	15	15	17	16	18	16	16	18	17	14	13	10
26	15	15	16	16	18	17	16	19	17	14	12	10
27	15	15	17	16	18	17	16	18	17	13	11	10
28	15	15	16	17	18	16	16	17	17	14	11	10
29	15	16	16	17	---	17	17	16	17	87	11	2560
30	15	16	16	17	---	18	16	16	17	18	12	150
31	15	---	16	17	---	16	---	16	---	12	12	---
TOTAL	502	453	491	504	532	572	481	770	987	520	528.8	3081
MEAN	16.2	15.1	15.8	16.3	19.0	18.5	16.0	24.8	32.9	16.8	17.1	103
MAX	45	16	17	17	29	60	17	118	299	87	227	2560
MIN	14	15	15	16	16	16	16	16	16	12	7.8	10
AC-FT	996	899	974	1000	1060	1130	954	1530	1960	1030	1050	6110
CAL YR 1982	TOTAL	10564.0	MEAN 28.9	MAX 1410	MIN 14	AC-FT 20950						
WTR YR 1983	TOTAL	9421.8	MEAN 25.8	MAX 2560	MIN 7.8	AC-FT 18690						

06852500 COURTLAND CANAL AT NEBRASKA-KANSAS STATE LINE

LOCATION.--Lat 40°00'15", long 98°07'55", in SW1/4SE1/4 sec.32, T.1 N., R.7 W., Nuckolls County, Nebraska, Hydrologic Unit 10250016, on left bank 0.2 mi upstream from Nebraska-Kansas State line and 3.5 mi southwest of Superior, NE.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder and concrete Parshall flume. Datum of gage is 1,612.46 ft 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.--29 years, 78.0 ft³/s, 56,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 781 ft³/s Sept. 2, 1973, gage height, 5.05 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 629 ft³/s July 30, 31; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	198	67	222	627	188
2	.00	.00	.00	.00	.00	.00	.00	203	68	220	623	193
3	.00	.00	.00	.00	.00	.00	.00	229	68	222	609	192
4	.00	.00	.00	.00	.00	.00	.00	309	67	254	578	196
5	.00	.00	.00	.00	.00	.00	.00	368	68	281	570	198
6	.00	.00	.00	.00	.00	.00	.00	370	67	294	570	198
7	.00	.00	.00	.00	.00	.00	.00	374	67	325	576	200
8	.00	.00	.00	.00	.00	.00	.00	382	66	338	576	185
9	.00	.00	.00	.00	.00	.00	.00	348	63	360	563	161
10	.00	.00	.00	.00	.00	.00	.00	303	64	370	529	152
11	.00	.00	.00	.00	.00	.00	.00	303	63	406	498	138
12	.00	.00	.00	.00	.00	.00	.00	303	62	436	508	130
13	.00	.00	.00	.00	.00	.00	.00	303	66	446	500	172
14	.00	.00	.00	.00	.00	.00	.00	305	43	444	498	186
15	.00	.00	.00	.00	.00	.00	.00	303	9.7	444	504	169
16	.00	.00	.00	.00	.00	.00	.00	281	76	444	492	169
17	.00	.00	.00	.00	.00	.00	.00	234	89	452	464	100
18	.00	.00	.00	.00	.00	.00	.00	174	92	476	446	76
19	.00	.00	.00	.00	.00	.00	.00	131	94	492	430	76
20	.00	.00	.00	.00	.00	.00	111	127	91	486	391	78
21	.00	.00	.00	.00	.00	.00	196	124	90	476	372	74
22	.00	.00	.00	.00	.00	.00	200	122	147	494	374	71
23	.00	.00	.00	.00	.00	.00	200	100	198	524	370	70
24	.00	.00	.00	.00	.00	.00	198	66	201	528	312	69
25	.00	.00	.00	.00	.00	.00	196	71	216	581	268	68
26	.00	.00	.00	.00	.00	.00	196	72	220	612	235	69
27	.00	.00	.00	.00	.00	.00	195	71	220	607	226	66
28	.00	.00	.00	.00	.00	.00	200	67	220	607	227	62
29	.00	.00	.00	.00	---	.00	195	66	220	614	214	106
30	.00	.00	.00	.00	---	.00	195	66	220	629	200	104
31	.00	---	.00	.00	---	.00	---	66	---	629	187	---
TOTAL	.00	.00	.00	.00	.00	.00	2082.00	6439	3302.7	13713	13537	3916
MEAN	.000	.000	.000	.000	.000	.000	69.4	208	110	442	437	131
MAX	.00	.00	.00	.00	.00	.00	200	382	220	629	627	200
MIN	.00	.00	.00	.00	.00	.00	.00	66	9.7	220	187	62
AC-FT	.00	.00	.00	.00	.00	.00	4130	12770	6550	27200	26850	7770
CAL YR 1982	TOTAL	18290.80	MEAN	50.1	MAX	382	MIN	.00	AC-FT	36280		
WTR YR 1983	TOTAL	42989.70	MEAN	118	MAX	629	MIN	.00	AC-FT	85270		

KANSAS RIVER BASIN

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 upstream from Willow Creek, 0.2 mi downstream from Courtland diversion dam, and 2 mi southwest of Guide Rock.

DRAINAGE AREA.--22,040 mi², approximately, of which about 14,550 mi² 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1959, at datum 5.00 ft 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.--33 years, 338 ft³/s, 244,900 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,200 ft³/s June 16, 1957, gage height, 20.73 ft, present datum; minimum daily, 0.1 ft³/s May 26, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1826 occurred June 1 or 2, 1935, discharge, about 250,000 ft³/s, from slope-area measurements near Bloomington and Hardy.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft³/s Sept. 29, gage height, 19.91 ft, from floodmark; minimum daily, 17 ft³/s Sept. 19, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	124	125	100	164	419	623	420	1180	1130	106	62
2	227	122	124	100	123	312	530	840	1180	697	57	55
3	161	118	118	104	120	316	972	345	1170	627	38	53
4	136	116	114	100	110	407	1080	207	1130	507	29	50
5	134	117	116	110	120	481	1080	167	1160	472	31	70
6	127	121	119	130	150	550	1210	157	1150	381	41	91
7	124	120	118	160	145	550	1200	265	1110	258	64	107
8	126	117	118	155	150	513	1200	242	973	190	68	89
9	149	117	118	153	161	509	1180	193	800	145	60	69
10	163	118	132	165	162	533	873	196	600	165	81	40
11	132	129	125	165	172	682	822	188	500	115	57	26
12	127	123	120	175	232	726	816	194	430	65	39	188
13	125	116	130	163	307	735	657	213	430	64	42	377
14	124	115	125	168	376	723	598	245	430	46	74	55
15	124	115	125	153	405	734	567	225	500	44	84	21
16	122	117	125	155	410	1040	565	226	1000	44	69	28
17	122	116	130	154	400	994	566	309	1800	82	60	28
18	121	117	145	151	449	843	564	1090	2200	57	31	21
19	122	119	145	148	433	841	553	1920	1900	32	26	17
20	122	118	140	163	428	834	419	973	1690	22	59	110
21	121	113	140	155	439	830	349	883	1390	26	91	98
22	121	112	145	140	437	825	361	835	1180	36	91	37
23	121	111	150	160	437	815	342	811	1080	32	510	26
24	123	107	150	169	433	813	313	873	1060	72	390	24
25	122	112	200	168	424	817	316	1580	1150	109	194	22
26	119	117	120	155	421	861	316	1390	1430	80	124	20
27	119	112	110	159	420	903	310	1310	1500	81	114	17
28	118	117	100	158	422	853	310	1260	1460	85	90	18
29	119	124	86	176	---	837	320	1230	1500	275	76	7730
30	119	128	90	169	---	852	320	1200	1440	277	67	8130
31	122	---	96	166	---	819	---	1190	---	153	62	---
TOTAL	4011	3528	3899	4647	8450	21967	19332	21177	34523	6369	2925	17679
MEAN	129	118	126	150	302	709	644	683	1151	205	94.4	589
MAX	227	129	200	176	449	1040	1210	1920	2200	1130	510	8130
MIN	99	107	86	100	110	312	310	157	430	22	26	17
AC-FT	7960	7000	7730	9220	16760	43570	38350	42000	68480	12630	5800	35070
CAL YR 1982	TOTAL	92925	MEAN 255	MAX 9600	MIN 44	AC-FT 184300						
WTR YR 1983	TOTAL	148507	MEAN 407	MAX 8130	MIN 17	AC-FT 294600						

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
13...	1700	125	820	8.0	12.0	11.0	<12	1200	450	360	110
NOV											
01...	1615	122	580	8.0	13.0	10.2	38	K35	220	310	92
DEC											
06...	1615	122	705	8.0	5.0	6.0	22	K6	K43	320	100
JAN											
05...	1645	110	750	7.7	.0	5.8	14	K3	110	350	110
31...	1700	172	700	8.0	1.0	12.0	18	28	2200	310	95
MAR											
01...	1545	435	730	8.2	11.0	11.5	25	K14	700	240	65
APR											
11...	1645	823	640	8.2	13.0	12.2	36	K28	420	230	59
MAY											
03...	1245	320	510	8.3	13.5	10.2	70	K58000	K44000	210	59
JUN											
07...	1130	1120	690	8.3	17.0	8.7	30	K600	440	230	58
29...	1045	1500	--	8.0	21.0	7.8	30	4700	6800	200	51
AUG											
02...	1245	62	640	8.4	27.5	7.2	20	--	K105000	220	54
SEP											
06...	1530	116	610	8.4	28.5	9.3	34	560	540	210	53

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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
13...	20	120	21	55	1.3	.170	.83	1.00	2.3	.480	4.9
NOV											
01...	19	120	22	42	.70	<.060	--	1.00	1.7	.100	3.8
DEC											
06...	18	130	25	33	1.3	.080	1.4	1.50	2.8	.130	4.3
JAN											
05...	18	120	23	68	1.7	.180	1.1	1.30	3.0	.220	3.9
31...	17	110	27	41	1.7	.190	.81	1.00	2.7	.190	4.3
MAR											
01...	19	96	21	112	.60	.080	1.3	1.40	2.0	.230	6.3
APR											
11...	21	92	22	180	.50	.080	1.2	1.30	1.8	.170	7.5
MAY											
03...	15	79	18	--	.90	.150	3.4	3.50	4.4	.430	21
JUN											
07...	20	92	23	80	.60	.070	1.3	1.40	2.0	.200	7.5
29...	18	89	21	188	.60	<.060	--	1.40	2.0	.170	8.5
AUG											
02...	20	82	22	61	.60	.080	.92	1.00	1.6	.230	7.8
SEP											
06...	19	85	21	123	.20	.060	1.0	1.10	1.3	.180	5.6

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

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 southwest of Hardy and at mi 141.2.

DRAINAGE AREA.--22,401 mi², of which about 7,500 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1904 to September 1915 (no winter records), April 1931 to current year. Prior to May 1932, published as "at Bostwick." Records for June 1896 to November 1903 published as "near Superior" in 18th to 22nd Ann. Repts., inclusive, Pt. 4, and WSP 75, 84, and 99, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 806: Drainage area. WSP 1006: 1941. WSP 1340: 1905(M), 1907-9, 1912, 1914-15, 1931. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,501.46 ft National Geodetic Vertical Datum of 1929. Prior to May 19, 1932, nonrecording gage at site at Bostwick, 20 mi upstream at different datum.

REMARKS.--Records 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.--52 years (water years 1914, 1933-83), 568 ft³/s, 411,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 225,000 ft³/s June 2, 1935, gage height, 19.4 ft, based on records for stations upstream; no flow Aug. 9-19, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stages since at least 1895, that of June 2, 1935, and 17.00 ft June 24, 1947, discharge, 100,000 ft³/s, based on records for upstream stations.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft³/s Sept. 30, stage rising, peak occurred Oct. 1, 1983; maximum peak discharge, 2,850 ft³/s June 18, gage height, 7.94 ft; minimum discharge, 87 ft³/s July 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	168	167	165	210	413	752	358	1070	1370	235	207
2	441	167	166	180	190	416	572	391	1080	1030	195	206
3	540	163	162	160	170	342	540	705	1100	760	161	200
4	305	159	155	140	150	342	955	361	1080	692	137	206
5	241	157	152	150	150	434	985	244	1070	616	109	219
6	217	161	151	170	150	524	1000	197	1110	580	111	247
7	202	163	146	200	150	645	1100	187	1100	484	131	282
8	197	164	144	200	170	593	1110	259	1080	366	163	306
9	201	165	134	180	200	488	1120	252	885	306	155	287
10	210	162	137	180	250	482	1060	203	652	255	145	265
11	229	158	138	180	300	552	845	201	616	246	141	247
12	198	171	134	180	350	631	845	195	540	218	135	288
13	189	164	125	200	400	636	800	193	660	185	119	439
14	186	160	137	228	475	654	668	235	1210	161	139	650
15	186	160	144	198	550	660	620	253	1430	143	180	384
16	184	161	145	170	539	695	604	233	800	135	203	294
17	184	164	145	161	507	910	592	240	1080	133	180	276
18	184	166	142	140	460	797	588	1120	2210	147	161	276
19	183	167	142	140	478	720	524	2180	2250	147	135	297
20	181	166	137	150	453	708	449	1750	1810	121	137	286
21	177	163	136	160	442	691	377	908	1580	102	161	382
22	178	156	139	170	440	696	356	843	1250	96	198	435
23	178	152	142	190	428	704	354	768	1070	98	333	345
24	177	150	147	210	420	700	322	777	1020	99	850	325
25	179	150	158	235	418	720	300	866	1010	117	506	320
26	180	151	166	215	417	756	297	1420	1160	163	327	310
27	176	155	169	200	417	810	290	1170	1400	149	262	301
28	172	156	160	200	418	805	289	1130	1410	151	248	296
29	169	159	150	220	---	776	286	1090	1480	161	233	3130
30	168	165	145	250	---	780	298	1070	1490	312	231	10500
31	169	---	155	230	---	785	---	1070	---	327	219	---
TOTAL	6565	4823	4570	5752	9702	19865	18898	20869	35703	9870	6640	22206
MEAN	212	161	147	186	347	641	630	673	1190	318	214	740
MAX	540	171	169	250	550	910	1120	2180	2250	1370	850	10500
MIN	168	150	125	140	150	342	286	187	540	96	109	200
AC-FT	13020	9570	9060	11410	19240	39400	37480	41390	70820	19580	13170	44050
CAL YR 1982	TOTAL	138883	MEAN 381	MAX 7550	MIN 70	AC-FT 275500						
WTR YR 1983	TOTAL	165463	MEAN 453	MAX 10500	MIN 96	AC-FT 328200						

KANSAS RIVER BASIN

06879900 BIG BLUE RIVER AT SURPRISE, NE

LOCATION.--Lat 41°06'05", long 97°18'35", in NW1/4NW1/4 sec.15, T.13 N., R.1 E., Butler County, Hydrologic Unit 10270201, on left bank 50 ft downstream from bridge on county road at south edge of Surprise.

DRAINAGE AREA.--345 mi².

PERIOD OF RECORD.--April 1964 to current year. Prior to October 1965, published as North Branch Big Blue River at Surprise.

GAGE.--Water-stage recorder and concrete broad-crested weir control. Altitude of gage is 1,520 ft, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--19 years, 26.3 ft³/s, 19,050 acre-ft/yr; median of yearly mean discharges, 24 ft³/s, 17,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft³/s July 19, 1965, gage height, 11.52 ft; no flow for many days in most years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 20	0200	1020	6.26	June 18	0100	1410	7.29
June 13	1630	724	5.36	June 21	0400	*1450	7.42

Minimum daily discharge, 0.04 ft³/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.53	1.4	.98	.52	19	36	1.8	4.9	67	7.6	3.0
2	13	.52	1.7	1.2	.61	18	27	4.4	2.2	52	7.5	2.5
3	53	.25	1.5	.68	.55	15	15	7.9	3.1	24	6.8	2.0
4	19	.14	1.4	.53	.52	15	19	16	3.0	16	4.0	1.6
5	6.5	.38	1.4	.31	.46	33	11	22	2.0	18	2.0	1.2
6	2.6	.53	.90	.42	.50	29	8.1	13	1.7	13	1.4	.95
7	.66	.58	.60	.76	.60	17	8.0	16	2.9	8.4	1.2	.94
8	2.0	.36	.37	.74	.54	11	7.0	8.0	2.4	5.6	1.1	1.6
9	72	.53	.45	1.1	.40	7.7	6.1	6.1	2.4	3.7	1.1	1.3
10	67	.69	.24	1.2	.42	6.6	6.3	4.0	1.9	3.2	1.0	.72
11	30	15	.17	1.0	.31	6.8	5.6	3.2	1.7	3.9	1.2	.52
12	15	27	.12	1.4	.32	5.7	5.1	3.0	1.1	3.5	1.3	.67
13	6.8	5.6	.13	2.5	.41	4.8	4.9	2.7	152	4.2	1.4	.55
14	2.9	1.8	.06	2.9	.75	3.9	9.9	2.4	33	3.0	1.5	.47
15	1.2	1.2	.07	3.9	11	7.7	27	2.1	77	2.0	1.5	.25
16	.50	.90	.07	9.5	116	11	17	1.7	356	2.0	1.7	.07
17	.37	.79	.14	15	329	15	28	5.5	593	2.3	1.7	.09
18	.18	.62	.24	8.6	551	10	31	9.3	754	1.7	1.4	.04
19	.05	.96	.13	5.1	862	7.0	20	9.5	414	1.4	1.3	.08
20	.09	.63	.24	3.5	934	5.2	20	7.4	814	2.0	3.5	.14
21	.26	.40	.35	2.6	517	3.8	17	5.5	1310	3.6	10	.12
22	.36	.19	.47	2.0	151	3.6	13	6.5	411	4.7	5.8	.05
23	.35	.06	.48	1.6	90	2.9	9.8	23	54	4.6	3.5	.07
24	.35	.07	1.5	1.4	56	2.6	7.6	19	35	4.4	3.1	.07
25	.41	.13	5.8	1.2	31	3.1	6.4	14	23	10	3.0	.09
26	.68	.08	9.0	1.0	24	6.3	5.9	11	16	16	2.8	.08
27	.69	.13	8.1	.68	22	11	4.1	8.0	14	14	4.3	.09
28	.65	.41	2.1	.85	21	11	3.4	5.6	11	10	6.4	.11
29	.66	.47	1.1	1.1	---	12	1.9	4.1	11	6.3	5.3	.70
30	.56	.99	.70	.76	---	32	1.5	3.0	13	4.2	4.1	.31
31	.52	---	.65	.59	---	69	---	3.7	---	7.6	3.5	---
TOTAL	298.89	61.94	41.58	75.10	3721.91	405.7	382.6	249.4	5120.3	322.3	102.0	20.38
MEAN	9.64	2.06	1.34	2.42	133	13.1	12.8	8.05	171	10.4	3.29	.68
MAX	72	27	9.0	15	934	69	36	23	1310	67	10	3.0
MIN	.05	.06	.06	.31	.31	2.6	1.5	1.7	1.1	1.4	1.0	.04
AC-FT	593	123	82	149	7380	805	759	495	10160	639	202	40

CAL YR 1982	TOTAL	15288.98	MEAN	41.9	MAX	1110	MIN	.00	AC-FT	30330
WTR YR 1983	TOTAL	10802.10	MEAN	29.6	MAX	1310	MIN	.04	AC-FT	21430

KANSAS RIVER BASIN

279

06880000 LINCOLN CREEK NEAR SEWARD, NE

LOCATION.--Lat 40°54'57", long 97°08'43", in NW1/4NE1/4 sec.24, T.11 N., R.2 E., Seward County, Hydrologic Unit 10270201, on left bank 20 ft downstream from county road bridge, 2 mi west of Seward, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--446 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to September 1973, March 1974 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,429.27 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--29 years, (1953-73, 1975-83) 45.5 ft³/s, 32,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s June 17, 1957, gage height, 20.53 ft; minimum daily, 1.3 ft³/s July 31, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	0330	977	13.68	June 18	1930	*1990	18.55
June 15	0500	476	11.40	June 30	0200	616	12.70

Minimum daily discharge, 8.7 ft³/s Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	13	13	13	19	30	160	27	22	106	33	19
2	48	13	14	13	15	28	88	32	22	126	32	16
3	91	12	13	13	14	27	63	24	22	92	31	11
4	84	12	12	13	13	27	50	26	19	62	29	9.9
5	49	13	12	14	13	63	48	24	24	60	29	9.8
6	38	13	12	14	13	45	48	47	23	62	27	8.9
7	28	13	11	15	12	32	42	134	19	53	22	8.7
8	67	13	10	15	12	29	35	110	18	46	25	8.8
9	181	13	10	16	12	24	31	50	17	41	24	9.1
10	169	13	11	18	12	23	32	44	16	39	24	9.4
11	66	15	10	19	12	22	25	30	16	37	23	9.7
12	96	16	10	20	12	18	24	26	15	35	20	10
13	80	26	11	20	13	16	25	25	22	36	23	10
14	54	29	12	21	40	15	28	42	221	33	23	11
15	38	22	12	20	120	72	37	43	216	32	23	11
16	29	15	12	20	327	46	80	34	55	32	21	10
17	24	13	13	20	577	27	94	35	68	33	20	11
18	20	13	13	19	714	24	75	63	839	39	21	10
19	18	15	12	18	812	23	69	93	1670	42	20	9.7
20	20	15	12	17	928	22	54	42	1370	35	22	11
21	15	14	12	17	832	22	44	36	1030	32	22	12
22	14	14	13	16	405	25	40	33	747	32	20	10
23	14	15	15	16	198	22	36	48	570	35	24	9.4
24	13	15	15	15	117	21	36	53	183	30	23	10
25	13	12	20	15	71	21	33	47	88	32	23	11
26	13	13	15	14	50	24	29	48	73	31	23	12
27	13	17	16	13	40	23	27	38	148	31	20	12
28	13	13	13	14	34	23	25	31	225	34	16	13
29	14	13	12	15	---	30	24	27	391	41	26	32
30	14	13	12	20	---	67	23	24	277	36	23	23
31	13	---	12	25	---	210	---	23	---	34	21	---
TOTAL	1379	446	390	518	5437	1101	1425	1359	8426	1409	733	358.4
MEAN	44.5	14.9	12.6	16.7	194	35.5	47.5	43.8	281	45.5	23.6	11.9
MAX	181	29	20	25	928	210	160	134	1670	126	33	32
MIN	13	12	10	13	12	15	23	23	15	30	16	8.7
AC-FT	2740	885	774	1030	10780	2180	2830	2700	16710	2790	1450	711
CAL YR 1982	TOTAL	37140.5	MEAN	102	MAX	3060	MIN	5.0	AC-FT	73670		
WTR YR 1983	TOTAL	22981.4	MEAN	63.0	MAX	1670	MIN	8.7	AC-FT	45580		

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
21...	1245	14	520	7.8	6.5	10.1	15	K1800	K4200	230	70
NOV											
18...	1115	13	560	8.3	3.0	13.3	28	K2900	5600	220	68
DEC											
14...	1345	13	610	8.7	1.0	14.8	35	K10	1000	260	78
JAN											
11...	1130	19	525	7.5	.0	12.5	31	340	K8100	220	68
FEB											
07...	1400	12	585	7.3	.5	12.1	23	K190	420	230	71
MAR											
10...	1200	23	585	7.9	1.0	12.8	29	200	1400	240	72
APR											
06...	1120	50	405	8.1	5.0	12.2	48	K1000	K8100	140	41
MAY											
03...	1100	24	598	8.1	10.0	11.2	38	K7300	14000	230	68
JUN											
02...	1045	22	562	7.9	13.5	7.6	39	1400	35000	250	76
JUL											
25...	1400	32	555	7.7	23.0	8.2	45	1400	K8200	210	61
AUG											
23...	1230	24	526	7.6	24.5	6.0	50	12000	24000	220	65
SEP											
21...	0950	12	588	8.2	11.0	9.5	30	730	5900	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, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
21...	14	35	7.0	60	2.9	.160	1.9	2.10	5.0	.530	4.3
NOV											
18...	13	46	8.1	26	2.6	<.060	--	1.80	4.4	.470	6.6
DEC											
14...	15	44	9.2	25	2.5	.120	1.4	1.50	4.0	.340	5.0
JAN											
11...	13	--	13	30	2.7	.210	.99	1.20	3.9	.410	6.3
FEB											
07...	13	43	9.4	16	2.6	.160	.94	1.10	3.7	.340	3.5
MAR											
10...	14	46	8.3	36	3.1	.260	1.4	1.70	4.8	.490	6.5
APR											
06...	9.9	32	6.1	111	2.7	.540	2.5	3.00	5.7	.790	15
MAY											
03...	14	48	13	194	3.3	.150	1.9	2.00	5.3	.710	9.6
JUN											
02...	15	44	8.7	214	3.4	.370	1.4	1.80	5.2	.770	43
JUL											
25...	14	49	8.8	144	3.5	.110	2.3	2.40	5.9	.770	11
AUG											
23...	14	42	9.5	343	2.1	.120	2.3	2.40	4.5	.720	13
SEP											
21...	9.2	53	7.8	90	1.6	.090	1.2	1.30	2.9	.400	5.4

06880000 LINCOLN CREEK NEAR SEWARD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 18...	1115	0	26	.8	9.8	237	.30	34	348	.47
FEB 07...	1400	0	27	.8	8.0	244	.30	31	349	.47
MAY 03...	1100	2	31	.9	10	226	.30	33	353	.46
AUG 23...	1230	0	27	.8	9.6	224	.50	29	331	.45

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	MITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P) (00666)	ARSENIC TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 18...	12.0	2.6	.320	6	200	0	1	<10	0	1500
FEB 07...	11.3	2.7	.260	--	--	0	--	--	--	--
MAY 03...	22.9	3.0	.390	8	100	0	<1	<10	10	4200
AUG 23...	21.5	1.9	.310	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 18...	1500	20	0	330	40	290	.0	7	<0	40
FEB 07...	--	20	--	--	--	350	--	--	--	--
MAY 03...	4200	20	0	520	260	260	.0	7	<0	30
AUG 23...	--	20	--	--	--	130	--	--	--	--

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 upstream from Plum Creek and 1.4 mi downstream from Lincoln Creek.

DRAINAGE AREA.--1,101 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 1919: Drainage area. WDR NE-80-1: 1979(M).

GAGE.--Water-stage recorder. Datum of gage is 1,415.16 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 19, 1969, at site 1.2 mi upstream at datum 6.33 ft 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.--30 years, 117 ft³/s, 84,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s June 18, 1957, gage height, 22.34 ft, site and datum then in use; maximum gage height, 22.83 ft June 16, 1967, site and datum then in use, from stage readings during 1967 flood, gage height at current site and datum was approximately 25.66 ft; no flow July 30, 31, 1955, result of irrigation pumping.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	1200	2860	19.27	June 27	1400	1140	14.57
June 14	2100	2430	19.02	June 29	2300	1540	16.67
June 19	1000	*5400	24.09				

Minimum daily discharge, 15 ft³/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	48	69	45	60	174	628	117	54	262	59	24
2	116	49	84	45	50	149	512	171	54	213	54	22
3	227	47	82	46	45	128	343	172	56	230	51	20
4	222	45	75	47	43	118	234	148	56	176	50	20
5	150	42	63	48	40	328	194	129	76	145	50	18
6	90	39	57	50	39	267	189	139	67	129	49	16
7	70	38	51	52	38	207	171	273	56	114	42	16
8	200	37	43	54	38	158	156	292	58	104	45	16
9	270	37	38	58	37	124	151	189	54	95	47	15
10	250	39	41	64	38	90	174	142	304	88	51	16
11	170	49	48	80	37	75	172	100	164	85	50	16
12	190	62	41	72	37	74	182	88	118	72	45	16
13	150	104	41	68	40	73	171	84	213	68	46	16
14	130	170	39	88	90	72	173	109	1930	69	46	16
15	110	108	37	98	200	284	190	104	1930	63	45	16
16	90	69	36	90	1030	284	249	94	865	64	44	16
17	80	60	37	70	1610	172	304	111	758	66	42	16
18	70	50	37	60	1780	149	249	182	3940	69	43	16
19	62	48	38	58	1990	131	215	259	5300	73	41	17
20	54	51	39	54	2570	112	186	155	4410	64	42	17
21	52	49	42	50	2820	99	154	124	3200	57	42	19
22	54	48	45	47	2360	94	143	105	2270	54	40	19
23	52	46	48	43	1020	85	134	104	1970	58	46	20
24	47	37	57	40	548	83	121	103	776	54	37	23
25	45	35	68	37	398	83	106	90	303	59	33	20
26	44	36	56	34	274	94	94	89	223	59	30	19
27	44	35	48	32	211	100	88	79	807	56	27	18
28	45	44	42	39	192	103	82	70	592	58	25	27
29	46	52	40	100	---	132	78	63	1220	68	31	148
30	51	59	40	120	---	254	79	58	888	70	30	66
31	49	---	44	82	---	670	---	54	---	64	27	---
TOTAL	3320	1633	1526	1871	17635	4966	5922	3997	32712	2906	1310	724
MEAN	107	54.4	49.2	60.4	630	160	197	129	1090	93.7	42.3	24.1
MAX	270	170	84	120	2820	670	628	292	5300	262	59	148
MIN	44	35	36	32	37	72	78	54	54	54	25	15
AC-FT	6590	3240	3030	3710	34980	9850	11750	7930	64880	5760	2600	1440
CAL YR 1982	TOTAL	93537	MEAN 256	MAX 6280	MIN 12	AC-FT 185500						
WTR YR 1983	TOTAL	78522	MEAN 215	MAX 5300	MIN 15	AC-FT 155700						

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (000061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (000095)	PH (STAND- ARD UNITS) (000400)	TEMPER- ATURE (DEG C) (000010)	OXYGEN, DIS- SOLVED (MG/L) (000300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (000340)	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) (000900)	CALCIUM DIS- SOLVED (MG/L AS CA) (000915)
OCT											
21...	1130	52	696	7.8	7.0	10.6	22	K500	K3600	290	83
NOV											
18...	1315	48	710	8.1	2.5	13.6	31	1600	5600	320	90
DEC											
14...	1135	39	860	8.3	.5	19.8	36	K29	K2100	390	110
JAN											
11...	1000	79	890	7.6	.0	13.8	25	1300	6100	350	98
FEB											
07...	1145	38	750	7.5	.5	12.4	31	360	K240	280	81
MAR											
10...	1330	88	764	8.1	2.0	12.0	36	600	12000	350	98
APR											
06...	1300	244	575	8.1	5.0	12.1	43	K2200	88000	220	60
MAY											
03...	1350	176	708	8.2	12.0	11.3	37	K7500	6200	290	80
JUN											
02...	1300	55	701	8.2	15.0	9.3	47	670	4500	320	90
JUL											
25...	1030	61	590	7.8	22.0	7.3	40	1700	K8600	240	69
AUG											
23...	1100	46	591	7.8	24.5	5.3	45	K1900	12000	250	71
SEP											
21...	1130	20	662	8.1	12.5	10.0	34	1600	8200	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) (000925)	SULFATE DIS- SOLVED (MG/L AS SO4) (000945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (000940)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) (000530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (000630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (000610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (000605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (000625)	NITRO- GEN, TOTAL (MG/L AS N) (000600)	PHOS- PHORUS, TOTAL (MG/L AS P) (000665)	CARBON, ORGANIC TOTAL (MG/L AS C) (000680)
OCT											
21...	21	81	8.8	48	2.2	.250	2.4	2.60	4.8	.510	9.2
NOV											
18...	23	150	9.5	13	1.8	.090	1.8	1.90	3.7	.390	8.0
DEC											
14...	28	120	10	6	1.6	.060	1.4	1.50	3.1	.360	6.1
JAN											
11...	25	41	8.3	6	2.4	.370	1.0	1.40	3.8	.330	6.8
FEB											
07...	19	92	11	1	2.4	.480	1.8	2.30	4.7	.360	5.6
MAR											
10...	25	120	12	192	2.0	.490	2.1	2.60	4.6	.480	11
APR											
06...	17	87	11	202	2.6	.570	2.5	3.10	5.7	.680	13
MAY											
03...	23	120	11	164	1.7	.110	1.7	1.80	3.5	.490	13
JUN											
02...	23	90	21	190	1.7	.060	2.6	2.70	4.4	.620	10
JUL											
25...	16	67	8.9	178	2.9	.120	2.3	2.40	5.3	.610	8.8
AUG											
23...	17	64	11	201	1.8	.170	2.0	2.20	4.0	.570	11
SEP											
21...	17	72	10	108	1.4	.070	1.5	1.60	3.0	.390	8.2

KANSAS RIVER BASIN

06880500 BIG BLUE RIVER AT SEWARD, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY LAH (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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 18...	1315	71	38	1.0	13	249	.30	23	497	.67
FEB 07...	1145	0	34	.9	8.7	281	.30	24	439	.60
MAY 03...	1350	50	40	1.1	10	245	.30	14	446	.61
AUG 23...	1100	12	32	.9	11	236	.50	25	373	.51

DATE	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 TOTAL (UG/L AS AS) (01002)	RADIUM, TOTAL RECOV- ERABLE (UG/L AS RA) (01007)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 18...	64.9	1.8	.290	5	100	0	1	<10	0	1000
FEB 07...	45.0	2.4	.270	--	--	0	--	--	--	--
MAY 03...	212	1.5	.250	6	100	0	1	10	10	6100
AUG 23...	46.4	1.7	.270	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 18...	960	40	10	390	70	320	.0	4	<0	30
FEB 07...	--	20	--	--	--	480	--	--	--	--
MAY 03...	6100	0	0	420	110	310	<.0	4	<0	40
AUG 23...	--	10	--	--	--	280	--	--	--	--

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE

LOCATION.--Lat 40°43'52", long 97°10'38", in SW1/4SW1/4 sec.23, T.9 N., R.2 E., Seward County, Hydrologic Unit 10270203, on right bank 60 ft downstream from bridge on county road, 6.2 mi northwest of Dorchester, and 19 mi upstream from mouth.

DRAINAGE AREA.--1,206 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1958 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,403.48 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1970, at site 60 ft 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.--25 years, 169 ft³/s, 122,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s Mar. 20, 1969, gage height, 20.34 ft; minimum daily, 12 ft³/s Dec. 31, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1950, reached a stage of 24.8 ft, present datum, from floodmarks, discharge, 49,400 ft³/s, from contracted-opening and flow-over-road measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 14	1730	2400	14.18	June 30	2230	1690	11.62
June 19	0430	*4600	17.80				

Minimum daily discharge, 34 ft³/s Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	49	51	42	90	101	363	98	97	1200	137	64
2	115	49	50	43	110	95	275	105	96	522	120	65
3	191	47	49	44	90	89	230	107	94	352	116	65
4	356	47	48	46	80	86	187	285	91	255	113	67
5	505	49	49	48	76	94	154	210	92	196	120	65
6	414	49	48	49	72	93	132	151	91	160	140	66
7	196	48	48	45	68	108	117	405	92	140	140	68
8	168	48	47	45	66	86	107	336	86	124	137	63
9	172	48	47	46	62	80	102	314	84	114	136	55
10	284	48	47	49	60	78	100	422	83	103	119	49
11	192	50	60	52	58	77	94	381	85	97	116	43
12	139	50	58	56	56	76	99	205	86	94	118	40
13	128	56	62	58	56	74	94	164	214	91	120	38
14	112	54	54	62	70	73	102	214	1890	95	129	35
15	94	51	50	70	105	218	119	139	646	101	126	34
16	80	50	54	66	681	370	144	124	318	113	129	34
17	71	49	75	60	1020	347	163	137	687	124	118	35
18	64	49	48	56	1450	252	148	209	2730	136	113	35
19	57	51	48	62	1210	261	127	338	4160	127	114	52
20	56	51	48	80	1100	182	113	554	2890	107	114	52
21	55	49	48	70	630	135	107	650	1690	109	129	43
22	55	48	47	60	356	117	102	552	1340	115	153	44
23	53	48	48	56	255	107	93	327	662	121	171	47
24	52	47	49	58	197	96	86	230	375	127	156	46
25	51	47	52	56	158	93	83	184	290	134	158	41
26	50	47	47	54	134	103	79	152	231	132	176	41
27	50	48	54	54	121	110	77	133	782	130	139	40
28	49	50	60	60	111	121	76	120	860	141	114	41
29	49	61	47	66	---	136	77	110	1210	150	94	331
30	49	51	40	68	---	235	76	104	1640	147	78	227
31	49	---	41	69	---	407	---	99	---	143	64	---
TOTAL	4039	1489	1574	1750	8542	4500	3826	7559	23692	5700	3907	1926
MEAN	130	49.6	50.8	56.5	305	145	128	244	790	184	126	64.2
MAX	505	61	75	80	1450	407	363	650	4160	1200	176	331
MIN	49	47	40	42	56	73	76	98	83	91	64	34
AC-FT	8010	2950	3120	3470	16940	8930	7590	14990	46990	11310	7750	3820

CAL YR 1982	TOTAL	100474	MEAN 275	MAX 5130	MIN 21	AC-FT 199300
WTR YR 1983	TOTAL	68504	MEAN 188	MAX 4160	MIN 34	AC-FT 135900

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
13...	1000	135	320	7.5	10.5	9.4	49	K8600	17000	120	36
NOV											
04...	1015	48	610	8.0	3.5	12.2	31	K150	K680	230	70
DEC											
13...	1120	62	620	8.1	.0	12.8	13	K100	1500	240	72
JAN											
04...	1100	48	640	7.9	.0	14.1	11	K25	1200	240	74
31...	1415	69	535	8.6	2.0	13.0	34	<100	25000	210	64
MAR											
03...	1230	89	500	7.8	12.0	10.6	36	K86	11000	180	54
29...	1000	276	470	7.8	5.5	11.3	78	K12000	K240000	170	49
APR											
26...	1400	80	585	8.2	17.0	9.5	29	250	11000	220	66
MAY											
24...	1030	232	254	7.4	17.5	6.9	100	K1500	11000	78	23
JUN											
21...	1055	1540	133	7.3	23.0	4.9	150	K33000	140000	31	8.9
JUL											
19...	1400	130	540	7.3	28.0	7.2	66	3000	29000	200	59
AUG											
22...	1600	181	490	8.2	28.0	6.9	55	4000	9000	200	60
SEP											
22...	1330	45	580	7.8	12.0	9.1	35	5500	14000	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, 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)	CARRON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
13...	8.1	31	10	262	1.4	.300	1.7	2.00	3.4	.860	15
NOV											
04...	13	55	17	15	1.2	.110	.99	1.10	2.3	.520	4.8
DEC											
13...	14	57	21	7	2.5	.090	.51	.60	3.1	.680	3.2
JAN											
04...	14	59	30	6	2.9	.430	1.3	1.70	4.6	.870	2.8
31...	12	50	17	18	2.5	.730	1.7	2.40	4.9	.830	6.0
MAR											
03...	10	45	15	111	2.0	.670	1.5	2.20	4.2	.720	7.6
29...	11	50	14	348	2.6	.610	3.6	4.20	6.8	1.30	18
APR											
26...	13	58	18	190	2.6	.130	2.2	2.30	4.9	.850	9.3
MAY											
24...	5.1	20	6.9	1130	2.6	.640	4.1	4.70	7.3	.980	35
JUN											
21...	2.2	11	3.2	1780	2.2	.460	7.3	7.80	10	2.10	48
JUL											
19...	12	53	21	260	2.3	.790	3.2	4.00	6.3	.810	15
AUG											
22...	12	55	22	206	2.1	.020	2.5	2.50	4.6	.780	14
SEP											
22...	12	59	24	134	2.1	.130	1.5	1.60	3.7	.820	7.8

06880800 WEST FORK BIG BLUE RIVER NEAR DORCHESTER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	SODIUM, DTS- 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)	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)
NOV 04...	1015	0	30	.9	8.4	229	.30	29	360	.49
JAN 31...	1415	9	29	.9	9.6	201	.30	28	331	.45
MAY 24...	1030	6	11	.6	11	73	.30	17	138	.19
AUG 22...	1600	6	29	.9	12	194	.40	24	331	.45

DATE	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 TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	RORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHPO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 04...	46.4	1.2	.460	6	<100	0	<1	<10	0	480
JAN 31...	61.3	2.5	.700	--	--	0	--	--	--	--
MAY 24...	86.6	2.5	.350	9	700	0	<1	30	40	39000
AUG 22...	162	2.1	.470	--	--	0	--	--	--	--

DATE	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)	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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 04...	420	60	<0	190	30	160	.0	4	0	10
JAN 31...	--	30	--	--	--	230	--	--	--	--
MAY 24...	39000	160	0	660	650	11	.0	2	<0	220
AUG 22...	--	10	--	--	--	28	--	--	--	--

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 county road bridge, 1.8 mi south of Missouri Pacific Railroad station in Crete, 3.3 mi downstream from Walnut Creek, and 3.6 mi upstream from Squaw Creek.

DRAINAGE AREA.--2,716 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1945 to current year. Prior to Oct. 1, 1953, discharge published only for stages above 12.0 ft because of variable backwater from dam downstream until 1952 and diurnal fluctuation from powerplant upstream in 1952-53.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,311.7 ft 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.--30 years (1953-83), 356 ft³/s, 257,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft³/s July 10, 1950, gage height, 28.74 ft; maximum gage height, 29.80 ft June 16, 1967; minimum daily discharge, 6.0 ft³/s Aug. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 19	0700	3790	18.15	June 20	1100	*12800	25.90
June 15	unknown	5150	a20.30	June 30	1800	3740	18.07

a From reconstructed gage-height trace.

Minimum daily discharge, 80 ft³/s Dec. 28, Sept. 14, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	133	139	125	348	433	2090	598	253	2920	226	114
2	335	131	144	130	237	393	1590	669	249	1360	206	109
3	355	129	151	130	220	352	1220	515	249	848	180	105
4	493	125	153	134	200	328	865	462	248	721	168	105
5	680	124	147	135	190	510	660	608	259	576	163	105
6	716	124	141	135	180	636	584	482	271	476	171	103
7	590	122	135	135	180	484	547	482	268	424	196	98
8	377	120	131	140	170	420	477	961	247	382	189	102
9	317	117	110	145	160	338	438	764	233	348	180	95
10	328	119	100	150	150	294	440	671	226	313	174	91
11	937	131	92	180	145	258	465	728	374	288	161	87
12	580	135	92	220	145	237	449	596	372	263	162	90
13	427	134	134	206	150	232	488	421	347	242	155	82
14	359	144	135	200	200	230	468	405	1860	219	153	80
15	299	202	126	210	681	488	503	405	4690	223	174	85
16	253	186	126	240	1730	1150	592	377	3180	216	166	80
17	224	159	121	250	2780	939	722	396	1460	219	157	81
18	203	141	129	190	3080	759	731	613	2410	233	146	81
19	188	138	128	160	3570	607	616	839	8850	235	132	83
20	176	133	124	150	3650	559	520	899	12600	226	132	103
21	171	133	133	150	3710	445	454	929	10100	197	152	103
22	170	134	133	155	3450	374	409	919	6860	184	214	94
23	168	132	133	160	2880	340	380	750	4410	185	222	93
24	165	127	134	150	1380	315	352	571	2860	193	315	89
25	160	123	146	140	914	302	321	471	1350	207	248	90
26	155	124	133	120	706	332	299	405	856	207	220	89
27	148	108	100	130	555	371	276	368	1110	206	215	87
28	147	137	80	140	475	372	261	335	2360	201	186	90
29	138	128	90	170	---	432	251	301	2400	212	164	151
30	136	133	105	400	---	614	245	277	3590	224	145	1350
31	134	---	120	470	---	1840	---	262	---	227	132	---
TOTAL	9681	4026	3865	5550	32236	15384	17713	17479	74542	12975	5604	4115
MEAN	312	134	125	179	1151	496	590	564	2485	419	181	137
MAX	937	202	153	470	3710	1840	2090	961	12600	2920	315	1350
MIN	134	108	80	120	145	230	245	262	226	184	132	80
AC-FT	19200	7990	7670	11010	63940	30510	35130	34670	147900	25740	11120	8160
CAL YR 1982	TOTAL	242902	MEAN 665	MAX 7680	MIN 56	AC-FT 481800						
WTR YR 1983	TOTAL	203170	MEAN 557	MAX 12600	MIN 80	AC-FT 403000						

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, 30.0°C Aug. 17, 18; minimum, 0.5°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
13...	1100	430	295	7.6	11.0	8.8	73	K10000	23000	100	28
NOV											
04...	1315	125	770	7.9	4.5	11.7	--	14000	22000	290	87
DEC											
13...	1430	131	790	8.6	1.5	15.1	--	15000	9500	320	92
JAN											
04...	1500	131	730	8.0	2.0	14.5	18	21000	8000	290	86
31...	1100	471	340	8.4	.5	13.2	78	9700	K210000	120	34
MAR											
03...	1045	352	560	8.0	9.0	11.2	40	3300	50000	210	61
29...	1320	434	610	8.0	4.5	12.6	45	3100	130000	210	61
APR											
26...	1230	300	665	8.1	15.5	8.3	28	3000	12000	250	72
MAY											
24...	1340	556	408	7.7	18.0	7.6	100	2000	9500	140	40
JUN											
21...	1255	11100	130	7.3	22.5	5.5	140	K30000	140000	34	10
JUL											
19...	1000	227	630	7.8	25.0	6.0	47	700	4800	250	74
AUG											
22...	1130	224	500	8.1	26.0	6.2	52	K31000	K100000	210	61
SEP											
22...	1000	95	650	8.2	12.5	9.4	35	K27000	15000	230	68

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, SUS- PENDE (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
13...	7.4	32	8.9	--	1.4	.400	2.0	2.40	3.8	1.20	21
NOV											
04...	18	87	17	30	1.5	.220	1.7	1.90	3.4	.720	6.6
DEC											
13...	21	95	20	9	1.7	.250	1.4	1.60	3.3	.580	6.8
JAN											
04...	19	84	20	11	2.5	.300	1.2	1.50	4.0	.550	4.8
31...	8.1	42	8.4	116	1.7	.860	3.3	4.20	5.9	.750	18
MAR											
03...	14	64	11	123	2.0	.690	2.0	2.70	4.7	.630	9.9
29...	15	81	12	206	2.3	.270	1.8	2.10	4.4	.700	14
APR											
26...	18	86	16	134	2.6	.190	1.9	2.10	4.7	.690	8.7
MAY											
24...	9.7	48	7.9	992	2.7	.600	4.4	5.00	7.7	1.60	32
JUN											
21...	2.3	12	2.4	1330	2.0	.540	4.0	4.50	6.5	1.80	40
JUL											
19...	15	68	19	225	2.3	.100	2.4	2.50	4.8	.470	--
AUG											
22...	13	58	22	326	2.1	.120	2.5	2.60	4.7	.790	6.5
SEP											
22...	15	72	20	67	1.4	.110	1.7	1.80	3.2	.570	7.3

KANSAS RIVER BASIN

06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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 LAH (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)
NOV 04...	1315	11	39	1.0	9.9	281	.30	29	456	.62
JAN 31...	1100	5	15	.6	11	113	.20	13	200	.27
MAY 24...	1340	16	19	.7	11	124	.30	15	225	.31
AUG 22...	1130	8	30	.9	10	198	.40	22	335	.46

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 04...	154	1.5	.480	6	100	0	<1	<10	0	1200
JAN 31...	254	1.7	.450	--	--	0	--	--	--	--
MAY 24...	338	2.6	.370	9	500	0	<1	30	40	35000
AUG 22...	203	2.1	.470	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 04...	1200	30	<0	270	70	200	.0	4	<0	10
JAN 31...	--	210	--	--	--	160	--	--	--	--
MAY 24...	35000	80	0	740	730	8	.0	2	<0	200
AUG 22...	--	10	--	--	--	75	--	--	--	--

06881000 BIG BLUE RIVER NEAR CRETE, NE--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	11.5	10.5	6.0	4.0	1.5	1.0	.5	.5	8.0	7.0
2	---	---	11.5	11.0	7.5	6.0	1.5	1.0	.5	.5	9.5	7.5
3	---	---	11.0	7.0	7.5	5.5	1.5	1.0	1.0	.5	11.5	9.0
4	---	---	7.0	4.5	5.5	4.5	2.0	1.5	1.0	.5	11.5	10.5
5	---	---	4.5	3.5	5.0	4.5	2.0	1.0	1.0	.5	12.0	11.5
6	---	---	6.0	4.0	4.5	3.0	2.5	1.5	1.0	1.0	12.0	12.0
7	---	---	7.0	6.0	4.0	2.5	2.0	1.5	1.0	1.0	12.0	9.5
8	---	---	7.0	7.0	2.5	1.0	2.0	1.5	2.0	1.0	9.5	7.0
9	---	---	8.0	6.5	1.5	.5	1.5	1.5	2.0	1.0	7.0	4.5
10	---	---	8.0	8.0	2.0	1.0	1.5	1.0	1.5	1.0	5.5	3.5
11	---	---	9.5	8.0	2.0	.5	1.5	1.0	2.0	1.5	5.5	3.5
12	12.5	12.5	9.5	5.0	1.0	.5	1.5	1.0	2.0	1.0	7.0	5.0
13	12.0	12.0	5.0	2.0	2.0	1.0	2.0	1.5	3.0	1.0	8.0	7.0
14	11.5	10.5	2.5	2.0	1.5	1.0	1.5	1.0	2.0	1.0	8.5	7.5
15	12.5	11.5	2.5	1.0	2.0	1.0	1.5	1.0	1.0	1.0	8.5	7.5
16	12.5	11.5	2.5	1.5	2.0	1.0	1.0	1.0	1.0	.5	7.5	6.0
17	12.5	12.0	3.0	2.0	2.5	1.0	1.0	1.0	1.0	.5	6.0	5.0
18	13.0	12.5	4.0	3.0	2.0	1.5	1.0	1.0	1.0	1.0	5.0	4.5
19	13.0	12.0	7.5	4.0	2.0	1.5	1.0	1.0	1.5	1.0	4.5	4.0
20	12.0	9.0	8.0	7.0	2.0	1.5	1.5	1.0	1.5	1.5	4.0	3.0
21	9.5	8.5	7.5	6.0	2.5	1.5	1.5	1.0	1.5	1.5	4.5	2.5
22	9.5	8.5	6.5	5.5	2.0	1.5	1.5	1.0	2.0	1.5	5.0	3.5
23	9.5	9.0	5.5	2.5	3.0	2.0	2.0	1.0	3.0	2.0	5.5	5.0
24	10.5	9.0	2.5	1.0	3.5	3.0	1.5	1.5	3.5	3.0	6.0	5.5
25	10.5	10.0	2.0	1.0	3.5	1.5	1.5	1.0	3.5	3.5	6.0	4.0
26	11.0	10.5	2.0	2.0	1.5	.5	2.0	1.0	5.0	5.0	4.0	3.0
27	12.0	10.5	2.0	.5	1.0	1.0	2.0	1.5	6.0	5.5	4.0	2.5
28	12.0	12.0	2.0	1.0	1.0	1.0	2.0	1.5	7.0	---	6.0	3.5
29	12.0	10.0	3.0	2.0	1.0	1.0	2.0	1.0	---	---	6.0	4.5
30	11.5	10.0	4.0	2.5	1.0	1.0	1.0	1.0	---	---	7.5	5.0
31	11.5	10.5	---	---	1.0	1.0	1.0	.5	---	---	7.5	6.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	7.0	17.0	14.5	18.0	16.0	25.0	23.5	28.0	25.5	27.0	24.0
2	7.0	6.5	14.5	12.5	18.5	15.5	26.5	25.0	28.0	26.0	26.5	23.5
3	6.5	5.5	15.0	11.5	21.0	16.0	27.5	25.5	28.0	25.0	26.0	23.0
4	6.0	5.5	17.0	13.5	21.5	19.0	27.5	24.5	29.0	26.5	25.5	22.5
5	5.5	5.0	17.5	15.0	21.0	18.0	25.5	23.5	29.0	26.5	26.0	23.5
6	5.0	4.5	19.0	16.5	19.0	16.0	24.5	22.5	28.0	26.0	26.0	23.0
7	7.0	4.5	19.0	16.0	21.0	17.5	24.0	22.0	28.5	25.0	24.0	20.0
8	7.0	6.0	17.5	16.0	22.5	19.0	24.5	22.5	29.0	26.0	26.0	22.5
9	7.0	6.0	17.0	15.5	24.0	20.0	25.0	22.5	29.0	26.5	26.0	23.5
10	9.0	6.0	17.0	16.0	24.5	21.5	25.0	22.5	29.5	26.5	26.0	23.0
11	10.0	8.0	18.0	17.0	21.5	20.0	25.0	23.0	29.5	26.5	23.0	19.5
12	10.5	9.0	18.0	18.0	21.0	20.0	25.5	22.5	28.0	24.5	21.5	19.5
13	10.5	7.0	18.0	16.5	20.0	19.5	26.0	24.0	27.0	24.5	21.0	17.5
14	7.5	5.0	17.0	15.0	19.5	18.5	26.0	24.0	27.5	24.5	19.0	17.5
15	8.0	5.5	16.0	13.5	19.5	19.0	25.0	22.5	29.0	25.5	20.0	17.0
16	9.0	7.0	17.0	14.5	20.0	19.5	25.0	23.5	29.5	27.0	20.0	17.0
17	9.0	7.5	17.0	13.5	22.0	22.0	26.0	22.5	30.0	27.0	22.0	18.0
18	9.5	8.0	13.5	12.5	22.0	21.0	27.5	24.5	30.0	27.5	22.0	19.5
19	9.5	8.5	13.5	12.5	21.0	20.5	28.0	25.0	29.5	26.5	22.5	19.0
20	9.5	8.5	13.5	13.0	22.0	21.0	28.0	25.5	29.0	25.0	21.5	16.0
21	10.5	9.5	13.5	13.5	23.5	23.5	28.0	25.5	28.0	24.0	16.0	13.0
22	11.5	10.5	15.5	13.5	24.0	23.5	28.5	25.5	28.0	26.0	14.5	13.0
23	13.5	11.0	17.0	15.5	25.0	24.0	28.5	26.0	28.0	25.5	14.0	12.0
24	15.5	11.5	20.0	16.5	26.0	25.0	27.0	23.5	28.0	24.5	15.0	12.5
25	16.5	13.5	20.0	17.5	26.0	25.0	25.0	21.5	28.5	26.0	17.5	15.0
26	18.0	15.5	20.5	17.5	26.0	24.5	26.0	23.0	29.0	26.5	18.5	16.0
27	18.0	15.0	22.5	19.5	25.0	23.5	27.5	24.5	29.0	26.5	19.5	17.0
28	16.0	13.5	22.5	20.5	24.0	23.0	28.0	26.0	28.0	25.0	19.5	18.5
29	16.0	15.0	22.5	19.5	23.0	22.5	27.5	25.0	28.0	26.0	19.5	18.5
30	17.0	14.0	21.0	18.0	23.5	22.5	28.5	26.0	27.5	25.5	19.5	18.0
31	---	---	19.0	16.5	---	---	28.5	25.0	27.0	25.0	---	---

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 west of Wilber.

DRAINAGE AREA.--460 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

REVISED RECORDS.--WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,322.00 ft National Geodetic Vertical Datum of 1929. Prior to July 10, 1970, at site 0.2 mile downstream at same datum.

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

AVERAGE DISCHARGE.--24 years, 81.0 ft³/s, 58,680 acre-ft/yr; median of yearly mean discharges, 64 ft³/s, 46,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s Mar. 28, 1960, gage height, 14.92 ft site then in use; maximum gage height, 17.92 ft Oct. 12, 1973, from high-water mark; no flow Sept. 20, 21, 24, 1976.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 16	1630	2080	13.45
June 20	0330	*2860	14.53

Minimum daily discharge, 2.2 ft³/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	6.5	14	8.4	150	31	299	206	29	832	16	9.4
2	15	7.7	15	8.2	110	28	164	529	29	507	16	7.8
3	58	7.8	12	8.6	54	27	106	338	29	183	15	7.0
4	64	6.5	12	8.8	35	26	76	154	28	94	15	4.5
5	33	7.1	10	9.0	30	31	59	94	28	66	15	4.6
6	27	8.0	9.6	10	35	42	53	68	28	54	15	4.3
7	42	11	9.1	11	30	41	51	67	28	47	15	3.8
8	57	9.4	6.5	12	26	30	45	174	26	42	15	3.3
9	34	9.4	6.0	13	23	27	34	240	25	39	15	2.2
10	145	9.9	9.1	15	20	23	27	219	25	35	15	3.4
11	109	12	8.0	15	19	21	44	125	25	32	12	3.0
12	90	11	6.8	17	18	20	43	77	26	30	12	2.6
13	53	11	8.6	20	17	19	52	61	87	30	12	2.9
14	35	12	8.3	19	20	19	55	55	477	31	12	2.7
15	23	10	8.9	16	190	19	54	62	1020	29	12	2.7
16	16	9.9	9.6	14	508	291	81	65	1730	29	12	4.1
17	12	9.4	7.7	12	636	191	125	86	413	30	13	3.1
18	9.9	10	7.4	11	580	96	106	207	1180	29	13	15
19	7.4	11	9.1	10	454	63	83	296	2040	27	12	19
20	7.1	10	9.6	10	333	48	63	321	2710	25	10	12
21	6.0	10	9.1	11	202	41	50	271	2370	25	9.1	7.3
22	6.3	10	9.4	11	121	36	43	159	811	22	22	7.2
23	5.8	9.4	11	12	89	33	37	86	168	22	30	6.5
24	7.1	8.0	11	13	70	32	34	61	108	22	279	7.2
25	7.1	7.4	11	11	54	31	31	73	83	22	93	9.0
26	7.7	7.7	9.0	11	45	38	30	66	69	23	51	6.0
27	5.4	6.3	10	11	38	65	28	44	64	21	33	4.5
28	4.5	12	12	12	34	98	27	42	99	20	24	3.6
29	4.9	13	10	75	---	129	26	34	93	20	22	35
30	5.8	14	9.0	300	---	226	26	31	276	20	17	912
31	10	---	8.0	200	---	433	---	30	---	17	13	---
TOTAL	916.3	287.4	296.8	915.0	3941	2255	1952	4341	14124	2425	865.1	1115.7
MEAN	29.6	9.58	9.57	29.5	141	72.7	65.1	140	471	78.2	27.9	37.2
MAX	145	14	15	300	636	433	299	529	2710	832	279	912
MIN	4.5	6.3	6.0	8.2	17	19	26	30	25	17	9.1	2.2
AC-FT	1820	570	589	1810	7820	4470	3870	8610	28010	4810	1720	2210

CAL YR 1982 TOTAL 59618.6 MEAN 163 MAX 3760 MIN 3.5 AC-FT 118300
WTR YR 1983 TOTAL 33434.3 MEAN 91.6 MAX 2710 MIN 2.2 AC-FT 66320

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 1982 TO SEPTEMBER 1983

DATE	TIME	STEAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
13...	1145	52	160	7.4	11.0	8.9	110	K13000	25000	36	10
NOV											
04...	1430	5.7	790	7.7	5.5	--	49	K360	1900	230	67
DEC											
06...	1400	9.4	670	8.1	3.0	13.5	12	K10	92	230	70
JAN											
04...	1400	8.8	715	7.8	.5	15.7	10	K5	92	250	76
31...	1300	194	225	8.1	.5	11.4	83	2100	K100000	56	16
MAR											
03...	0945	47	530	8.1	8.5	10.4	43	K93	2000	190	58
29...	1230	129	385	8.0	3.5	12.7	70	4200	100000	130	37
APR											
26...	1100	30	625	8.2	15.0	8.5	29	K190	2400	220	66
MAY											
24...	1220	60	348	7.6	18.0	8.1	76	K1600	4100	110	31
JUN											
21...	1200	2260	--	7.2	22.5	5.7	120	K17000	77000	20	5.8
JUL											
19...	1230	27	550	7.5	26.0	7.5	35	830	2600	190	57
AUG											
22...	1400	8.2	560	8.1	26.0	7.8	37	K560	K1500	190	55
SEP											
22...	1145	6.9	740	7.9	12.0	8.2	43	770	1800	170	50

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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
13...	2.7	15	10	855	1.4	.640	8.7	9.30	11	1.50	41
NOV											
04...	15	61	65	35	.40	.120	.98	1.10	1.5	.680	11
DEC											
06...	14	58	43	8	.30	.060	1.1	1.20	1.5	.310	4.5
JAN											
04...	15	69	44	3	.40	.060	.54	.60	1.0	.280	3.6
31...	3.9	24	6.0	218	1.5	.710	2.9	3.60	5.1	.630	23
MAR											
03...	12	58	26	98	1.0	.490	2.0	2.50	3.5	.490	7.8
29...	8.9	53	11	368	1.1	.420	3.5	3.90	5.0	.740	21
APR											
26...	14	75	29	136	.80	.110	1.5	1.60	2.4	.550	8.1
MAY											
24...	7.3	37	16	556	2.1	.550	2.6	3.10	5.2	.730	26
JUN											
21...	1.4	13	2.3	1110	1.6	.500	5.9	6.40	8.0	.680	42
JUL											
19...	11	52	31	91	.70	.110	1.3	1.40	2.1	1.10	10
AUG											
22...	12	52	49	52	.55	.030	1.7	1.70	2.3	.480	12
SEP											
22...	12	63	75	38	.50	.070	1.7	1.80	2.3	.470	9.8

KANSAS RIVER BASIN

06881200 TURKEY CREEK NEAR WILBER, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY LAB (MG/L AS CAC03) (90410)	FLUC- TIDE, 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)
NOV 04...	1430	10	63	1.9	11	219	.30	30	444	.60
JAN 31...	1300	4	7.1	.4	10	52	.20	10	109	.15
MAY 24...	1220	11	19	.8	12	97	.20	16	197	.27
AUG 22...	1400	0	50	1.7	10	188	.70	16	358	.49

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 04...	6.8	.42	.590	7	100	0	1	<10	0	1500
JAN 31...	57.0	1.5	.360	--	--	0	--	--	--	--
MAY 24...	31.9	1.9	.250	7	500	0	1	20	30	24000
AUG 22...	7.9	.56	.310	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) (01054)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 04...	1200	340	<0	420	20	400	.0	3	0	10
JAN 31...	--	320	--	--	--	110	--	--	--	--
MAY 24...	24000	100	0	500	480	17	.0	2	<0	150
AUG 22...	--	10	--	--	--	80	--	--	--	--

06881500 BIG BLUE RIVER AT BEATRICE, NE

LOCATION.--Lat 40°15'22", long 96°44'47", in SW1/4NW1/4 sec.3, T.3 N., R.6 E., Gage County, Hydrologic Unit 10270202, at left upstream corner of 6th Street and U.S. Highway 77 bridge in Beatrice, 0.7 mi south of the intersection of U.S. Highways 136 and 77, 1.2 mi downstream from Indian Creek, and 3.1 mi upstream from Bear Creek.

DRAINAGE AREA.--3,900 mi², of which about 3,830 mi² contributes directly to surface runoff.

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 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.--14 years (water years 1911-15, 1975-83), 638 ft³/s, 462,200 acre-ft/yr; median of yearly mean discharges, 552 ft³/s, 400,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s July 23, 1911, gage height, 26.00 ft; minimum daily, 20 ft³/s Aug. 15, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1902, 49,100 ft³/s Oct. 12, 1973, gage height, 33.02 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 20	0500	5160	11.59	June 22	1300	*14100	19.59
June 17	0230	5780	11.97	July 1	2400	4640	10.53

Minimum daily discharge, 90 ft³/s Dec. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	189	208	175	1000	610	2970	395	350	4180	290	192
2	204	192	215	180	660	548	2730	1570	340	4090	291	176
3	286	186	217	185	560	497	2030	2020	332	2210	285	163
4	432	184	219	185	480	464	1570	1320	327	1350	260	159
5	524	184	223	190	420	658	1210	795	349	1090	240	163
6	680	184	217	190	370	786	977	856	344	882	238	163
7	743	187	208	190	340	853	867	747	340	725	239	155
8	660	189	196	185	330	656	805	851	341	640	254	159
9	515	184	198	190	320	536	719	1300	326	570	259	152
10	559	186	202	200	290	430	714	1240	315	517	255	152
11	1150	195	120	230	290	373	714	1070	318	478	240	145
12	1100	196	100	300	280	333	1020	1050	420	431	233	148
13	746	194	170	280	280	305	920	853	642	390	222	137
14	508	187	160	270	371	293	872	699	1910	356	249	137
15	407	185	160	290	1180	288	943	787	3900	331	242	189
16	336	222	150	300	2980	420	965	761	5370	317	229	182
17	287	247	170	320	4540	1460	1120	699	5130	312	225	159
18	260	229	175	270	4790	1200	1250	1360	6030	312	216	153
19	238	212	180	220	4900	896	1130	1990	8390	308	205	152
20	226	207	183	200	5040	698	943	1840	9140	308	199	179
21	216	198	177	200	4520	608	785	1620	10900	300	226	160
22	216	196	178	200	4170	492	683	1520	13800	290	210	162
23	215	197	185	210	3830	406	648	1350	11200	267	425	161
24	217	192	198	210	3160	356	575	1100	6530	258	405	156
25	214	185	200	205	1730	345	518	833	3500	272	588	155
26	211	185	196	170	1210	602	508	698	1770	281	461	152
27	202	181	180	190	927	1010	481	609	1250	277	348	152
28	203	196	90	210	729	1200	426	516	1440	272	312	154
29	195	192	120	300	---	1560	404	457	2830	276	266	163
30	191	206	140	2100	---	1600	395	405	3080	285	242	1380
31	189	---	160	1600	---	2080	---	372	---	287	217	---
TOTAL	12329	5867	5495	10145	49697	22563	29892	31683	100914	22862	8571	6010
MEAN	398	196	177	327	1775	728	996	1022	3364	737	276	200
MAX	1150	247	223	2100	5040	2080	2970	2020	13800	4180	588	1380
MIN	189	181	90	170	280	288	395	372	315	258	199	137
AC-FT	24450	11640	10900	20120	98570	44750	59290	62840	200200	45350	17000	11920
CAL YR 1982	TOTAL	440894	MEAN	1208	MAX	10600	MIN	70	AC-FT	874500		
WTR YR 1983	TOTAL	306028	MEAN	838	MAX	13800	MIN	90	AC-FT	607000		

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HTGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
13...	1330	720	315	7.8	10.5	8.8	110	K14000	52000	97	27
NOV											
09...	1200	184	790	7.6	8.5	14.1	31	K67	K190	280	83
DEC											
06...	1000	218	765	8.2	3.5	13.8	24	1700	200	270	80
JAN											
05...	1430	189	810	8.5	1.5	15.6	18	140	160	300	88
FEB											
09...	1600	315	648	8.2	.0	11.2	23	830	4600	210	62
MAR											
01...	1045	615	440	7.8	7.0	10.8	47	K500	13000	150	43
30...	1000	1670	405	7.6	5.0	12.0	56	2800	125000	130	37
APR											
28...	0840	442	663	8.2	12.5	9.9	26	2600	2400	240	70
MAY											
25...	1630	807	395	7.8	20.5	8.1	100	K10000	13000	130	37
JUN											
22...	1500	11100	125	7.2	30.0	7.3	190	7700	160000	13	1.7
JUL											
19...	1315	346	700	7.9	29.0	9.0	50	K1700	11000	230	70
AUG											
15...	1100	238	650	7.8	26.5	7.4	30	930	5200	220	65
SEP											
13...	1345	138	720	8.9	21.0	12.7	50	320	4800	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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, 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											
13...	7.3	36	10	975	1.4	.830	14	15.0	16	1.50	35
NOV											
09...	17	82	53	13	2.0	<.060	--	1.40	3.4	.680	5.4
DEC											
06...	18	78	41	12	1.8	<.060	--	2.10	3.9	.510	5.1
JAN											
05...	20	86	45	9	2.7	.300	.80	1.10	3.8	.500	4.5
FEB											
09...	14	65	38	43	2.6	.700	1.2	1.90	4.5	.570	4.6
MAR											
01...	10	52	15	206	1.8	.810	2.3	3.10	4.9	.670	13
30...	9.4	45	14	634	2.2	.510	3.3	3.80	6.0	.880	24
APR											
28...	17	83	33	104	2.2	.140	1.8	1.90	4.1	.630	6.3
MAY											
25...	9.1	43	19	1130	2.7	.150	1.6	1.70	4.4	1.60	37
JUN											
22...	2.2	18	2.7	2420	2.1	.710	9.0	9.70	12	2.70	61
JUL											
19...	14	66	47	86	1.8	.110	2.1	2.20	4.0	.360	7.8
AUG											
15...	14	63	47	123	2.5	.080	1.9	2.00	4.5	.740	8.5
SEP											
13...	15	68	65	95	.50	.060	2.6	2.70	3.2	.800	12

06881500 BIG BLUE RIVER AT BEATRICE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	HARD- NESS NONCAR- BONATE (MG/L AS CAC03) (95902)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SURP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY 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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
NOV 09...	1200	17	62	1.7	8.9	261	.40	27	490	.67
FEB 09...	1600	6	45	1.4	11	207	.30	23	383	.52
MAY 25...	1630	12	25	1.0	11	118	.30	16	231	.31
AUG 15...	1100	11	52	1.6	13	209	.40	23	403	.55

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
NOV 09...	243	2.0	.570	6	<100	0	<1	<10	0	650
FEB 09...	325	2.6	.490	--	--	0	--	--	--	--
MAY 25...	504	2.9	.400	8	600	0	<1	30	30	35000
AUG 15...	259	2.4	.560	--	--	0	--	--	--	--

DATE	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)	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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 09...	630	20	0	170	50	120	.0	4	<0	20
FEB 09...	--	50	--	--	--	92	--	--	--	--
MAY 25...	35000	70	10	780	780	3	.0	1	<0	150
AUG 15...	--	0	--	--	--	15	--	--	--	--

KANSAS RIVER BASIN

06882000 BIG BLUE RIVER AT BARNESTON, NE

LOCATION.--Lat 40°02'40"N, long 96°35'12"W, in NE1/4NW1/4 sec.24, T.1 N., R.7 E., Gage County, Hydrologic Unit 10270202, on right bank at right downstream end of bridge on State Highway 8, 0.6 mi southwest of Barneston, 1.3 mi upstream from Plum Creek, and 4.3 mi upstream from Nebraska-Kansas State line.

DRAINAGE AREA.--4,447 mi², of which about 4,370 mi² contributes directly to surface runoff.

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 National Geodetic Vertical Datum of 1929. Prior to June 9, 1941, water-stage recorder at site 0.3 mi downstream at datum 1.56 ft higher. June 9 to Nov. 17, 1941, nonrecording gage and Nov. 18, 1941, to Sept. 30, 1979, water-stage recorder at site 0.7 mi upstream at datum 2.0 ft higher.

REMARKS.--Records fair except those for winter period, which are poor. Low flow regulated by powerplant 0.7 mi upstream. No large tributaries between station and Nebraska-Kansas State line. Some pump diversions for irrigation above station. Natural flow of stream affected by ground-water withdrawals for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--51 years, 787 ft³/s, 570,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,700 ft³/s June 9, 1941, gage height, 34.3 ft; minimum daily, 1 ft³/s Nov. 30, 1945.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 18	1645	*17800	21.91
June 22	2200	13300	18.21

Minimum daily discharge, 111 ft³/s Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	296	229	270	1420	765	3620	580	488	3760	402	261
2	253	253	245	260	696	694	3530	1080	487	4140	328	245
3	173	213	249	270	489	642	2590	2340	480	2570	316	191
4	431	221	245	272	450	609	1980	1490	460	1510	312	111
5	530	209	194	263	450	1710	1580	1040	513	1190	275	112
6	683	212	299	254	460	1350	1420	972	536	1000	275	165
7	811	149	261	250	410	1220	1280	937	486	840	174	156
8	831	295	246	307	420	1020	1150	919	477	733	368	150
9	639	230	248	246	490	828	1070	1210	453	661	296	140
10	531	230	244	441	376	701	1160	1440	422	573	282	146
11	1120	154	235	460	376	615	1100	1170	489	580	186	144
12	1190	308	132	470	376	549	1480	1160	479	498	335	154
13	994	219	244	509	405	506	1770	1050	838	459	135	128
14	704	167	211	536	435	499	1330	957	2570	411	278	139
15	553	295	241	471	1180	477	1380	983	3480	409	396	187
16	460	240	223	440	3230	463	1310	1020	4540	273	278	190
17	376	280	222	420	6050	1280	1340	988	4890	345	278	151
18	381	307	171	436	5990	1450	1410	2390	13300	422	266	155
19	322	286	240	327	6100	1160	1370	3700	11300	359	257	163
20	283	266	297	308	6140	969	1220	2420	10300	356	122	177
21	272	179	231	380	5070	854	1050	1950	10600	340	228	167
22	256	289	239	370	4430	748	937	1860	12800	333	364	149
23	255	236	162	360	4060	640	854	1560	11400	324	276	274
24	188	230	207	380	3570	567	784	1320	7070	208	545	113
25	295	154	190	386	2260	545	736	1450	4130	384	559	113
26	255	202	225	419	1410	2480	689	980	2220	319	655	149
27	251	272	250	378	1120	3220	639	858	1420	309	436	161
28	256	159	140	290	912	2570	632	736	1330	309	408	150
29	259	270	150	577	---	3200	595	650	2870	314	427	219
30	280	270	170	2200	---	2600	564	589	3240	248	291	541
31	130	---	200	2690	---	2840	---	547	---	309	295	---
TOTAL	14170	7091	6840	15640	58775	37771	40570	40346	114068	24486	10043	5301
MEAN	457	236	221	505	2099	1218	1352	1301	3802	790	324	177
MAX	1190	308	299	2690	6140	3220	3620	3700	13300	4140	655	541
MIN	130	149	132	246	376	463	564	547	422	208	122	111
AC-FT	28110	14060	13570	31020	116600	74920	80470	80030	226300	48570	19920	10510

CAL YR 1982	TOTAL	493057	MEAN	1351	MAX	13200	MIN	110	AC-FT	978000
WTR YR 1983	TOTAL	375101	MEAN	1028	MAX	13300	MIN	111	AC-FT	744000

06882000 BIG BLUE RIVER AT BARNESTON, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-69, October 1980 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1966 to September 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C on several days in summer periods; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
28...	1300	279	685	8.0	12.0	10.4	21	K53	88	240	68
NOV											
09...	1430	258	775	7.7	8.0	13.3	38	K70	K170	280	83
DEC											
08...	1345	227	770	8.3	3.0	13.2	21	140	K80	290	83
JAN											
05...	1310	242	770	8.8	1.0	14.9	26	180	K320	310	91
FEB											
09...	1435	418	483	8.2	.0	14.4	37	2300	4700	180	50
MAR											
01...	1345	762	440	8.0	7.5	11.2	52	K430	12000	160	45
30...	1400	2780	375	7.9	5.0	13.0	81	3200	190000	130	36
APR											
28...	1100	707	681	8.3	14.5	10.0	24	K57	1000	240	68
MAY											
25...	1300	1580	290	7.7	16.0	8.9	130	77000	92000	100	30
JUN											
22...	1330	10600	135	7.4	23.5	6.6	130	K4700	150000	31	8.8
JUL											
19...	1030	380	705	8.0	27.5	9.1	31	K100	1900	250	72
AUG											
15...	1430	239	670	8.0	28.5	7.9	33	K120	2400	230	69
SEP											
13...	1230	121	720	8.8	23.5	9.8	33	K10	K870	230	67

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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, TOTAL (MG/L AS N) (00630)	NITRO- GEN, 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											
28...	16	67	45	49	2.6	.110	1.4	1.50	4.1	.710	5.6
NOV											
09...	18	82	46	17	1.8	<.060	--	1.50	3.3	.660	6.3
DEC											
08...	19	80	40	2	1.9	<.060	--	1.10	3.0	.560	4.8
JAN											
05...	21	91	33	16	2.1	<.060	--	2.00	4.1	.500	6.6
FEB											
09...	13	55	20	45	2.5	.740	1.7	2.40	4.9	.550	7.9
MAR											
01...	11	46	12	144	1.9	.740	2.3	3.00	4.9	.620	15
30...	9.0	43	11	396	2.3	.540	3.4	3.90	6.2	.770	23
APR											
28...	18	83	28	57	2.3	.130	1.8	1.90	4.2	.530	8.3
MAY											
25...	7.0	31	8.6	1390	2.3	.170	3.4	3.60	5.9	.690	43
JUN											
22...	2.2	16	2.9	1720	2.0	.450	4.5	4.90	6.9	1.70	48
JUL											
19...	17	80	41	48	1.7	.090	1.6	1.70	3.4	.660	5.7
AUG											
15...	15	68	41	92	2.1	.070	1.9	2.00	4.1	.610	9.0
SEP											
13...	16	70	56	39	1.6	.060	1.5	1.60	3.2	.740	8.3

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

KANSAS RIVER BASIN

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE

LOCATION.--Lat 40°19'58", long 98°04'00", in SW1/4NW1/4 sec.12, T.4 N., R.7 W., Nuckolls County, Hydrologic Unit 10270206, on right bank 10 ft downstream from bridge on State Highway 14, 1 mi upstream from Walnut Creek, 3.2 mi southeast of Deweese, and 6 mi northwest of Angus.

DRAINAGE AREA.--979 mi².

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 National Geodetic Vertical Datum of 1929. Prior to May 16, 1957, non-recording gage and Oct. 1, 1974, to Mar. 24, 1981, at present site and datum; May 16, 1957, to Sept. 30, 1972, and Mar. 25, 1981 to Mar. 24, 1982, at site 1,500 ft upstream from bridge at present datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--28 years (water years 1954-72, 1975-83), 143 ft³/s, 103,600 acre-ft/yr; median of yearly mean discharges, 122 ft³/s, 88,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,100 ft³/s Aug. 31, 1969, gage height, 18.57 ft; minimum daily, 6.3 ft³/s Sept. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 26, 1951, reached a stage of 14.9 ft, from information by local residents, discharge, 16,000 ft³/s, based on records for former station at Angus.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 19	0530	2360	6.95	Sept. 30	0100	*4340	8.99
June 18	0600	1800	6.19				

Minimum daily discharge, 24 ft³/s Aug. 18, Sept. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	59	66	56	58	83	192	118	101	136	55	33
2	294	59	65	58	60	80	153	443	96	122	39	29
3	186	58	62	60	62	79	130	368	92	105	39	33
4	99	58	61	64	60	80	114	218	88	93	41	38
5	80	59	63	62	58	90	102	158	84	85	42	39
6	71	61	61	66	58	83	94	126	79	82	39	30
7	68	61	60	72	60	100	90	143	79	76	42	27
8	70	59	60	71	62	110	88	339	80	75	39	26
9	164	59	56	72	64	95	87	391	78	74	36	24
10	294	61	58	72	66	85	84	226	77	67	33	24
11	173	67	56	67	68	81	82	173	79	65	33	24
12	124	62	54	65	69	78	82	154	108	66	37	38
13	97	60	58	65	81	76	81	136	196	63	37	41
14	83	60	61	65	112	74	80	140	783	59	38	67
15	78	61	60	63	146	84	78	132	604	58	37	112
16	73	62	59	64	157	515	78	118	249	62	32	65
17	71	63	61	62	230	464	78	143	209	65	26	53
18	69	64	62	58	239	247	78	1070	1250	65	24	45
19	68	65	59	60	269	178	80	1980	697	63	28	45
20	65	63	59	62	216	133	78	981	308	50	38	142
21	63	60	59	60	180	106	76	387	201	49	41	151
22	63	60	55	59	144	96	76	239	177	53	44	134
23	62	61	55	58	125	91	74	185	155	57	126	79
24	63	58	64	56	109	86	72	167	146	56	201	62
25	62	56	64	56	97	85	72	156	140	54	159	54
26	61	60	61	54	90	91	73	250	148	46	99	49
27	62	61	58	52	86	90	72	222	128	44	70	45
28	61	64	40	56	84	86	71	152	192	46	54	46
29	59	64	45	57	---	94	73	133	165	50	44	2460
30	61	64	50	56	---	143	71	117	181	68	38	3150
31	60	---	56	56	---	188	---	107	---	71	35	---
TOTAL	2961	1829	1808	1904	3110	3971	2659	9672	6970	2125	1646	7165
MEAN	95.5	61.0	58.3	61.4	111	128	88.6	312	232	68.5	53.1	239
MAX	294	67	66	72	269	515	192	1980	1250	136	201	3150
MIN	57	56	40	52	58	74	71	107	77	44	24	24
AC-FT	5870	3630	3590	3780	6170	7880	5270	19180	13820	4210	3260	14210
CAL YR 1982	TOTAL	76305	MEAN 209	MAX 6320	MIN 20	AC-FT 151400						
WTR YR 1983	TOTAL	45820	MEAN 126	MAX 3150	MIN 24	AC-FT 90880						

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-70, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1979 to September 1981.

WATER TEMPERATURES: February 1979 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 508 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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC- CI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT											
14...	0945	83	370	7.5	7.0	9.7	38	K1600	3500	81	18
NOV											
02...	1015	58	430	7.9	9.0	11.1	17	210	320	210	66
DEC											
07...	0930	60	470	8.0	3.0	12.5	10	K88	3400	220	68
JAN											
06...	0945	65	465	7.8	.0	9.6	<10	53	290	220	69
FEB											
01...	0930	54	500	7.8	.0	10.3	10	K14	80	220	69
MAR											
02...	0945	80	520	8.1	8.0	11.7	15	160	1500	210	64
APR											
12...	1045	83	495	8.0	9.5	10.8	12	K210	740	200	62
MAY											
03...	1500	302	193	7.8	15.0	9.3	180	K60000	K160000	68	20
JUN											
07...	1340	80	--	8.3	20.5	9.2	10	250	92	210	64
29...	1700	175	245	7.6	26.0	7.8	100	13000	26000	95	29
AUG											
02...	1530	40	455	8.6	31.0	8.5	41	--	K180000	180	54
SEP											
07...	1145	27	450	8.0	21.0	8.6	14	320	1300	190	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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS, TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT											
14...	8.7	32	9.1	158	1.2	.180	1.1	1.30	2.5	.830	8.4
NOV											
02...	11	38	11	17	.70	<.060	--	1.10	1.8	.220	2.3
DEC											
07...	11	39	12	14	1.0	<.060	--	1.40	2.4	.200	2.2
JAN											
06...	11	36	13	30	1.2	.090	.81	.90	2.1	.290	2.0
FEB											
01...	11	40	13	31	1.5	.060	.94	1.00	2.5	.290	2.9
MAR											
02...	11	38	12	46	1.3	.100	.80	.90	2.2	.330	2.5
APR											
12...	11	37	13	65	1.5	.220	.88	1.10	2.6	.340	2.7
MAY											
03...	4.4	21	8.3	2300	.90	.410	.29	.70	1.6	1.70	63
JUN											
07...	11	37	13	--	.80	.060	.64	.70	1.5	.250	3.7
29...	5.5	22	7.6	1560	1.4	.080	12	12.0	13	.900	37
AUG											
02...	10	34	12	148	.60	.140	1.5	1.60	2.2	.610	13
SEP											
07...	11	40	12	40	.20	.090	.61	.70	.90	.380	3.4

KANSAS RIVER BASIN

06883000 LITTLE BLUE RIVER NEAR DEWEESE, NE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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- LITY LAB AS CAC03) (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)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
FEB 01...	0930	7	19	.6	6.7	211	.30	33	319	.43
MAY 03...	1500	3	7.0	.4	11	65	.30	13	124	.17
AUG 02...	1530	0	18	.6	13	182	.40	28	279	.38
SEP 07...	1145	0	19	.6	10	201	.40	27	298	.41

DATE	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 TOTAL (UG/L AS AS) (01002)	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)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
FEB 01...	46.5	1.4	.250	--	--	0	--	--	--	--
MAY 03...	101	.86	.310	11	800	0	1	40	70	51000
AUG 02...	30.1	.59	.400	8	200	0	<1	10	20	6800
SEP 07...	21.7	.21	.260	--	--	0	--	--	--	--

DATE	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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED 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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
FEB 01...	--	0	--	--	--	59	--	--	--	--
MAY 03...	51000	150	60	1000	1000	4	.5	1	<0	250
AUG 02...	6800	20	0	320	310	6	.0	2	<0	40
SEP 07...	--	0	--	--	--	42	--	--	--	--

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 upstream from bridge on State Highway 53, 2.7 mi south of Alexandria, 9.8 mi downstream from Dry Creek, and 5.7 mi upstream from Big Sandy Creek.

DRAINAGE AREA.--1,557 mi².

PERIOD OF RECORD.--July 1959 to September 1972 (published as "near Gilead"), April 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,359.29 ft National Geodetic Vertical Datum of 1929. July 1959 to Sept. 30, 1972, at site 2.3 mi upstream at datum 12.0 ft higher.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by irrigation development above station.

AVERAGE DISCHARGE.--22 years (water years 1960-72, 1975-83), 232 ft³/s, 168,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft³/s Mar. 28, 1960, gage height, 17.30 ft, site and datum then in use; maximum gage height, 18.93 ft July 4, 1982; minimum daily discharge, 2.9 ft³/s Aug. 9, 1980.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 19	1930	3440	13.04	June 19	0300	4080	13.68
June 14	0100	5590	15.01	Sept. 29	1930	*8290	16.62
June 18	0630	6490	15.71				

Minimum daily discharge, 28 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	86	104	68	104	132	249	287	215	342	93	51
2	120	88	99	72	110	127	285	244	202	252	105	48
3	397	84	95	76	114	122	257	322	195	197	95	43
4	408	82	90	84	98	124	221	423	189	171	72	39
5	206	82	89	80	92	135	200	287	188	153	70	36
6	152	83	88	84	94	133	182	230	186	141	71	38
7	117	86	84	94	90	131	165	209	183	128	84	39
8	113	86	76	88	94	124	155	186	177	115	79	38
9	173	87	62	88	96	145	154	235	174	108	78	33
10	132	87	64	90	98	140	151	466	175	105	74	30
11	305	102	62	92	100	127	146	316	230	101	71	28
12	225	92	54	84	110	121	147	251	187	97	64	29
13	194	89	66	90	130	115	145	222	920	92	66	37
14	150	84	80	100	220	116	144	405	3470	89	86	80
15	127	84	76	98	350	122	138	325	1530	88	96	60
16	112	84	72	90	582	121	135	254	936	83	82	70
17	104	87	74	86	555	336	130	258	618	81	68	91
18	98	87	82	76	451	560	129	374	4330	82	60	61
19	96	90	90	78	399	374	127	2570	2810	83	55	49
20	91	92	91	84	405	266	128	2430	1210	83	49	51
21	87	94	90	80	343	208	130	1300	636	78	72	54
22	83	89	92	80	288	185	131	750	383	67	67	140
23	82	83	94	84	235	165	128	517	288	67	208	159
24	82	73	90	86	199	154	123	408	235	75	232	125
25	84	64	108	96	177	155	122	335	205	84	168	84
26	84	72	90	92	162	188	116	291	193	85	195	65
27	86	80	80	86	147	193	116	326	190	81	151	54
28	87	84	45	100	138	175	120	375	315	69	114	153
29	84	83	50	120	---	169	119	290	462	73	81	5810
30	84	100	60	114	---	172	116	254	759	77	65	7670
31	86	---	70	110	---	182	---	232	---	77	57	---
TOTAL	4313	2564	2467	2750	5981	5517	4609	15372	21791	3424	2918	15265
MEAN	139	85.5	79.6	88.7	214	178	154	496	726	110	94.1	509
MAX	408	102	108	120	582	560	285	2570	4330	342	232	7670
MIN	64	64	45	68	90	115	116	186	174	67	49	28
AC-FT	8550	5090	4890	5450	11860	10940	9140	30490	43220	6790	5790	30280
CAL YR 1982	TOTAL	127750	MEAN 350	MAX 10200	MIN 45	AC-FT 253400						
WTR YR 1983	TOTAL	86971	MEAN 238	MAX 7670	MIN 28	AC-FT 172500						

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 upstream from bridge on State Highway 53, 0.8 mi south of Alexandria.

DRAINAGE AREA.--607 mi².

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

REVISED RECORDS.--WRD NE-82-1: 1981(M).

GAGE.--Water stage recorder. Altitude of gage is 1,395 ft 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, 10,200 ft³/s Sept. 29, 1983, gage height, 15.37 ft; minimum daily, 16 ft³/s Apr. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,200 ft³/s Sept. 29, gage height, 15.37 ft; minimum daily, 19 ft³/s Sept. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	23	23	20	37	28	64	139	36	204	65	27
2	140	23	23	20	30	26	45	244	35	118	58	30
3	57	22	23	20	26	25	44	58	35	96	56	31
4	75	22	23	20	25	24	38	36	34	79	59	38
5	85	22	23	21	24	26	34	34	34	71	65	38
6	108	22	22	21	23	26	32	36	34	65	67	34
7	54	22	23	22	22	24	30	313	33	61	73	29
8	53	22	23	21	22	24	29	102	33	57	70	26
9	83	23	23	21	21	23	28	48	35	57	66	25
10	60	23	24	31	20	23	27	56	33	58	62	23
11	46	24	23	27	20	23	27	46	34	59	59	21
12	36	23	23	25	20	23	28	37	60	57	58	20
13	31	23	23	24	23	23	28	35	250	58	57	20
14	29	23	23	24	142	23	30	182	3300	56	64	20
15	28	22	23	23	478	24	32	87	600	60	64	24
16	27	22	22	23	462	43	32	50	149	64	57	24
17	26	22	22	22	436	29	29	237	151	63	56	22
18	25	22	22	20	281	25	28	516	2340	64	52	21
19	25	22	22	20	260	25	28	384	731	63	53	21
20	25	22	22	20	167	23	27	257	321	66	57	23
21	24	22	22	20	114	23	27	194	173	63	70	20
22	24	22	22	20	77	22	27	119	129	65	63	20
23	24	22	22	20	60	22	26	70	87	71	214	19
24	24	22	22	20	53	22	25	53	75	71	185	19
25	24	22	22	20	43	22	25	46	70	71	120	20
26	23	22	21	20	40	96	25	43	67	70	76	20
27	24	22	22	20	35	190	25	41	65	65	55	23
28	24	24	21	20	31	129	25	38	134	65	41	643
29	24	23	21	248	---	131	25	37	685	73	34	8340
30	23	23	21	63	---	115	25	37	999	74	29	4980
31	23	---	21	42	---	84	---	36	---	75	26	---
TOTAL	1303	673	692	958	2992	1366	915	3611	10762	2239	2131	14621
MEAN	42.0	22.4	22.3	30.9	107	44.1	30.5	116	359	72.2	68.7	487
MAX	140	24	24	248	478	190	64	516	3300	204	214	8340
MIN	23	22	21	20	20	22	25	34	33	56	26	19
AC-FT	2580	1330	1370	1900	5930	2710	1810	7160	21350	4440	4230	29000
CAL YR 1982	TOTAL	59479	MEAN 163	MAX 5000	MIN 17	AC-FT 118000						
WTR YR 1983	TOTAL	42263	MEAN 116	MAX 8340	MIN 19	AC-FT 83830						

06884000 LITTLE BLUE RIVER NEAR FAIRBURY, NE

LOCATION.--Lat 40°06'54", long 97°10'13", in NW1/4NE1/4 sec.26, T.2 N., R.2 E., Jefferson County, Hydrologic Unit 10270207, at right downstream wingwall of bridge on State Highway 15, 0.8 mi south of Fairbury, and 5.2 mi upstream from Rose Creek.

DRAINAGE AREA.--2,350 mi².

PERIOD OF RECORD.--May 1908 to September 1915, October 1928 to September 1956 (published as "near Endicott"), October 1956 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1086: 1941(M). WSP 1390: 1908(M), 1912, 1915, 1935, 1939, 1945(M). WSP 1510: 1947 (calendar year figures only). WSP 1919: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,282.19 ft National Geodetic Vertical Datum of 1929. May 23, 1908, to Sept. 30, 1915, nonrecording gage at present site at different datum. Apr. 26, 1929, to Sept. 24, 1957, nonrecording gage or water-stage recorder at site 3.5 mi downstream at various datums.

REMARKS.--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.--62 years, 369 ft³/s, 267,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,800 ft³/s Oct. 12, 1973, gage height, 18.96 ft; minimum daily, 14 ft³/s Nov. 22, 1929, discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 20	0100	3360	6.61	June 18	0630	10700	a11.62
June 14	unknown	9400	a11.05	Sept. 29	2300	*20000	a14.87

a Observer's reading.

Minimum daily discharge, 70 ft³/s Dec. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	130	143	108	150	208	389	406	259	830	141	107
2	194	129	143	108	155	201	396	671	246	498	139	102
3	313	128	143	114	170	204	376	441	233	366	131	98
4	474	122	133	120	185	215	342	530	220	300	121	93
5	360	118	130	118	180	248	318	416	225	253	127	97
6	304	116	129	122	180	225	306	360	228	225	120	102
7	275	116	127	135	175	225	280	482	222	206	133	100
8	240	123	120	130	180	218	272	510	222	192	133	97
9	270	118	109	130	190	215	261	348	218	176	123	90
10	288	120	100	130	197	225	264	452	220	170	120	87
11	270	128	100	135	197	220	259	441	256	166	116	82
12	316	135	92	125	197	208	272	363	246	172	112	79
13	268	122	109	130	206	208	259	329	624	164	107	79
14	233	121	118	140	318	206	259	571	7880	164	127	100
15	198	113	115	135	873	201	248	583	3000	166	139	133
16	172	114	112	130	1180	213	264	423	1440	170	133	127
17	157	113	120	125	1090	235	267	502	927	164	120	133
18	153	109	140	116	818	600	251	956	9220	166	112	127
19	151	90	139	110	716	498	240	2060	4930	161	102	114
20	151	115	136	121	613	392	222	2830	2140	155	107	121
21	145	118	135	110	510	312	210	1670	1160	147	127	112
22	141	117	135	110	409	280	208	1060	693	137	141	127
23	141	114	135	114	345	240	208	698	514	139	284	188
24	141	113	139	120	309	223	199	518	409	141	433	195
25	119	116	143	130	283	225	188	433	348	145	351	165
26	124	119	130	125	251	341	201	366	320	143	292	144
27	130	130	110	130	233	516	190	320	297	143	256	136
28	133	138	78	140	220	459	196	386	320	137	218	157
29	152	132	70	230	---	430	199	348	703	141	176	11700
30	133	140	90	190	---	419	188	303	1670	147	141	17800
31	127	---	110	170	---	392	---	283	---	149	127	---
TOTAL	6434	3617	3733	4051	10530	9002	7732	20059	39390	6433	5009	32792
MEAN	208	121	120	131	376	290	258	647	1313	208	162	1093
MAX	474	140	143	230	1180	600	396	2830	9220	830	433	17800
MIN	119	90	70	108	150	201	188	283	218	137	102	79
AC-FT	12760	7170	7400	8040	20890	17860	15340	39790	78130	12760	9940	65040
CAL YR 1982	TOTAL	209971	MEAN 575	MAX 15700	MIN 66	AC-FT 416500						
WTB YR 1983	TOTAL	148782	MEAN 408	MAX 17800	MIN 70	AC-FT 295100						

KANSAS RIVER BASIN

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS

LOCATION.--Lat 39°58'48", long 97°00'16", NE1/4SW1/4 sec.8, T.1 S., R.4 E., Washington County, Hydrologic Unit 10270207, on right bank and 2 ft downstream from bridge on county road, 0.6 mi west of Hollenberg, and 1.75 mi downstream from Nebraska-Kansas State line.

DRAINAGE AREA.--2,752 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1973 to February 1974 (discharge measurements only), March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,216.10 ft 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.--9 years, 470 ft³/s, 340,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s Mar. 15, 1978, gage height, 16.58 ft from high-water mark; minimum daily, 40 ft³/s Dec. 17, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1973, reached a stage of 23.07 ft, present datum, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 20	0830	3870	8.57	June 18	1930	15400	15.92
June 14	1930	9780	12.87	Sept. 30	2000	*16300	16.37

Minimum daily discharge, 90 ft³/s Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	149	174	135	200	269	610	278	369	1270	188	134
2	181	152	180	135	205	259	583	921	356	637	179	122
3	357	147	176	140	215	253	542	770	346	467	172	117
4	540	146	172	145	230	252	491	654	332	386	154	112
5	541	146	166	140	220	315	449	602	339	346	146	109
6	403	144	164	150	215	295	461	468	313	315	153	108
7	360	145	161	185	205	269	421	458	297	298	158	107
8	298	145	155	170	210	258	384	743	293	272	173	105
9	328	147	150	170	210	248	380	500	281	249	167	101
10	398	148	154	180	215	259	397	439	278	240	154	96
11	317	161	177	200	220	263	367	626	337	233	144	93
12	417	167	128	185	240	250	529	502	399	230	136	93
13	329	153	131	190	300	249	440	428	545	224	131	90
14	293	149	167	195	450	247	406	679	6870	219	151	91
15	247	145	160	205	1010	244	442	1000	4800	211	176	128
16	218	145	165	200	1790	250	410	659	2140	205	184	132
17	202	149	172	195	1730	275	404	610	1130	211	168	128
18	193	151	180	190	1530	512	387	1390	12300	207	150	143
19	188	150	181	180	1270	653	356	1880	11200	204	140	127
20	178	124	169	220	1060	500	330	3590	5210	199	142	130
21	172	151	164	210	846	405	322	2490	2030	196	165	126
22	168	154	163	200	663	345	316	1580	1180	186	193	114
23	167	153	164	205	533	311	312	1050	758	177	254	162
24	164	145	169	215	446	290	291	790	573	179	447	190
25	162	145	181	225	402	288	279	643	489	191	489	177
26	135	145	172	230	345	681	271	551	441	192	348	144
27	150	153	155	220	320	958	261	472	419	188	322	129
28	157	165	130	250	290	783	275	503	401	180	288	122
29	157	168	120	390	---	725	274	521	733	182	232	5730
30	174	161	130	450	---	614	269	428	1690	182	187	14800
31	152	---	140	300	---	558	---	388	---	192	151	---
TOTAL	7915	4503	4970	6405	15570	12078	11659	26613	56849	8668	6242	23960
MEAN	255	150	160	207	556	390	389	858	1895	280	201	799
MAX	541	168	181	450	1790	958	610	3590	12300	1270	489	14800
MIN	135	124	120	135	200	244	261	278	278	177	131	90
AC-FT	15700	8930	9860	12700	30880	23960	23130	52790	112800	17190	12380	47520
CAL YR 1982	TOTAL	253711	MEAN	695	MAX	14300	MIN	96	AC-FT	503200		
WTR YR 1983	TOTAL	185432	MEAN	508	MAX	14800	MIN	90	AC-FT	367800		

KANSAS RIVER BASIN

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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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS AS CAC03 (00900)
OCT										
28...	1100	172	590	7.6	12.5	9.6	15	K5800	K2000	210
NOV										
09...	1600	147	582	8.1	11.5	14.2	25	800	1200	210
DEC										
08...	1015	151	615	8.2	.5	12.9	13	200	390	210
JAN										
05...	1100	138	670	8.4	.5	13.8	13	330	800	230
FEB										
10...	1015	214	600	7.3	.0	11.7	15	520	720	210
MAR										
01...	1530	270	570	7.9	12.0	9.6	20	<100	8400	210
30...	1630	612	460	8.1	10.0	11.2	230	26000	2000000	160
APR										
28...	1300	278	600	8.4	13.0	11.2	16	3000	1000	210
MAY										
25...	0930	653	380	7.9	19.0	7.5	58	3800	5300	130
JUN										
22...	1115	1180	350	7.9	24.5	6.7	94	K4200	50000	120
JUL										
19...	1145	225	590	8.1	27.5	11.8	46	K1400	75000	190
AUG										
23...	1600	299	405	8.3	26.5	--	49	K5000	12000	140
SEP										
23...	1115	168	540	8.6	12.0	12.2	38	K33	K10000	170

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 LAR (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT									
28...	21	67	10	42	1.3	7.6	188	41	43
NOV									
09...	0	66	10	41	1.3	6.4	207	43	42
DEC									
08...	2	67	11	41	1.3	5.6	211	45	42
JAN									
05...	8	73	11	41	1.2	6.2	220	46	39
FEB									
10...	2	68	10	36	1.1	7.1	209	45	33
MAR									
01...	11	66	10	34	1.1	9.3	195	47	32
30...	12	52	7.9	24	.9	10	151	47	20
APR									
28...	10	69	10	39	1.2	6.8	204	58	37
MAY									
25...	10	43	6.5	18	.7	14	124	33	20
JUN									
22...	16	40	5.4	14	.6	9.8	106	32	12
JUL									
19...	0	60	10	41	1.3	9.6	198	47	42
AUG									
23...	0	45	7.5	31	1.2	8.0	145	31	31
SEP									
23...	0	53	8.8	33	1.2	7.2	175	40	10

KANSAS RIVER BASIN

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, SUS- PENDED (MG/L) (00530)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)
OCT 28...	.30	26	350	.48	162	81	1.2	1.2	.090
NOV 09...	.40	23	356	.48	141	15	.90	.91	<.060
DEC 08...	.30	21	360	.49	147	13	1.1	.97	.130
JAN 05...	.30	27	376	.51	140	15	1.8	1.8	.230
FEB 10...	.30	27	352	.48	203	65	1.9	1.8	.290
MAR 01...	.30	25	341	.46	248	63	1.5	1.5	.180
30...	.20	17	269	.37	444	336	1.6	1.6	.440
APR 28...	.30	15	358	.49	268	57	.50	.53	.070
MAY 25...	.30	17	226	.31	399	594	1.9	2.0	.180
JUN 22...	.30	16	193	.26	615	1220	1.7	1.7	.190
JUL 19...	.30	20	349	.47	212	46	<.10	<.10	.100
AUG 23...	.30	18	259	.35	209	218	.60	.62	.070
SEP 23...	.30	23	280	.38	127	174	1.3	1.3	.080

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 28...	1.5	1.60	2.8	.400	.290	0	40	34	4.9
NOV 09...	--	.90	1.8	.270	.220	0	0	43	4.2
DEC 08...	.37	.50	1.6	.280	.200	0	<0	61	2.5
JAN 05...	.37	.60	2.4	.300	.050	0	0	57	2.4
FEB 10...	1.0	1.30	3.2	.340	.260	0	20	27	3.8
MAR 01...	.92	1.10	2.6	.400	.310	0	30	18	5.7
30...	2.6	3.00	4.6	.660	.360	0	80	13	18
APR 28...	1.0	1.10	1.6	.280	.200	0	10	13	6.4
MAY 25...	1.8	2.00	3.9	.830	.360	0	60	3	19
JUN 22...	3.8	4.00	5.7	1.40	.280	0	50	2	33
JUL 19...	2.3	2.40	--	.680	.220	0	20	3	12
AUG 23...	2.4	2.50	3.1	.530	.210	0	20	5	6.4
SEP 23...	1.6	1.70	3.0	.520	.360	0	20	9	7.3

06884025 LITTLE BLUE RIVER AT HOLLENBERG, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FF) (01045)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) (01044)
NOV 09...	1600	4	100	<1	<10	0	620	610
FEB 10...	1015	5	100	1	<10	0	1300	1300
MAY 25...	0930	7	300	<1	20	20	20000	20000
AUG 23...	1600	8	200	<1	10	10	6900	6900

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN) (01054)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 09...	0	80	40	.0	2	<0	20
FEB 10...	0	80	50	.0	2	<0	40
MAY 25...	10	450	450	.0	1	<0	90
AUG 23...	0	550	550	.0	2	<0	40

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 1983

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Tekamah Creek basin							
06608000	Tekamah Creek at Tekamah, NE	Lat 41°46'30", long 96°13'10" in SE1/4 sec.19, T.21 N., R.11 E., Burt County, on left bank upstream from bridge, 1 block east of U.S. Highway 73 in Tekamah.	23	*1949-81 1983	06-14-83	8.90	1,250
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	1961-83	06-13-83	2.69	70
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	1961-83	06-13-83	9.37	200
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 1978-83b	09-29-83	6.67	1,080
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	1960-83	06-18-83	14.19	3,200

* 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.

Measurements of streamflow at points other than gaging stations are given in the following table. Some measurements were made during periods of base flow when streamflow is primarily from ground-water storage and may be correlated with the simultaneous discharge of a nearby stream where continuous records are available to give a picture of the low-flow potentiality of the stream.

Discharge measurements made at miscellaneous sites during water year 1983

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Niobrara River basin						
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 1978-82	11-15-82	24
					06-07-83	33
					07-26-83	75
Plum Creek ¹ (06462470)	Niobrara River	Lat 42°40'01", long 100°03'25", 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 1978-82	11-15-82	74
					06-07-83	85
					07-26-83	166
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.	--	1978-82	11-16-82	54
					06-08-83	52
					07-27-83	60
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 1978-82	11-16-82	3.4
					06-08-83	3.3
					07-28-83	2.0
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.	--	1978-82	11-16-82	1.9
					06-08-83	1.6
					07-26-83	2.8
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.	--	1978-82	11-16-82	8.7
					06-08-83	6.9
					07-27-83	18
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 1978-82	11-16-82	51
					06-08-83	73
					07-28-83	122
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.	--	1969-82	05-25-83	23
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.	--	1969-82	05-25-83	10
Redbird Creek ¹ (06465398)	Niobrara River	Lat 42°39'33", long 98°33'31", in NE1/4SE1/4 sec.14, T.31 N., R.11 W., Holt County, at site 3.2 miles east and 2.7 miles south of Meek.	--	1969-82	05-25-83	24
Blackbird Creek ¹ (06465420)	Redbird Creek	Lat 42°39'46", long 98°34'24", in SW1/4NW1/4 sec.14, T.31 N., R.11 W., Holt County, at county road bridge 2.4 miles east and 2.3 miles south of Meek.	--	1969-82	05-25-83	13

See footnotes at end of table

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Niobrara River basin--Continued						
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 1978-82	10-04-82 11-09-82 03-21-83 04-18-83 05-16-83 06-20-83 07-11-83 08-15-83 09-06-83	83 146 178 234 151 136 97 75 91
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 Bolsus.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	.75 .94 .91 a.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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	14 18 18 12
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 1977-82	10-28-82 06-01-83 08-03-83 09-28-83	24 25 38 21
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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	3.4 3.3 5.6 2.8
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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	3.5 4.0 3.7 2.3
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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	11 16 17 9.1
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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	1.2 .90 2.8 .85
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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	.67 .10 7.7 .60
Dane Creek ¹ (06788495)	North Loup River	Lat 98°54'01", long 41°36'31", in NE1/4NE1/4 sec.20, T.19 N., R.14 W., Valley County, at bridge on State Highway 11 at northwest edge of Ord.	--	1962b 1977-82	05-24-83	.66
Myra Creek ¹ (06788990)	North Loup River	Lat 41°29'54", long 98°46'46", in SE1/4SW1/4 sec.26, T.18 N., R.13 W., Valley County, at bridge on State Highway 11 at west edge of North Loup.	--	1977-82	05-24-83 06-28-83 06-28-83	2.5 645 815

DISCHARGE AT PARTIAL RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1983--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Platte River basin--Continued						
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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	1.8 1.6 .65 1.0
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.	--	1977-82	10-28-82 06-01-83 08-03-83 09-28-83	.16 a.1 a.2 .13
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	1971-82	11-22-82 12-21-82 01-18-83 02-17-83 04-20-83 06-23-83 07-12-83 08-08-83 09-07-83	17 19 26 711 104 101 27 13 5.5
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	1971-82	10-27-82 01-18-83 02-17-83 04-21-83 05-19-83 06-15-83 07-12-83 09-07-83	143 75 2070 660 2990 1150 293 85
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 ^a , 1954-60 ^b , 1961-81	09-29-83	631
Republican River (06850500)	Kansas River	Lat 40°03'58", long 99°02'14", in NW1/4SE1/4 sec.8, T.1 N., R.15 W., Franklin County, 2 miles south of Bloomington.	21000	1929-57 ^a , 1960-67, 1970-78, 1980	08-11-83	662
Republican River (06851090)	Kansas River	Lat 40°05'26", long 98°46'03", in SE1/4SE1/4 sec.34, T.2 N., R.13 W., Franklin County, at bridge on county road 0.5 mile west of Riverton.	21300	1963-67, 1970-78, 1980	06-28-83	1650
Republican River (06853400)	Kansas River	Lat 40°01'22", long 98°06'17", in NE corner SE1/4 sec.28, T.1 N., R.7 W., Nuckolls County, on downstream guard rail of railroad bridge at cement plant, 2.0 miles west of Superior.	22300	1961-65, 1967, 1971-75 ^c , 1977 ^c , 1979	06-29-83	1480

* Also a crest-stage gage.

* Operated as a continuous-record gaging station.

¹ 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 crest stage partial record station.

LOW-FLOW INVESTIGATIONS

Low-flow investigations were made in the Platte River basin in Nebraska in the 1983 water year to obtain data on ground-water/surface-water relationships. These data may be used to help calibrate numerical models of the hydrologic system.

PLATTE RIVER BASIN

South Platte River Basin

Discharge measurements and observations of no flow were made on the South Platte River and tributaries in Deuel, Keith, and Lincoln Counties, Nebr., in early October of 1982. Conditions were good. Streamflow was generally low and only scattered light rainshowers occurred toward the end of the measurement period.

Observation of zero flow
or measured discharge,
in cubic feet per second

October 4-7, 1982

<u>Location</u>	
South Platte River at Julesburg, CO (gage) in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.12 N., R.44 W.-----	143
Western Canal diversion 6 mi SW of Big Springs in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T.12 N., R.43 W.-----	51
South Platte River 6 mi southwest of Big Springs in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.12 N., R.43 W.-----	116
Walrath Draw 6 mi southwest of Big Springs in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T.12 N., R.43 W.-----	0
Dry Creek 4 mi southwest of Big Springs in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.12 N., R.42 W.-----	0
South Platte tributary 3 mi SW of Big Springs in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T.13 N., R. 42 W.-----	0
South Platte River tributary 2 mi east of Big Springs in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T.13 N., R.42 W.-----	107
South Platte River at Big Springs in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T.13 N., R.41 W.-----	121
Trailer House Gulch at northeast corner of Big Springs in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T.13 N., R.41 W.-----	0
South Platte River 5 mi southwest of Brule in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T.13 N., R.41 W.-----	119
South Platte River at Brule in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T.13 N., R.40 W.-----	116
South Platte River tributary 2 mi east of Brule in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T.13 N., R.39 W.-----	0
South Platte River 4 mi east of Brule in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T.13 N., R.39 W.-----	117
Western Canal ret. to South Platte River 4 mi SW of Ogallala in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.13 N., R.39 W.---	46
South Platte River tributary 2 mi west of Ogallala in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T.13 N., R.39 W.-----	0
South Platte River at Ogallala in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T.13 N., R.38 W.-----	159
Sewage return to South Platte River at Ogallala in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.13 N., R.38 W.-----	.10
Sewage return to South Platte River at Ogallala in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T.13 N., R.38 W.-----	1.5
South Platte River tributary 2 mi east of Ogallala in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T.13 N., R.38 W.-----	0
South Platte River 3 mi east of Ogallala in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.13 N., R.38 W.-----	154
South Platte River tributary 3 mi east of Ogallala in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T.13 N., R.38 W.-----	0
South Platte River tributary 3 mi west of Roscoe in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.13 N., R.38 W.-----	0
South Platte River at Roscoe in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T.13 N., R.37 W.-----	139
South Platte River tributary 2 mi east of Roscoe in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.13 N., R.37 W.-----	0
South Platte River 4 mi east of Roscoe in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T.13 N., R.37 W.-----	156
South Platte River Supply Canal 6 mi SW of Paxton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T.13 N., R.36 W.-----	137
South Platte River 3 mi west of Paxton in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.13 N., R.36 W.-----	4.2
South Platte River at Paxton in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.13 N., R.35 W.-----	10
Sewage return to South Platte River at Paxton in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T.13 N., R.35 W.-----	.10
South Platte River 2 mi east of Paxton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.13 N., R.35 W.-----	10
South Platte River 4 mi east of Paxton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.13 N., R.34 W.-----	12
South Platte River 4 mi west of Sutherland in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T.14 N., R.34 W.-----	12
South Platte River tributary 3 mi SW of Sutherland in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T.13 N., R.33 W.-----	2.0
South Platte River tributary 1 mi south of Sutherland in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.13 N., R.33 W.-----	43
South Platte River at Sutherland in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T.14 N., R.33 W.-----	68
South Platte River tributary 1 mi south of Sutherland in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 33, T.14 N., R.33 W.-----	3.8
South Platte River 2 mi southeast of Sutherland in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T.14 N., R.33 W.-----	100
South Platte River at Hershey in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T.14 N., R.32 W.-----	96
South Platte River 5 mi southeast of Hershey in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T.14 N., R.31 W.-----	105
South Platte River 3 mi west of North Platte in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T.14 N., R.31 W.-----	128
South Platte River tributary 3 mi west of North Platte in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T.14 N., R.31 W.-----	.11
Beer Slough 5 mi southeast of Hershey in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T.13 N., R.31 W.-----	11
South Platte River at North Platte (gage) in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.13 N., R.30 W.-----	131
Sutherland Power return 2 mi south of North Platte in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T.13 N., R.30 W.-----	663
South Platte River 2 mi southeast of North Platte in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 11, T.13 N., R.30 W.-----	760

PLATTE RIVER BASIN--Continued

Discharge measurements and observations of no flow were made on the South Platte and North Platte Rivers at North Platte, Nebr., and the Platte River and its tributaries downstream to Columbus, Nebr., in October 1982. Conditions were good downstream to Lexington, Nebr., as flows were generally low. Conditions were poor downstream from the Phelps County Canal power return, as flows were at maximum wading stage.

Location	Observation of zero flow or measured discharge, in cubic feet per second	
	October 4-7, 1982	
North Platte River at North Platte (gage) in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T.14 N., R.30 W.-----	405	
South Platte River at North Platte (gage) in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.13 N., R.30 W.-----	138	
Tri-County Supply Canal 5 mi SE of North Platte in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.13 N., R.29 W.-----	831	
Platte River below Tri-County Supply Canal diversion in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.13 N., R.29 W.-----	225	
Whitehorse Creek 4 mi east of North Platte in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.13 N., R.29 W.-----	11	
Platte River 6 mi southeast of North Platte in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.13 N., R.29 W.-----	239	
Fremont Slough 2 mi south of North Platte in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.13 N., R.30 W.-----	18	
Fremont Slough drain 3 mi southeast of North Platte in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T.13 N., R.30 W.-----	10	
Fremont Slough 7 mi southeast of North Platte in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T.13 N., R.29 W.-----	16	
Stenger Drain 6 mi west of Maxwell in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T.13 N., R.29 W.-----	1.8	
Drain to Platte River 3 mi southwest of Maxwell in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31, T.13 N., R.28 W.-----	2.2	
Drain to Platte River 1.5 mi northwest of Maxwell in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T.13 N., R.28 W.-----	2.5	
Platte River at Maxwell in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.13 N., R.28 W.-----	243	
Drain to Platte River 3 mi south of Maxwell in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, T.12 N., R.28 W.-----	4.5	
Drain to Platte River 3 mi south of Maxwell in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T.12 N., R.28 W.-----	.39	
Drain to Platte River 4 mi south of Maxwell in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T.12 N., R.28 W.-----	.07	
Drain to Platte River 5 mi southeast of Maxwell in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T.12 N., R.28 W.-----	0	
Drain to Platte River 6 mi southwest of Brady in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, T.12 N., R.28 W.-----	0	
Pawnee Slough 5 mi northwest of Brady in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T.13 N., R.27 W.-----	.19	
Pawnee Creek 1 mi northwest of Brady in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.12 N., R.27 W.-----	6.4	
Pawnee Creek at Brady in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T.12 N., R.27 W.-----	8.1	
Platte River at Brady (gage), two channels, in secs. 11 and 23, T.12 N., R.27 W.-----	282	
Drain to Platte River 3 mi southeast of Brady in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T.12 N., R.27 W.-----	2.8	
Tri-County Canal wasteway to river 3 mi southeast of Brady, in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T.12 N., R.27 W.---	Ponded	
Thirty Mile Canal 3 mi southeast of Brady in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T.12 N., R.26 W.-----	4.2	
Gothenburg Canal 5 mi southeast of Brady in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T.12 N., R.26 W.-----	52	
Platte River 5 mi southeast of Brady in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.12 N., R.26 W.-----	278	
Peckham Ditch drain 6 mi southeast of Brady in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 4, T.11 N., R.26 W.-----	7.8	
Sheldon Ditch drain 3 mi southwest of Gothenburg in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T.11 N., R.25 W.-----	6.7	
Six Mile Canal 3 mi southwest of Gothenburg in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T.11 N., R.25 W.-----	1.1	
Gothenburg Canal return at Gothenburg in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.11 N., R.25 W.-----	.24	
Platte River at Gothenburg, three channels in secs. 15 and 22, T.11 N., R.25 W.-----	312	
Cozad Canal diversion at Gothenburg in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T.11 N., R.25 W.-----	0	
Six Mile Canal return 2 mi south of Gothenburg in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.11 N., R.25 W.-----	.38	
Thirty Mile Canal Little Wasteway 3 mi SE of Gothenburg in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T.11 N., R.25 W.-----	0	
Thirty Mile Canal Middle Wasteway 2 mi SW of Willow Island in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T.10 N., R.24 W.----	4.6	
Drain to Platte River 2 mi southeast of Gothenburg in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.11 N., R.24 W.-----	.46	
Platte River near Willow Island, two channels in sec. 33, T.11 N., R.24 W., and sec. 8, T.10 N., R.24 W.-----	334	
Thirty Mile Canal Henderson Wasteway 3 mi SW of Willow Island in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T.10 N., R.24 W.---	0	
Orchard-Alfalfa Canal 3 mi southwest of Cozad in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, T.10 N., R.24 W.-----	0	
Drain to Platte River 3 mi southeast of Willow Island in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T.10 N., R.24 W.-----	0	
Kaufman-Scroggins-Laier Drain 3 mi SW of Cozad in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T.10 N., R.24 W.-----	.05	
Buffalo Creek 2 mi west of Cozad in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.10 N., R.24 W.-----	.35	
Drain to Platte River 2 mi west of Cozad in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T.10 N., R.24 W.-----	0	
Drain to Platte River 1 mi southwest of Cozad in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T.10 N., R.24 W.-----	1.0	
Dawson County Canal at Cozad in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, T.10 N., R.23 W.-----	.08	
Platte River near Cozad (gage), two channels in sec. 18, T.10 N., R.23 W. (10-6-82)-----	354	
Platte River overflow channel 2 mi south of Cozad in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T.10 N., R.23 W. (10-6-82)---	.76	
Platte River near Cozad (gage), two channels in sec. 18, T.10 N., R.23 W. (10-4-82)-----	358	
Platte River overflow channel 2 mi south of Cozad in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T.10 N., R.23 W. (10-4-82)---	1.0	
Drain to Platte River 3 mi south of Cozad in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T.10 N., R.23 W.-----	0	
Drain to Platte River 3 mi south of Cozad in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, T.10 N., R.23 W.-----	0	
Drain to Platte River 3 mi southeast of Cozad in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.10 N., R.23 W.-----	0	
Drain to Platte River 3 mi southwest of Darr in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T.10 N., R.23 W.-----	0	
Drain to Platte River 3 mi southwest of Darr in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.10 N., R.23 W.-----	15	
Drain to Platte River 2 mi southeast of Cozad in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T.10 N., R.23 W.-----	0	
Drain to Platte River 2 mi southeast of Cozad in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T.10 N., R.23 W.-----	3.9	
Drain to Platte River 2 mi southwest of Darr in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.10 N., R.23 W.-----	0	
Platte River at Darr, three channels in sec. 26, T.10 N., R.23 W.-----	381	

PLATTE RIVER BASIN--Continued

Location	Observation of zero flow or measured discharge, in cubic feet per second	
	October 4-7, 1982	
Dawson County drainage ditch 1 mi south of Darr in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T.10 N., R.23 W.-----	5.6	
Drain to Platte River 3 mi southeast of Darr in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 5, T.9 N., R.22 W.-----	0	
Platte River 3 mi southeast of Darr, two channels in sec. 5, T.9 N., R.22 W.-----	384	
Thirty Mile Canal 3 mi southeast of Darr in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.9 N., R.22 W.-----	3.6	
Drain to Platte River 4 mi southeast of Darr in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.9 N., R.22 W.-----	2.0	
Drain to Platte River 4 mi southeast of Darr in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T.9 N., R.22 W.-----	3.4	
Drain to Platte River 4 mi southwest of Lexington in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T.9 N., R.22 W.-----	5.7	
Drain to Platte River 3 mi southwest of Lexington in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T.9 N., R.22 W.-----	Trace	
Platte River 3 mi south of Lexington in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.9 N., R.21 W.-----	414	
Drain to Platte River 6 mi southeast of Lexington in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T.8 N., R.21 W.-----	5.0	
Phelps County Canal return to Platte River 6 mi SE of Lexington in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.8 N., R.21 W.-----	880	
October 18-26, 1982		
Platte River 3 mi south of Lexington in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.9 N., R.21 W.-----	406	
Drain to Platte River 6 mi southeast of Lexington in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T.8 N., R.21 W.-----	5.0	
Phelps County Canal return to Platte River 6 mi SE of Lexington in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.8 N., R.21 W.-----	240	
Plum Creek 7 mi southwest of Overton in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T.8 N., R.21 W.-----	3.8	
Platte River 6 mi southwest of Overton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, T.8 N., R.20 W.-----	731	
Drain to Platte River 6 mi southwest of Overton in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T.8 N., R.20 W.-----	0	
Drain to Platte River 5 mi southwest of Overton in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T.8 N., R.20 W.-----	1.1	
Platte River near Overton (gage) in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T.8 N., R.20 W.-----	777	
Drain to Platte River 3 mi south of Overton in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.8 N., R.19 W.-----	0	
Spring Creek 3 mi southeast of Overton in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.8 N., R.19 W.-----	10	
Elm Creek Canal 3 mi southeast of Overton in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T.8 N., R.19 W.-----	0	
Drain to Platte River 4 mi southeast of Overton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T.8 N., R.19 W.-----	3.0	
Drain to Platte River 5 mi southeast of Overton in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T.8 N., R.19 W.-----	1.3	
Platte River 4 mi southwest of Elm Creek in secs. 3 and 10, T.8 N., R.19 W.-----	706	
Drain to Platte River 3 mi southwest of Elm Creek in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.8 N., R.19 W.-----	0	
Drain to Platte River 2 mi southwest of Elm Creek in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.8 N., R.19 W.-----	0	
Platte River 2 mi south of Elm Creek in NE $\frac{1}{4}$ sec. 8, T.8 N., R.18 W.-----	764	
Drain to South Channel Platte River 4 mi SE of Elm Creek in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T.8 N., R.19 W.-----	9.3	
Drain to South Channel Platte River 4 mi SW of Elm Creek in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.8 N., R.18 W.-----	1.3	
Drain to South Channel Platte River 4 mi SW of Elm Creek in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.8 N., R.18 W.-----	0	
South Channel of Platte River 3 mi south of Elm Creek in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 17, T.8 N., R.18 W.-----	12	
Drain to Platte River 2 mi southeast of Elm Creek in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, T.8 N., R.18 W.-----	0	
Elm Creek 2 mi southeast of Elm Creek in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.8 N., R.18 W.-----	trace	
Kearney Canal return to Platte River 3 mi southwest of Odessa in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T.8 N., R.18 W.-----	.30	
South Channel of Platte River 3 mi southwest of Odessa in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.8 N., R.17 W.-----	14	
Drain to Platte River 3 mi southwest of Odessa in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.8 N., R.17 W.-----	1.2	
Platte River near Odessa (gage) in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, T.8 N., R.17 W.-----	863	
Platte River 4 mi southwest of Kearney in E $\frac{1}{2}$ sec. 18, T.8 N., R.16 W.-----	737	
North Dry Creek Ditch 2.5 mi southwest of Kearney in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T.8 N., R.16 W.-----	11	
Platte River near Kearney (gage) in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T.8 N., R.16 W.-----	809	
Kearney Canal return to Platte River 0.5 mi SW of Kearney in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T.8 N., R.16 W.-----	1.0	
Turkey Creek 3 mi southeast of Odessa in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T.8 N., R.16 W.-----	.41	
North Channel Platte River 4 mi southeast of Kearney in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T.8 N., R.15 W.-----	14	
Crooked Creek drainage ditch 6 mi southeast of Kearney in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T.8 N., R.15 W.-----	3.4	
Platte River 6 mi southwest of Gibbon in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T.8 N., R.14 W.-----	763	
Platte River 4.5 mi south of Gibbon in E $\frac{1}{2}$ W $\frac{1}{2}$ sec. 12, T.8 N., R.14 W.-----	732	
Platte River 4 mi south of Shelton in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, T.9 N., R.13 W.-----	843	
Dry Creek 7 mi southeast of Shelton in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T.8 N., R.12 W.-----	0	
Platte River 5 mi southeast of Shelton in E $\frac{1}{2}$ E $\frac{1}{2}$ sec. 28, T.9 N., R.12 W.-----	884	
Platte River 4 mi south of Wood River in W $\frac{1}{2}$ W $\frac{1}{2}$ sec. 17, T.9 N., R. 11 W.-----	792	
Platte River 6 mi southeast of Wood River (2 channels) in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.10 N., R.10 E., and NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T.9 N., R.10 E.-----	844	
Platte River 6 mi south of Grand Island (4 channels) in E $\frac{1}{2}$ E $\frac{1}{2}$ secs. 24 and 25, T.10 N., R.10 W.---	857	
Platte River 4 mi southeast of Grand Island (gage) in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.11 N., R.8 W.-----	855	
Platte River 4 mi east of Grand Island in NW $\frac{1}{4}$ sec. 15, T.11 N., R.8 W.-----	899	
Platte River 3 mi southeast of Chapman in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T.12 N., R.7 W.-----	887	
Wood River 2 mi southeast of Chapman in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, T.12 N., R.7 W.-----	33	
Platte River 3.5 mi east of Chapman (5 channels) in secs. 11 and 12, T.12 N., R.7 W.-----	896	
Platte River 2 mi south of Central City in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T.13 N., R.6 W.-----	912	
Platte River 3 mi east of Central City in S $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 12, T.13 N., R.6 W.-----	907	

PLATTE RIVER BASIN--Continued

<u>Location</u>	<u>Observation of zero flow or measured discharge, in cubic feet per second</u>	
	October 18-26, 1982	
Platte River 4 mi northeast of Central City in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 5, T.13 N., R.5 W.-----	837	
Warm Slough 4 mi northeast of Central City in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T.14 N., R.5 W.-----	.14	
Platte River 2.5 mi south of Clarks in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T.14 N., R.4 W.-----	908	
Platte River 5 mi northeast of Clarks in NW $\frac{1}{4}$ sec. 26, T.15 N., R.4 W.-----	863	
Platte River at Silver Creek in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T.15 N., R.3 W.-----	945	
Silver Creek at Silver Creek in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T.16 N., R.3 W.-----	21	
Platte River 5 mi southwest of Duncan in SW $\frac{1}{4}$ sec. 20, T.16 N., R.2 W.-----	830	
Prairie Creek 5 mi southwest of Duncan in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, T.16 N., R.2 W.-----	27	
Platte River near Duncan (gage) in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.16 N., R.2 W.-----	829	
Platte River 3 mi southeast of Duncan in W $\frac{1}{2}$ W $\frac{1}{2}$ sec. 9, T.16 N., R.1 W.-----	818	
Platte River 1.5 mi south of Columbus in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T.17 N., R.1 E.-----	848	
South Channel of Platte River 3.5 mi south of Columbus in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T.16 N., R.1 E.-----	0	
Clear Creek 4 mi south of Columbus in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T.16 N., R.1 E.-----	40	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS STATIONS

Water-quality samples were collected October 4-26, 1982, in conjunction with low-flow investigations at gaging stations and miscellaneous sites in the Platte River Basin. These measurements were made to obtain data on ground-water/surface-water relationships.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

STATION NO. (06-)	LOCATION	DATE	TIME	STREAMFLOW INSTAN- TANEOUS (CFS) (00061)	SPECIFIC CONDUCTANCE (UMHOS) (00095)	pH (UNITS) (00400)	TEMPER- ATURE (°C.) (00010)	HARDNESS (MG/L AS CaCO ₃) (00900)	HARDNESS NONCARBO- NATE (MG/L AS CaCO ₃) (95902)
7640.00	South Platte River at Julesburg, CO	Oct. 04	1300	143	2,250	8.3	16.5	780	540
	Western Canal Div. 6 mi SW of Big Springs, NE	Oct. 05	1030	51	2,240	8.5	13.0	780	560
	South Platte River at Big Springs, NE	Oct. 04	1510	121	2,200	8.2	19.0	770	570
	South Platte River at Brule, NE	Oct. 05	0835	116	2,140	8.3	12.0	740	530
	South Platte River at Ogallala, NE	Oct. 05	1125	159	2,130	8.3	15.0	740	540
	South Platte R. Supply Canal 6 mi SW of Paxton, NE	Oct. 05	1615	137	2,080	8.3	17.0	710	500
	South Platte River at Paxton, NE	Oct. 06	0925	10	1,620	8.0	9.0	570	370
	South Platte River at Sutherland, NE	Oct. 06	1130	68	1,080	7.9	10.5	350	140
	South Platte River at Hershey, NE	Oct. 06	1535	96	1,060	8.1	15.5	350	140
	South Platte R. Trib. 3 mi west of North Platte, NE	Oct. 06	1710	.11	1,160	8.2	15.5	320	87
7655.00	South Platte River at North Platte, NE	Oct. 07	0955	131	1,000	8.1	9.0	340	130
	Fremont Slough Drain 3 mi SE of North Platte, NE	Oct. 07	1120	10	612	7.7	9.5	250	57
6930.00	North Platte River at North Platte, NE	Oct. 04	1500	405	629	8.1	17.0	190	18
	Sutherland Power Return 2 mi S. of North Platte, NE	Oct. 07	0850	663	813	8.2	10.0	220	42
7657.00	Supply Canal (Tri-Co Div) nr. Maxwell, NE	Oct. 05	0900	831	725	8.3	14.0	220	37
	Whitehorse Creek 4 mi east of North Platte, NE	Oct. 04	1630	11	341	7.8	18.0	140	0
	Platte River at Maxwell, NE (north channel)	Oct. 05	1045	215	704	7.8	14.0	220	33
	Platte River at Maxwell, NE (south channel)	Oct. 05	1200	28	790	8.2	15.0	290	68
	Pawnee Creek at Brady, NE	Oct. 05	1430	8.1	242	7.6	18.0	94	0
7659.80	Platte River at Brady, NE (north channel)	Oct. 05	1600	239	699	8.2	22.0	210	30
7659.90	Platte River at Brady, NE (south channel)	Oct. 05	1715	43	800	8.3	18.5	280	60
	Thirty Mile Canal 3 mi SE of Brady, NE	Oct. 06	0845	4.2	804	8.0	14.0	290	73
	Gothenburg Canal 5 mi SE of Brady, NE	Oct. 06	0945	52	645	8.4	11.0	210	33
7662.47	Platte R. at Gothenburg, NE (north channel)	Oct. 06	1315	192	670	8.5	13.5	220	35
7662.48	Platte R. at Gothenburg, NE (middle channel)	Oct. 06	1245	2.7	720	7.9	16.5	220	31
7662.49	Platte R. at Gothenburg, NE (south channel)	Oct. 06	1200	118	780	8.3	12.0	250	48
	Buffalo Creek 2 mi west of Cozad, NE	Oct. 06	1430	.35	1,620	7.9	15.0	550	250
7665.00	Platte R. nr. Cozad, NE (north channel)	Oct. 06	1540	346	760	7.9	16.5	250	45
	Platte R. nr. Cozad, NE (south channel)	Oct. 06	1530	7.9	972	8.1	16.5	320	71
	Platte R. 3 mi SE of Darr, NE (north channel)	Oct. 04	1615	370	790	8.5	18.5	250	37
	Sand, fine to coarse, much medium, some limy siltstone								
7670.00	Platte R. 3 mi SE of Darr, NE (south channel)	Oct. 04	1445	14	1,100	8.3	18.0	400	100
	Platte River 3 mi SE of Lexington, NE	Oct. 04	1600	414	840	8.5	19.5	260	49
	Phelps Co. Canal Return to Platte River 6 mi SE of Lexington, NE	Oct. 19	0900	240	803	8.3	11.0	230	55
	Plum Creek 7 mi southwest of Overton, NE	Oct. 19	1030	3.8	848	8.0	9.0	350	91
	Drain to Platte River 5 mi SW of Overton, NE	Oct. 19	1145	1.1	978	7.9	9.0	340	87
7680.00	Platte River near Overton, NE (Totflo)	Oct. 19	1415	777	832	8.2	8.0	260	65
	Spring Creek 3 mi SE of Overton, NE	Oct. 19	1515	10	1,460	8.3	8.0	470	82
	Drain to Platte R. 4 mi SE of Overton, NE	Oct. 20	1030	3.0	1,020	8.0	6.0	350	140
	Drain to Platte R. 5 mi SE of Overton, NE	Oct. 20	0915	1.3	1,040	8.3	9.0	380	140
	Platte River 2 mi south of Elm Creek, NE	Oct. 20	1545	764	869	8.4	9.0	270	64
	Drain to So. Ch. Platte R. 4 mi SE of Elm Creek, NE	Oct. 20	1250	9.3	1,160	8.1	9.0	440	170
	Drain to Platte River 4 mi SW of Elm Creek, NE	Oct. 20	1145	1.3	1,340	8.9	7.0	560	250
	Drain to Platte River 3 mi SW of Odessa, NE	Oct. 21	0945	1.2	1,370	8.4	3.0	580	230
7700.00	Platte River near Odessa, NE	Oct. 20	1715	863	859	8.4	11.0	270	67
	Turkey Creek 3 mi SE of Odessa, NE	Oct. 21	0830	.41	1,040	8.5	2.5	390	94
7702.00	No. Dry Creek Ditch 2.5 mi SW of Kearney, NE	Oct. 21	1100	11	1,040	8.4	6.5	450	180
	Platte River near Kearney, NE	Oct. 21	1200	809	876	8.3	8.0	280	67
	No. Channel Platte R. 4 mi SE of Kearney, NE	Oct. 21	1330	14	1,080	8.3	11.0	280	66
	Crooked Cr. Drainage Ditch 6 mi SE of Kearney, NE	Oct. 21	1430	3.4	701	8.2	13.5	290	67
	Platte River 4.5 mi south of Gibbon, NE	Oct. 21	1600	732	868	8.6	12.0	270	70
	Platte River 4 mi south of Shelton, NE	Oct. 21	1730	843	894	8.2	13.0	280	75
	Platte R. 4 mi S. of Wood River, NE (So. Channel)	Oct. 20	1200	412	1,030	7.7	7.5	390	150
	Platte R. 6 mi SE of Wood River, NE (Mid. Channel)	Oct. 20	1400	438	880	8.0	8.0	270	64
	Platte R. 6 mi SE of Wood River, NE (So. Channel)	Oct. 20	1245	406	865	8.5	7.5	280	75
7705.00	Platte River near Grand Island, NE	Oct. 21	1145	855	890	8.3	8.0	280	72
	Platte River 3 mi SE of Chapman, NE	Oct. 21	0900	887	885	8.1	4.0	270	71
	Wood River 2 mi SE of Chapman, NE	Oct. 21	0945	33	---	7.8	7.5	310	100
	Platte River 2 mi south of Central City, NE	Oct. 21	1015	912	890	8.2	5.0	270	74
	Warm Slough 4 mi NE of Central City, NE	Oct. 22	1100	.14	985	7.8	8.0	350	110
	Platte River at Silver Creek, NE	Oct. 22	1530	945	900	8.1	13.5	230	22
	Silver Creek at Silver Creek, NE	Oct. 22	1430	21	635	7.8	14.0	240	70
	Prairie Creek 5 mi SW of Duncan, NE	Oct. 25	1445	27	405	8.0	15.0	150	9
7740.00	Platte River near Duncan, NE	Oct. 25	1545	829	870	8.5	15.0	280	81
	Platte River 1.5 mi south of Columbus, NE	Oct. 26	1230	848	880	8.2	12.0	280	76
	Clear Creek 4 mi south of Columbus, NE	Oct. 26	1130	40	620	7.7	11.0	280	47

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

STATION NO. (06-)	LOCATION	DATE	TIME	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM DISSOLVED (MG/L AS MG) (00925)	SODIUM DISSOLVED (MG/L AS NA) (00930)	SODIUM ADSORP- TION RATIO (00931)	POTASSIUM DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CaCO_3) (90410) ³
7640.00	South Platte River at Julesburg, CO	Oct. 04	1300	200	67	210	3.3	16	232
	Western Canal Div. 6 mi SW of Big Springs, NE	Oct. 05	1030	200	67	210	3.3	17	212
	South Platte River at Big Springs, NE	Oct. 04	1510	200	66	210	3.3	16	206
	South Platte River at Brule, NE	Oct. 05	0835	190	65	200	3.2	16	210
	South Platte River at Ogallala, NE	Oct. 05	1125	190	65	210	3.4	16	204
	South Platte R. Supply Canal 6 mi SW of Paxton, NE	Oct. 05	1615	180	63	200	3.3	16	208
	South Platte River at Paxton, NE	Oct. 06	0925	150	47	150	2.9	13	197
	South Platte River at Sutherland, NE	Oct. 06	1130	100	25	91	2.2	13	215
	South Platte River at Hershey, NE	Oct. 06	1535	100	25	89	2.2	13	209
	South Platte R. Trib. 3 mi west of North Platte, NE	Oct. 06	1710	77	31	130	3.4	18	233
7655.00	South Platte River at North Platte, NE	Oct. 07	0955	95	24	81	2.0	13	210
	Fremont Slough Drain 3 mi SE of North Platte, NE	Oct. 07	1120	76	15	24	.7	13	195
6930.00	North Platte River at North Platte, NE	Oct. 04	1500	54	14	51	1.7	9.6	174
	Sutherland Power Return 2 mi S. of North Platte, NE	Oct. 07	0850	52	21	91	2.9	11	174
7657.00	Supply Canal (Tri-Co Div) nr. Maxwell, NE	Oct. 05	0900	59	17	68	2.1	10	180
	Whitehorse Creek 4 mi east of North Platte, NE	Oct. 04	1630	46	6.0	11	.4	12	161
	Platte River at Maxwell, NE (north channel)	Oct. 05	1045	60	16	62	2.0	10	183
	Platte River at Maxwell, NE (south channel)	Oct. 05	1200	79	22	66	1.8	14	220
	Pawnee Creek at Brady, NE	Oct. 05	1430	31	4.0	7.9	.4	8.1	116
7659.80	Platte River at Brady, NE (north channel)	Oct. 05	1600	59	16	63	2.0	11	183
7659.90	Platte River at Brady, NE (south channel)	Oct. 05	1715	76	21	62	1.7	15	216
	Thirty Mile Canal 3 mi SE of Brady, NE	Oct. 06	0845	80	23	67	1.8	15	221
	Gothenburg Canal 5 mi SE of Brady, NE	Oct. 06	0945	59	16	60	1.9	10	180
7662.47	Platte R. at Gothenburg, NE (north channel)	Oct. 06	1315	61	17	62	1.9	11	187
7662.48	Platte R. at Gothenburg, NE (middle channel)	Oct. 06	1245	60	17	69	2.2	10	189
7662.49	Platte R. at Gothenburg, NE (south channel)	Oct. 06	1200	69	20	67	2.0	13	207
	Buffalo Creek 2 mi west of Cozad, NE	Oct. 06	1430	150	42	130	2.6	37	302
7665.00	Platte R. nr. Cozad, NE (north channel)	Oct. 06	1540	68	19	65	1.9	12	203
	Platte R. nr. Cozad, NE (south channel)	Oct. 06	1530	86	26	78	2.0	14	251
	Platte R. 3 mi SE of Darr, NE (north channel)	Oct. 04	1615	68	19	66	1.9	13	211
	Platte R. 3 mi SE of Darr, NE (south channel)	Oct. 04	1445	110	30	85	2.0	21	297
7670.00	Platte River 3 mi SE of Lexington, NE	Oct. 04	1600	73	20	70	2.0	14	216
	Phelps Co. Canal Return to Platte River 6 mi SE of Lexington, NE	Oct. 19	0900	58	21	83	2.6	11	177
	Plum Creek 7 mi southwest of Overton, NE	Oct. 19	1030	97	25	48	1.2	15	255
	Drain to Platte River 5 mi SW of Overton, NE	Oct. 19	1145	93	27	80	2.0	14	257
7680.00	Platte River near Overton, NE (Totflo)	Oct. 19	1415	69	22	80	2.3	12	198
	Spring Creek 3 mi SE of Overton, NE	Oct. 19	1515	130	35	150	3.2	34	387
	Drain to Platte R. 4 mi SE of Overton, NE	Oct. 20	1030	100	24	83	2.1	12	210
	Drain to Platte R. 5 mi SE of Overton, NE	Oct. 20	0915	110	25	72	1.7	14	243
	Platte River 2 mi south of Elm Creek, NE	Oct. 20	1545	72	22	79	2.2	12	207
	Drain to So. Ch. Platte R. 4 mi SE of Elm Creek, NE	Oct. 20	1250	130	27	89	2.0	14	269
	Drain to Platte River 4 mi SW of Elm Creek, NE	Oct. 20	1145	170	33	84	1.6	15	316
	Drain to Platte River 3 mi SW of Odessa, NE	Oct. 21	0945	170	37	80	1.5	31	347
7700.00	Platte River near Odessa, NE	Oct. 20	1715	72	22	79	2.2	13	204
	Turkey Creek 3 mi SE of Odessa, NE	Oct. 21	0830	110	28	77	1.8	13	296
	No. Dry Creek Ditch 2.5 mi SW of Kearney, NE	Oct. 21	1100	140	24	46	1.0	15	267
7702.00	Platte River near Kearney, NE	Oct. 21	1200	74	22	79	2.2	12	209
	No. Channel Platte R. 4 mi SE of Kearney, NE	Oct. 21	1330	76	23	100	2.8	14	219
	Crooked Cr. Drainage Ditch 6 mi SE of Kearney, NE	Oct. 21	1430	93	14	30	.8	7.8	223
	Platte River 4.5 mi south of Gibbon, NE	Oct. 21	1600	73	22	79	2.2	13	203
	Platte River 4 mi south of Shelton, NE	Oct. 21	1730	74	23	80	2.2	13	205
	Platte R. 4 mi S. of Wood River, NE (So. Channel)	Oct. 20	1200	110	28	80	1.9	8.7	237
	Platte R. 6 mi SE of Wood River, NE (Mid. Channel)	Oct. 20	1400	72	22	79	2.2	12	207
	Platte R. 6 mi SE of Wood River, NE (So. Channel)	Oct. 20	1245	73	23	78	2.2	11	202
7705.00	Platte River near Grand Island, NE	Oct. 21	1145	73	23	80	2.2	12	205
	Platte River 3 mi SE of Chapman, NE	Oct. 21	0900	72	23	81	2.3	12	204
	Wood River 2 mi SE of Chapman, NE	Oct. 21	0945	91	19	100	2.6	14	203
	Platte River 2 mi south of Central City, NE	Oct. 21	1015	72	23	83	2.3	12	201
	Warm Slough 4 mi NE of Central City, NE	Oct. 22	1100	98	26	67	1.7	22	243
	Platte River at Silver Creek, NE	Oct. 22	1530	--	19	--	--	10	204
	Silver Creek at Silver Creek, NE	Oct. 22	1430	73	14	31	.9	9.1	170
	Prairie Creek 5 mi SW of Duncan, NE	Oct. 25	1445	47	9.0	18	.7	8.6	146
7740.00	Platte River near Duncan, NE	Oct. 25	1545	75	23	82	2.3	13	201
	Platte River 1.5 mi south of Columbus, NE	Oct. 26	1230	73	23	82	2.3	13	201
	Clear Creek 4 mi south of Columbus, NE	Oct. 26	1130	84	16	23	.6	8.3	229

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

STATION NO. (06-)	LOCATION	DATE	TIME	SULFATE	CHLORIDE	FLUORIDE	SILICA	SOLIDS, SUM	NITROGEN,
				DISSOLVED (MG/L AS SO ₄) (00945)	DISSOLVED (MG/L AS CL) (00940)	DISSOLVED (MG/L AS F) (00950)	DISSOLVED (MG/L AS SiO ₂) (00955)	OF CONSTIT- UENTS DISSOLVED (MG/L) (70301)	NO ₂ + NO ₃ DISSOLVED (MG/L AS N) (00631)
7640.00	South Platte River at Julesburg, CO	Oct. 04	1300	870	96	0.7	24	1,630	1.7
	Western Canal Div. 6 mi SW of Big Springs, NE	Oct. 05	1030	860	93	.7	24	1,610	3.4
	South Platte River at Big Springs, NE	Oct. 04	1510	820	94	.7	24	1,560	1.7
	South Platte River at Brule, NE	Oct. 05	0835	840	93	.7	23	1,560	1.6
	South Platte River at Ogallala, NE	Oct. 05	1125	820	88	.7	22	1,540	1.4
	South Platte R. Supply Canal 6 mi SW of Paxton, NE	Oct. 05	1615	800	91	.8	22	1,500	1.1
	South Platte River at Paxton, NE	Oct. 06	0925	580	67	.7	23	1,150	.22
	South Platte River at Sutherland, NE	Oct. 06	1130	300	34	.6	37	733	.61
	South Platte River at Hershey, NE	Oct. 06	1535	290	36	.5	36	717	.45
South Platte R. Trib. 3 mi west of North Platte, NE	Oct. 06	1710	300	28	1.0	19	788	9.9	
7655.00	South Platte River at North Platte, NE	Oct. 07	0955	270	34	.5	35	682	.72
	Fremont Slough Drain 3 mi SE of North Platte, NE	Oct. 07	1120	91	14	.4	53	415	2.6
6930.00	North Platte River at North Platte, NE	Oct. 04	1500	110	11	.6	39	399	1.1
	Sutherland Power Return 2 mi S. of North Platte, NE	Oct. 07	0850	200	28	.5	24	534	.42
7657.00	Supply Canal (Tri-Co Div) nr. Maxwell, NE	Oct. 05	0900	160	17	.5	34	478	.87
	Whitehorse Creek 4 mi east of North Platte, NE	Oct. 04	1630	19	3.6	.5	45	241	.25
7659.80	Platte River at Maxwell, NE (north channel)	Oct. 05	1045	140	16	.6	35	453	.80
	Platte River at Maxwell, NE (south channel)	Oct. 05	1200	170	23	.6	41	552	.96
	Pawnee Creek at Brady, NE	Oct. 05	1430	10	1.8	.4	48	184	.67
	Platte River at Brady, NE (north channel)	Oct. 05	1600	150	16	.6	35	463	.55
7659.90	Platte River at Brady, NE (south channel)	Oct. 05	1715	170	23	.6	39	540	.89
	Thirty Mile Canal 3 mi SE of Brady, NE	Oct. 06	0845	180	24	.6	36	563	1.1
	Gothenburg Canal 5 mi SE of Brady, NE	Oct. 06	0945	140	22	.5	36	454	.60
7662.47	Platte R. at Gothenburg, NE (north channel)	Oct. 06	1315	140	15	.6	35	456	.47
7662.48	Platte R. at Gothenburg, NE (middle channel)	Oct. 06	1245	150	18	.5	32	470	.10
7662.49	Platte R. at Gothenburg, NE (south channel)	Oct. 06	1200	160	19	.6	37	514	.82
	Buffalo Creek 2 mi west of Cozad, NE	Oct. 06	1430	480	69	.5	30	1,130	1.6
7665.00	Platte R. nr. Cozad, NE (north channel)	Oct. 06	1540	160	18	.6	36	504	.80
	Platte R. nr. Cozad, NE (south channel)	Oct. 06	1530	220	28	.6	34	642	.93
	Platte R. 3 mi SE of Darr, NE (north channel)	Oct. 04	1615	160	21	.6	36	514	.90
7670.00	Platte R. 3 mi SE of Darr, NE (south channel)	Oct. 04	1445	240	32	.5	48	766	4.8
	Platte River 3 mi SE of Lexington, NE	Oct. 04	1600	170	24	.6	37	544	1.2
	Phelps Co. Canal Return to Platte River 6 mi SE of Lexington, NE	Oct. 19	0900	220	27	.6	26	557	.81
	Plum Creek 7 mi southwest of Overton, NE	Oct. 19	1030	170	26	.4	30	569	.94
7680.00	Drain to Platte River 5 mi SW of Overton, NE	Oct. 19	1145	220	32	.7	35	667	2.5
	Platte River near Overton, NE (Totflo)	Oct. 19	1415	210	25	.6	31	574	1.1
	Spring Creek 3 mi SE of Overton, NE	Oct. 19	1515	380	47	.7	43	1,060	2.7
	Drain to Platte R. 4 mi SE of Overton, NE	Oct. 20	1030	250	37	.7	34	681	3.2
7700.00	Drain to Platte R. 5 mi SE of Overton, NE	Oct. 20	0915	210	38	.7	35	673	5.0
	Platte River 2 mi south of Elm Creek, NE	Oct. 20	1545	210	25	.6	32	581	1.0
	Drain to So. Ch. Platte R. 4 mi SE of Elm Creek, NE	Oct. 20	1250	300	38	.7	32	809	3.7
	Drain to Platte River 4 mi SW of Elm Creek, NE	Oct. 20	1145	350	42	.7	30	932	3.8
7702.00	Drain to Platte River 3 mi SW of Odessa, NE	Oct. 21	0945	370	40	.5	26	982	4.3
	Platte River near Odessa, NE	Oct. 20	1715	210	28	.6	31	582	.92
	Turkey Creek 3 mi SE of Odessa, NE	Oct. 21	0830	240	25	.4	43	716	.26
	No. Dry Creek Ditch 2.5 mi SW of Kearney, NE	Oct. 21	1100	240	23	.4	32	707	6.0
7705.00	Platte River near Kearney, NE	Oct. 21	1200	220	26	.7	32	596	1.1
	No. Channel Platte R. 4 mi SE of Kearney, NE	Oct. 21	1330	230	55	.7	25	668	2.9
	Crooked Cr. Drainage Ditch 6 mi SE of Kearney, NE	Oct. 21	1430	68	14	.5	29	461	16
	Platte River 4.5 mi south of Gibbon, NE	Oct. 21	1600	210	27	.6	29	581	1.2
7740.00	Platte River 4 mi south of Shelton, NE	Oct. 21	1730	220	29	.6	29	596	1.0
	Platte R. 4 mi S. of Wood River, NE (So. Channel)	Oct. 20	1200	290	32	.7	15	724	3.9
	Platte R. 6 mi SE of Wood River, NE (Mid. Channel)	Oct. 20	1400	210	27	.6	27	578	.82
	Platte R. 6 mi SE of Wood River, NE (So. Channel)	Oct. 20	1245	220	26	.6	25	582	.86
7705.00	Platte River near Grand Island, NE	Oct. 21	1145	220	27	.6	26	588	.81
	Platte River 3 mi SE of Chapman, NE	Oct. 21	0900	220	27	.5	26	587	.68
	Wood River 2 mi SE of Chapman, NE	Oct. 21	0945	130	120	.5	26	651	6.4
	Platte River 2 mi south of Central City, NE	Oct. 21	1015	210	33	.5	25	583	.93
7740.00	Warm Slough 4 mi NE of Central City, NE	Oct. 22	1100	250	25	.4	11	649	.86
	Platte River at Silver Creek, NE	Oct. 22	1530	200	31	.5	20	533	1.2
	Silver Creek at Silver Creek, NE	Oct. 22	1430	110	15	.4	16	412	9.3
	Prairie Creek 5 mi SW of Duncan, NE	Oct. 25	1445	47	7.2	.4	24	262	2.9
7740.00	Platte River near Duncan, NE	Oct. 25	1545	210	33	.6	26	589	1.3
	Platte River 1.5 mi south of Columbus, NE	Oct. 26	1230	220	33	.6	25	595	1.0
	Clear Creek 4 mi south of Columbus, NE	Oct. 26	1130	78	10	.5	29	405	4.2

One-time triazine herbicide measurements were made on samples from four stations in the Platte River Basin during October 5-26, 1982. Samples were collected in conjunction with low-flow investigations at these and other sites.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

STATION NO.	LOCATION	DATE	PROPAZINE TOTAL (UG/L) (39024)	SIMETRYN TOTAL (UG/L) (39054)	SIMAZINE TOTAL (UG/L) (39055)	PROMETONE TOTAL (UG/L) (39056)	PROMETRYNE TOTAL (UG/L) (39057)	ATRAZINE TOTAL (UG/L) (39630)
06-7648.80	South Platte R. at Roscoe, NE	Oct. 05	< .1	< .1	< .1	< .1	< .1	< .1
06-7680.00	Platte R. nr. Overton, NE (Totflo)	Oct. 19	< .1	< .1	< .1	< .1	< .1	< .1
06-7705.00	Platte R. nr. Grand Island, NE	Oct. 21	< .1	< .1	< .1	< .1	< .1	.1
06-7740.00	Platte R. nr. Duncan, NE	Oct. 26	< .1	< .1	< .1	.1	< .1	< .1

STATION NO.	LOCATION	DATE	CYANAZINE TOTAL (UG/L) (81757)	AMETRYNE TOTAL (UG/L) (82184)	ATRATONE TOTAL (UG/L) (82185)	CYPRAZINE TOTAL (UG/L) (82187)	SIMETONE TOTAL (UG/L) (82188)
06-7648.80	South Platte R. at Roscoe, NE	Oct. 05	< .1	< .1	< .1	< .1	< .1
06-7680.00	Platte R. nr. Overton, NE (Totflo)	Oct. 19	< .1	< .1	< .1	< .1	< .1
06-7705.00	Platte R. nr. Grand Island, NE	Oct. 21	< .1	< .1	< .1	< .1	< .1
06-7740.00	Platte R. nr. Duncan, NE	Oct. 26	< .1	< .1	< .1	< .1	< .1

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHDS) (00095)	PH (STAND- ARD 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

06459350 - AINSWORTH CANAL NR JOHNSTOWN NE (LAT 42 33 30 LONG 100 05 14)

JUN , 1983											
07...	1540	85	180	8.4	22.0	67	0	21	3.5	7.1	.4
JUL											
26...	1530	325	190	8.2	23.5	70	0	22	3.6	7.3	.4

06462450 - PLUM CREEK AT JOHNSTOWN, NEBR (LAT 42 34 08 LONG 100 06 22)

NOV , 1982											
15...	1530	24	208	7.4	5.5	72	0	23	3.6	7.8	.4
JUN , 1983											
06...	1520	33	235	8.1	20.0	81	0	25	4.5	11	.6
JUL											
26...	1450	75	--	8.2	26.0	120	0	37	7.1	16	.7

06462470 - PLUM CREEK NEAR JOHNSTOWN, NEBR (LAT 42 40 01 LONG 100 03 26)

NOV , 1982											
15...	1645	74	200	7.6	6.0	70	0	23	3.1	6.9	.4
JUN , 1983											
07...	1630	85	228	8.2	19.5	83	0	26	4.3	9.8	.5
JUL											
26...	1630	166	--	8.1	24.5	120	0	36	6.7	14	.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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, 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 DTS- 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 , 1983										
07...	5.4	82	9.0	1.1	.30	41	138	.19	31.6	<.10
JUL										
26...	5.4	84	9.1	1.0	.30	39	138	.19	121	<.10

06462450 - PLUM CREEK AT JOHNSTOWN, NEBR (LAT 42 34 08 LONG 100 06 22)

NOV , 1982										
15...	6.3	85	7.0	2.5	.30	53	154	.21	10.0	1.5
JUN , 1983										
06...	7.1	105	6.6	2.3	.40	45	165	.22	14.7	1.2
JUL										
26...	9.6	154	8.2	3.1	.60	43	217	.30	43.9	.78

06462470 - PLUM CREEK NEAR JOHNSTOWN, NEBR (LAT 42 40 01 LONG 100 03 26)

NOV , 1982										
15...	6.0	87	6.0	1.7	.30	57	156	.21	31.2	.97
JUN , 1983										
07...	6.8	105	6.3	1.9	.40	52	170	.23	39.1	.83
JUL										
26...	8.5	149	8.2	2.7	.60	47	213	.29	95.5	.64

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
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NIOBRARA RIVER BASIN--Continued

06463050 - LONG PINE CREEK AT LONG PINE, NEBR. (LAT 42 32 59 LONG 099 42 23)

NOV , 1982											
16...	1650	54	137	7.8	9.0	49	0	16	2.3	5.5	.4
JUN , 1983											
08...	1820	52	138	8.4	18.5	49	0	16	2.3	5.6	.4
JUL											
27...	1700	60	142	7.2	20.5	49	0	16	2.3	5.9	.4

06463090 - BONE CREEK AT AINSWORTH, NEBR (LAT 42 32 51 LONG 099 52 33)

NOV , 1982											
16...	1255	3.4	187	7.3	6.0	65	0	20	3.6	8.4	.5
JUN , 1983											
08...	1400	3.3	194	8.5	20.0	73	0	23	3.8	7.4	.4
JUL											
28...	0745	2.0	305	7.4	19.0	110	0	33	6.0	14	.6

06463290 - SAND DRAW NR JOHNSTOWN NE (LAT 42 34 08 LONG 099 58 08)

NOV , 1982											
16...	0850	1.9	167	7.3	1.0	57	0	18	3.0	7.9	.5
JUN , 1983											
08...	0930	1.6	174	7.7	18.5	67	0	22	3.0	6.3	.3
JUL											
26...	1745	2.8	212	7.6	24.0	83	0	27	3.7	8.1	.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 CONSI- TUENTS, DIS- SOLVED (MG/L AS SiO2) (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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06463050 - LONG PINE CREEK AT LONG PINE, NEBR. (LAT 42 32 59 LONG 099 42 23)

NOV , 1982										
16...	4.0	60	5.0	.8	.20	55	125	.17	18.2	1.2
JUN , 1983										
08...	4.1	59	4.0	1.1	.30	54	123	.17	17.2	.90
JUL										
27...	4.6	59	3.8	1.4	.30	54	124	.17	20.0	1.2

06463090 - BONE CREEK AT AINSWORTH, NEBR (LAT 42 32 51 LONG 099 52 33)

NOV , 1982										
16...	7.3	78	10	3.9	.30	45	145	.20	1.3	1.9
JUN , 1983										
08...	4.8	81	6.5	2.2	.30	45	142	.19	1.3	2.1
JUL										
28...	9.2	125	13	4.8	.30	44	199	.27	1.1	3.6

06463290 - SAND DRAW NR JOHNSTOWN NE (LAT 42 34 08 LONG 099 58 08)

NOV , 1982										
16...	7.5	77	<5.0	3.8	.30	38	136	.18	.70	.17
JUN , 1983										
08...	3.6	81	4.5	1.4	.30	34	124	.17	.53	.13
JUL										
26...	5.2	100	8.9	2.4	.30	39	155	.21	1.2	.22

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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)

NOV , 1982											
16...	1110	8.7	276	8.0	.5	94	0	29	5.3	15	.7
JUN , 1983											
08...	1210	6.9	268	8.5	22.0	95	0	30	4.9	14	.7
JUL											
27...	0900	18	258	7.9	21.0	92	0	29	4.8	13	.6

06463350 - BONE CREEK NEAR LONG PINE, NEBR (LAT 42 40 16 LONG 099 46 06)

NOV , 1982											
16...	1450	51	257	8.1	7.0	96	0	30	5.2	12	.6
JUN , 1983											
08...	1610	73	226	8.5	24.5	85	0	27	4.3	9.5	.5
JUL											
27...	1410	122	242	7.5	28.5	89	0	28	4.6	10	.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY 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, 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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06463310 - SAND DRAW NR MEADVILLE NE (LAT 42 38 10 LONG 099 51 10)

NOV , 1982										
16...	8.7	114	12	3.9	.20	35	177	.24	4.2	4.0
JUN , 1983										
08...	7.5	106	11	2.8	.30	28	162	.22	3.0	3.2
JUL										
27...	10	109	16	4.7	.30	35	178	.24	8.7	2.0

06463350 - BONE CREEK NEAR LONG PINE, NEBR (LAT 42 40 16 LONG 099 46 06)

NOV , 1982										
16...	8.4	110	10	6.0	.30	51	189	.26	26.0	2.4
JUN , 1983										
08...	6.5	100	8.6	3.3	.30	46	165	.23	32.6	.98
JUL										
27...	9.0	105	11	5.2	.30	46	177	.24	58.3	1.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	COLOR (PLAT- INUM- CORALY UNITS) (00080)	HARD- NESS (MG/L AS CAC03) (00900)	HARD- NONCAR- BONATE (MG/L AS CAC03) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
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NIOBRARA RIVER BASIN--Continued

06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)										
MAY , 1983	25...	1450	23	291	8.5	21.0	5	130	12	42
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)										
MAY , 1983	25...	1600	10	273	8.5	21.5	5	130	0	46
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)										
MAY , 1983	25...	1235	24	224	7.6	18.0	10	98	2	33
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)										
MAY , 1983	25...	1335	13	313	8.1	19.5	10	140	4	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- LITY 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)
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06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)										
MAY , 1983	25...	5.2	9.0	.4	5.6	115	13	4.8	<.10	33
06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)										
MAY , 1983	25...	4.8	7.0	.3	5.8	144	7.0	2.3	<.10	43
06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)										
MAY , 1983	25...	3.9	7.4	.3	4.3	97	11	2.6	<.10	37
06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)										
MAY , 1983	25...	6.0	9.5	.4	5.0	141	21	3.3	<.10	37

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SOLIDS, SOLUBLE SOLIDS (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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
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NIOBRARA RIVER BASIN--Continued

06465050 - EAGLE CREEK NEAR MIDWAY NEBR (LAT 42 38 02 LONG 098 46 29)

MAY , 1983 25...	182	.25	11.3	4.6	.110	30	22	5
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06465100 - EASTBRANCH EAGLE CREEK NR MIDWAY NEBR (LAT 42 37 30 LONG 098 45 56)

MAY , 1983 25...	202	.28	5.5	.91	.080	30	13	5
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06465398 - REDBIRD CREEK NR MEEK NEBRASKA (LAT 42 39 33 LONG 098 33 31)

MAY , 1983 25...	157	.21	10.2	1.8	.070	20	67	13
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06465420 - BLACKBIRD CREEK NEAR MEEK NEBR (LAT 42 39 46 LONG 098 34 24)

MAY , 1983 25...	214	.29	7.5	1.9	.070	30	40	22
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)
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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)

MAY , 1983											
31...	1340	--	238	8.6	17.0	88	0	28	4.4	8.6	.4
AUG											
02...	1305	421	228	8.4	28.5	81	0	26	3.8	7.4	.4
SEP											
27...	1240	--	202	7.4	19.5	78	0	25	3.8	7.3	.4

06781530 - DEER CREEK NEAR BOELUS NE (LAT 41 05 37 LONG 098 42 37)

OCT , 1982											
28...	1430	.75	1060	7.3	11.5	550	51	160	37	19	.4
JUN , 1983											
01...	1415	.94	956	8.4	13.5	470	73	130	36	21	.4
AUG											
03...	1445	.91	642	8.0	28.5	260	3	73	19	13	.4
SEP											
28...	1320	E.10	926	7.9	19.0	480	105	140	32	20	.4

06784400 - OAK CREEK NEAR FARWELL NE (LAT 41 11 30 LONG 098 41 25)

OCT , 1982											
28...	1520	14	620	7.5	11.5	280	0	82	18	17	.5
JUN , 1983											
01...	1455	18	617	8.4	13.0	290	0	84	19	18	.5
AUG											
03...	1505	18	565	7.9	25.5	230	0	69	15	17	.5
SEP											
28...	1345	13	585	7.9	18.0	270	0	79	17	18	.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINTY 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)
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06778860 - FARWELL CANAL AT HWY 58 ABV SHERMAN RES NE (LAT 41 22 23 LONG 099 00 44)

MAY , 1983										
31...	6.7	109	9.5	1.5	.30	54	178	.24	--	.34
AUG										
02...	6.3	100	8.7	1.7	.30	57	171	.23	195	.40
SEP										
27...	5.8	93	7.7	1.2	.30	57	164	.22	--	.56

06781530 - DEER CREEK NEAR BOELUS NE (LAT 41 05 37 LONG 098 42 37)

OCT , 1982										
28...	14	502	110	12	.30	31	684	.93	1.4	<.10
JUN , 1983										
01...	15	401	120	15	.30	32	610	.83	1.5	<.10
AUG										
03...	16	258	50	6.3	.40	31	363	.49	.89	.23
SEP										
28...	16	377	150	12	.30	31	627	.85	--	<.10

06784400 - OAK CREEK NEAR FARWELL NE (LAT 41 11 30 LONG 098 41 25)

OCT , 1982										
28... 11	321	17	6.4	.30	42	386	.53	14.6	.88	
JUN , 1983										
01... 11	313	17	7.5	.30	41	385	.52	18.7	1.4	
AUG										
03... 11	267	15	5.9	.30	46	339	.46	16.5	1.6	
SEP										
28... 12	288	17	5.6	.30	50	372	.51	12.5	1.6	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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- SUPP- 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)

OCT , 1982											
28...	1230	24	657	7.5	11.0	310	0	94	19	21	.5
JUN , 1983											
01...	1300	25	704	7.9	13.0	330	0	98	20	22	.6
AUG											
03...	1310	38	--	7.9	25.0	230	0	69	14	17	.5
SEP											
28...	1225	21	623	8.0	17.5	300	0	90	18	21	.5

06784505 - DRY C NR DANNEBROG NE (LAT 41 06 18 LONG 098 36 16)

OCT , 1982											
28...	1310	3.4	909	7.2	11.0	410	43	120	27	31	.7
JUN , 1983											
01...	1340	3.3	975	8.0	13.0	450	95	130	31	36	.8
AUG											
03...	1440	5.6	702	7.9	24.5	270	8	78	19	23	.6
SEP											
28...	1250	2.8	812	7.7	17.0	410	54	120	26	32	.7

06784750 - TURKEY CREEK NEAR NYSTED NE (LAT 41 10 48 LONG 098 36 50)

OCT , 1982											
28...	1600	3.5	786	7.6	11.5	340	0	95	26	42	1.0
JUN , 1983											
01...	1540	4.0	803	8.4	13.5	340	0	92	26	42	1.0
AUG											
03...	1545	3.7	718	7.2	27.5	280	0	79	20	35	.9
SEP											
28...	1410	2.3	835	7.9	20.0	350	0	96	26	45	1.1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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, 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)

OCT , 1982										
28...	12	337	32	8.5	.30	44	433	.59	28.0	1.1
JUN , 1983										
01...	12	331	33	9.3	.30	41	434	.59	29.3	1.7
AUG										
03...	12	247	25	6.5	.30	44	336	.46	34.5	1.4
SEP										
28...	13	308	31	7.2	.30	50	415	.56	23.8	1.7

06784505 - DRY C NR DANNEBROG NE (LAT 41 06 18 LONG 098 36 16)

OCT , 1982										
28...	15	368	110	13	.40	33	570	.78	5.2	3.1
JUN , 1983										
01...	14	358	160	15	.30	35	636	.86	5.7	3.3
AUG										
03...	15	265	70	9.0	.40	40	413	.56	6.2	1.9
SEP										
28...	14	353	120	14	.30	42	580	.79	4.4	3.1

06784750 - TURKEY CREEK NEAR NYSTED NE (LAT 41 10 48 LONG 098 36 50)

OCT , 1982										
28...	15	405	26	10	.40	36	493	.67	4.7	2.8
JUN , 1983										
01...	15	386	29	13	.30	34	483	.66	5.2	4.1
AUG										
03...	16	326	24	9.2	.40	40	419	.57	4.2	5.0
SEP										
28...	17	395	33	12	.30	38	504	.69	3.1	6.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPF- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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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PLATTE RIVER BASIN--Continued

06784810 - TURKEY CREEK NORTHEAST OF DANNEBROG NE (LAT 41 09 28 LONG 098 31 06)

OCT , 1982											
28...	1145	11	803	7.4	11.0	330	0	94	23	39	1.0
JUN , 1983											
01...	1130	16	808	7.9	13.0	340	0	96	25	42	1.0
AUG											
03...	1150	17	--	7.7	23.5	230	0	65	16	26	.8
SEP											
28...	1100	9.1	759	7.8	17.0	330	0	94	22	40	1.0

06784820 - TURKEY CREEK TRIBUTARY NR ST PAUL NE (LAT 41 10 55 LONG 098 29 39)

OCT , 1982											
28...	1110	1.2	680	7.2	10.5	320	0	93	22	17	.4
JUN , 1983											
01...	1055	.90	634	8.2	14.0	300	0	84	23	19	.5
AUG											
03...	1020	2.8	--	7.8	25.5	170	0	50	11	11	.4
SEP											
28...	1035	.85	649	7.8	18.0	310	0	90	20	19	.5

06785020 - UNNAMED CREEK AT ST PAUL NE (LAT 41 12 48 LONG 098 28 35)

OCT , 1982											
28...	1005	.67	677	7.6	10.0	320	0	89	23	17	.4
JUN , 1983											
01...	1020	.10	675	8.1	13.5	330	7	88	26	20	.5
AUG											
03...	1050	7.7	285	7.7	25.0	110	0	32	6.3	8.7	.4
SEP											
28...	1010	.60	668	8.2	18.0	320	7	89	23	21	.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB DIS- SOLVED (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 (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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06784810 - TURKEY CREEK NORTHEAST OF DANNEBROG NE (LAT 41 09 28 LONG 098 31 06)

OCT , 1982										
28...	16	338	48	13	.40	37	473	.64	14.1	3.3
JUN , 1983										
01...	15	363	53	14	.30	36	499	.68	21.6	5.3
AUG										
03...	16	252	30	8.3	.40	40	353	.48	16.2	5.0
SEP										
28...	17	351	41	13	.30	41	479	.65	11.8	5.8

06784820 - TURKEY CREEK TRIBUTARY NR ST PAUL NE (LAT 41 10 55 LONG 098 29 39)

OCT , 1982										
28...	10	329	37	10	.40	28	415	.56	1.3	.20
JUN , 1983										
01...	7.6	318	32	7.6	.30	24	388	.53	.94	.21
AUG										
03...	11	193	15	3.8	.40	35	253	.34	1.9	.30
SEP										
28...	11	312	30	9.4	.40	30	397	.54	.91	.26

06785020 - UNNAMED CREEK AT ST PAUL NE (LAT 41 12 48 LONG 098 28 35)

OCT , 1982										
2A...	14	317	47	9.6	.40	18	408	.56	.74	.42
JUN , 1983										
01...	12	320	53	8.8	.30	17	417	.57	.11	<.10
AUG										
03...	9.0	126	10	2.2	.40	36	180	.25	3.7	.14
SEP										
2A...	13	310	48	8.2	.40	20	408	.56	.66	.16

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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)
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PLATTE RIVER BASIN--Continued

06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

MAY , 1983	24...	1400	.66	832	7.6	19.0	5	370	22	110
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06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

MAY , 1983	24...	1000	2.5	713	7.7	17.0	5	330	0	91
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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)
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06788495 - DANE C AT ORD, NEBR. (LAT 41 36 31 LONG 098 56 36)

MAY , 1983	24...	24	29	.7	18	352	76	17	.30	32
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06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

MAY , 1983	24...	25	25	.6	19	347	37	12	.30	30
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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)

MAY , 1983	24...	518	.70	.92	3.4	.500	0	10	230
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06788990 - MIRA C AT NORTH LOUP, NEBR. (LAT 41 29 54 LONG 098 46 46)

MAY , 1983	24...	448	.61	3.0	1.6	.660	0	10	520
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WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHQS) (00095)	PH (STAND- ARD 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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PLATTE RIVER BASIN--Continued

06790245 - AUGER CREEK AT ELBA NE (LAT 41 17 38 LONG 098 34 26)

OCT , 1982											
28...	0905	1.8	686	7.1	10.0	320	0	95	21	18	.5
JUN , 1983											
01...	0915	1.6	670	7.8	14.0	320	0	92	21	19	.5
AUG											
03...	0930	.65	706	7.6	18.0	320	2	100	16	15	.4
SEP											
28...	0910	1.0	659	7.3	15.0	320	0	95	19	17	.4

06790255 - UNNAMED CREEK SOUTH OF ELBA NE (LAT 41 16 22 LONG 098 33 24)

OCT , 1982											
28...	1040	.16	522	7.2	9.5	240	0	66	19	9.4	.3
JUN , 1983											
01...	0950	E.10	493	8.3	12.0	250	0	67	19	9.6	.3
AUG											
03...	0950	E.25	598	7.8	23.5	270	0	75	20	10	.3
SEP											
28...	0935	.13	525	7.6	16.0	260	0	72	20	10	.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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, 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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06790245 - AUGER CREEK AT ELBA NE (LAT 41 17 38 LONG 098 34 26)

OCT , 1982										
28...	10	346	28	8.2	.30	46	434	.59	2.1	.65
JUN , 1983										
01...	9.4	320	34	11	.30	35	414	.56	1.8	.89
AUG										
03...	9.0	314	29	8.0	.30	53	419	.57	.73	2.4
SEP										
28...	8.9	321	22	8.0	.30	46	409	.56	1.1	.88

06790255 - UNNAMED CREEK SOUTH OF ELBA NE (LAT 41 16 22 LONG 098 33 24)

OCT , 1982										
28...	7.2	264	10	3.3	.30	35	308	.42	.13	<.10
JUN , 1983										
01...	2.8	271	7.5	.8	.30	27	296	.40	--	<.10
AUG										
03...	8.2	298	7.3	3.7	.30	39	342	.47	--	<.10
SEP										
28...	7.9	283	7.4	3.3	.30	42	333	.45	.12	<.10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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)
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PLATTE RIVER BASIN--Continued

06803199 - ANTELOPE C AT 52ND ST AT LINCOLN NE (LAT 40 47 05 LONG 096 38 55)

DEC , 1982										
01...	1330	.11	905	7.6	10.5	13.6	380	24	110	26
JAN , 1983										
06...	1425	3.6	1900	7.8	.5	17.5	150	65	48	6.8
FEB										
10...	1030	.95	500	8.1	.5	15.5	170	10	50	12
14...	1045	3.3	450	8.2	3.0	14.9	150	14	42	9.9
MAR										
05...	0915	22	380	8.1	10.5	10.9	130	4	38	9.3
14...	1040	2.3	480	7.9	6.5	14.6	170	6	47	12
26...	0945	6.4	280	7.8	2.0	14.1	93	2	27	6.3
APR										
07...	1330	6.0	430	8.3	8.0	13.7	160	6	44	11
13...	1400	13	390	8.2	6.5	12.8	100	1	30	6.6
MAY										
09...	1145	.30	965	8.1	14.0	14.2	400	49	110	31
JUN										
09...	1200	.23	862	8.1	22.0	13.2	330	30	91	26

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 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
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06803199 - ANTELOPE C AT 52ND ST AT LINCOLN NE (LAT 40 47 05 LONG 096 38 55)

DEC , 1982									
01...	51	1	5.6	358	100	25	.770	22	450
JAN , 1983									
06...	280	10	7.7	83	35	490	.730	39	200
FEB									
10...	32	1	6.5	165	47	31	1.00	24	170
14...	26	1	6.5	132	38	27	.650	34	88
MAR									
05...	19	.7	5.6	129	35	16	.740	59	42
14...	24	.8	5.8	161	48	19	.850	39	94
26...	17	.8	4.0	92	24	15	.620	130	68
APR									
07...	24	.9	5.8	149	46	16	1.10	64	43
13...	30	1	3.6	101	27	39	.520	93	34
MAY									
09...	58	1	5.3	354	130	34	1.50	9	450
JUN									
09...	51	1	5.6	305	100	29	.760	14	160

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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)
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PLATTE RIVER BASIN--Continued

06803300 - ANTELOPE CR AT 27TH ST. LINCOLN, NEB. (LAT 40 48 10 LONG 096 40 56)

DEC , 1982										
01...	1200	.21	595	7.6	9.0	10.2	210	11	60	14
JAN , 1983										
06...	1500	9.6	1850	7.9	.5	17.1	150	64	50	6.7
FEB										
10...	1145	.93	710	8.2	.5	15.0	180	10	52	13
14...	1110	2.9	490	8.1	1.5	14.2	140	14	42	8.9
MAR										
05...	0945	23	370	8.1	10.5	10.6	130	4	39	8.9
14...	1240	1.8	490	8.5	10.5	14.7	180	8	49	13
26...	1015	14	155	8.2	1.0	14.2	44	0	14	2.2
APR										
07...	1200	8.0	450	8.5	6.5	14.2	160	9	46	12
13...	1345	27	810	8.1	6.5	12.6	72	4	23	3.6
MAY										
09...	1120	.40	--	8.3	13.0	12.0	320	67	90	23
JUN										
09...	1245	4.5	684	7.8	16.5	10.0	240	31	69	16

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 LAB (MG/L) AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)
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06803300 - ANTELOPE CR AT 27TH ST. LINCOLN, NEB. (LAT 40 48 10 LONG 096 40 56)

DEC , 1982									
01...	40	1	7.7	197	67	29	.480	33	43
JAN , 1983									
06...	290	11	9.9	89	37	490	1.30	34	120
FEB									
10...	68	2	6.6	174	55	87	1.00	14	110
14...	40	2	6.1	128	39	59	.940	29	93
MAR									
05...	21	.8	5.8	130	37	18	.830	79	38
14...	28	1	5.9	168	53	18	.750	25	50
26...	9.3	.6	2.1	48	11	11	.470	130	27
APR									
07...	25	.9	5.7	156	49	18	1.10	100	41
13...	110	6	2.5	68	16	190	.340	71	36
MAY									
09...	71	2	6.6	253	100	87	4.20	5	56
JUN									
09...	44	1	6.6	208	86	25	1.40	17	29

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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)
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PLATTE RIVER BASIN--Continued

06803405 - ANTELOPE CREEK AT COURT STREET, AT LINCOLN, NEBR (LAT 40 49 44 LONG 096 41 58)

DEC , 1982										
01...	0900	1.0	6700	7.2	9.0	9.0	380	135	100	32
JAN , 1983										
06...	1530	18	1950	8.2	3.5	15.5	160	76	53	7.5
FEB										
10...	1345	1.9	4100	7.9	5.0	15.2	340	130	96	25
14...	1145	5.8	1750	8.1	5.5	14.3	170	38	50	12
MAR										
05...	1000	30	590	7.9	11.5	9.8	120	7	35	7.9
14...	1330	3.0	3200	7.7	10.0	14.5	260	52	70	20
26...	1030	23	370	8.0	1.0	13.6	51	0	16	2.6
APR										
07...	0930	8.8	1360	8.2	5.5	15.2	190	24	53	15
13...	1300	44	1390	8.0	5.5	12.4	93	27	30	4.5
MAY										
09...	1045	1.1	6000	7.9	14.0	12.0	440	186	120	33
JUN										
09...	1345	5.6	1030	8.6	22.0	17.3	250	65	73	17

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 LAB (MG/L AS CAC03) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
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06803405 - ANTELOPE CREEK AT COURT STREET, AT LINCOLN, NEBR (LAT 40 49 44 LONG 096 41 58)

DEC , 1982									
01...	1300	30	11	247	330	1900	3.80	50	300
JAN , 1983									
06...	310	11	9.7	87	54	540	1.10	28	82
FEB									
10...	680	17	8.9	213	200	1000	2.50	10	180
14...	280	10	6.9	137	90	390	1.50	37	110
MAR									
05...	58	2	5.3	113	44	80	1.00	12	33
14...	500	14	7.8	206	170	760	1.90	20	120
26...	43	3	2.0	51	21	65	.750	110	36
APR									
07...	180	6	6.2	170	94	260	1.70	63	68
13...	210	10	3.1	67	24	310	.470	31	40
MAY									
09...	1000	22	11	250	350	1500	2.90	40	280
JUN									
09...	100	3	7.9	188	130	120	1.10	10	51

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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 AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
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PLATTE RIVER BASIN--Continued

06803501 - DEAD MANS RUN AT 66TH ST AT LINCOLN NE (LAT 40 49 02 LONG 096 37 49)

DEC , 1982										
01...	1410	1.4	645	7.2	10.5	10.6	220	28	67	14
JAN , 1983										
06...	1350	7.5	1650	7.8	2.0	16.6	170	81	56	7.2
FEB										
11...	1045	.37	1600	7.8	1.5	12.4	350	50	99	24
14...	1015	3.3	800	7.8	2.5	13.4	190	31	55	13
MAR										
05...	0845	9.1	570	7.9	12.0	10.0	150	11	43	9.8
14...	1000	.40	1080	7.9	7.0	14.3	400	24	110	31
26...	0915	25	540	8.2	2.0	14.1	140	13	40	9.9
APR										
08...	0930	.97	920	8.5	6.0	13.0	330	22	92	24
14...	1335	27	445	7.7	1.5	11.4	98	4	29	6.1
MAY										
09...	0915	.80	960	8.0	11.5	13.1	370	21	100	28
JUN										
09...	1515	.42	902	8.3	26.5	16.0	320	15	85	26

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 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
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06803501 - DEAD MANS RUN AT 66TH ST AT LINCOLN NE (LAT 40 49 02 LONG 096 37 49)

DEC , 1982									
01...	46	1	4.8	197	55	58	.540	14	120
JAN , 1983									
06...	220	8	8.1	89	30	410	.770	23	120
FEB									
11...	200	5	5.5	297	98	280	2.00	11	470
14...	75	2	5.7	160	48	120	.850	130	330
MAR									
05...	43	2	4.1	137	32	67	.450	64	96
14...	76	2	4.1	379	120	55	1.60	7	380
26...	46	2	3.5	128	33	72	.200	37	34
APR									
08...	64	2	3.8	307	91	59	1.30	7	300
14...	48	2	2.8	94	20	70	.270	95	36
MAY									
09...	67	2	4.3	345	110	45	1.80	6	230
JUN									
09...	66	2	4.9	305	100	43	.640	22	98

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS) (00061)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)	PH (STAND- ARD 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)
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PLATTE RIVER BASIN--Continued

06803503 - DEAD MANS RUN AT HIGHWAY 6, AT LINCOLN, NEBR. (LAT 40 50 33 LONG 096 40 40)

DEC , 1982										
01...	1030	1.6	1140	--	8.5	--	310	51	90	21
JAN , 1983										
06...	1315	3.7	1900	7.5	5.0	13.6	370	92	110	24
FEB										
11...	1130	2.2	1900	7.4	4.0	12.0	350	70	100	24
14...	1215	7.2	900	7.6	5.0	13.2	200	32	57	13
MAR										
05...	1100	13	580	7.8	12.5	9.9	140	16	43	8.8
14...	0900	2.2	2850	7.4	8.5	9.9	410	122	120	28
26...	1110	29	245	7.8	.5	13.6	62	1	19	3.6
APR										
08...	1030	2.7	1400	7.9	8.5	11.2	320	61	92	23
14...	1430	63	770	7.7	4.5	10.6	73	9	24	3.2
MAY										
09...	1015	2.9	1540	7.6	13.0	11.5	360	76	100	26
JUN										
09...	1430	2.4	1780	7.8	22.0	10.6	360	84	100	26

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 LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
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06803503 - DEAD MANS RUN AT HIGHWAY 6, AT LINCOLN, NEBR. (LAT 40 50 33 LONG 096 40 40)

DEC , 1982									
01...	110	3	6.5	261	91	150	1.90	34	340
JAN , 1983									
06...	240	6	7.7	282	110	380	1.90	23	380
FEB									
11...	260	6	6.7	279	120	390	1.80	11	380
14...	94	3	5.7	164	50	140	.980	38	290
MAR									
05...	46	2	4.4	128	32	67	.650	57	71
14...	420	9	6.8	294	160	610	1.70	10	330
26...	19	1	2.2	61	16	26	.580	110	53
APR									
08...	150	4	5.3	264	100	220	1.80	8	410
14...	120	6	3.1	64	13	190	.410	85	57
MAY									
09...	180	4	6.3	281	110	250	2.30	8	460
JUN									
09...	210	5	7.2	273	120	280	1.90	12	330

339

403403098244001. Local number 7N-10W-23AB.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused irrigation water-table well, diameter 8 in, depth 155 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,927 ft. Measuring point: Top of casing 1.0 ft above land-surface datum.

REMARKS.--Large amounts of ground water are pumped from municipal and industrial wells located east and northeast of the well and from irrigation wells in other directions.

PERIOD OF RECORD.--August 1934 to October 1938; August 1948 to December 1950; and January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 99.95 ft below land-surface datum, Jan. 22, 1935;
lowest, 128.82 ft below land-surface datum, July 10, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

	DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	119.61	121.62	118.65	118.23	117.77	117.64	116.14	115.89	115.37	120.55	122.27	119.66	
10	119.63	118.53	118.68	118.15	117.55	116.51	.....	115.82	115.90	119.80	122.22	119.30	
15	118.92	118.77	118.62	117.25	117.46	116.45	117.14	115.90	115.75	120.69	120.49	118.89	
20	119.37	118.95	118.48	116.95	116.76	116.30	116.00	115.89	115.70	120.00	122.16	118.87	
25	119.17	117.95	118.57	116.87	117.66	116.20	115.90	116.86	115.83	123.55	119.40	118.50	
EOM	119.07	118.59	118.35	117.90	117.65	116.20	115.96	115.82	115.91	122.00	122.46	120.37	

WTR YEAR 1983 MAX 115.37 JUN 5, 1983 MIN 123.56 JUL 22, 1983

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 west of junction of State Highways 91 and 2 north of Dunning. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 13 ft, screened 11 to 13 ft.

DATUM.--Altitude of land-surface datum is 2,618 ft. Measuring point: Top of casing 1.40 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.04 ft below land-surface datum, Mar. 8, 1950;
lowest, 6.97 ft below land-surface datum, Aug. 8, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.26	JAN 18	3.57	MAR 15	2.80	MAY 11	1.18	JUL 6	1.88	AUG 30	3.79
NOV 23	3.85	FEB 15	3.28	APR 12	2.18	JUN 6	2.65	AUG 9	3.14	SEP 27	4.31
DEC 21	3.89										

GROUND-WATER LEVELS

BOONE COUNTY

413323098074501. Local number 18N-7W-4CA.

LOCATION.--Lat 41°33'23", long 98°07'45", NE1/4SW1/4 sec.4, T.18 N., R.7 W., Hydrologic Unit 10210010, at junction of State Highways 52 and 56 approximately 1 mi east of Cedar Rapids. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

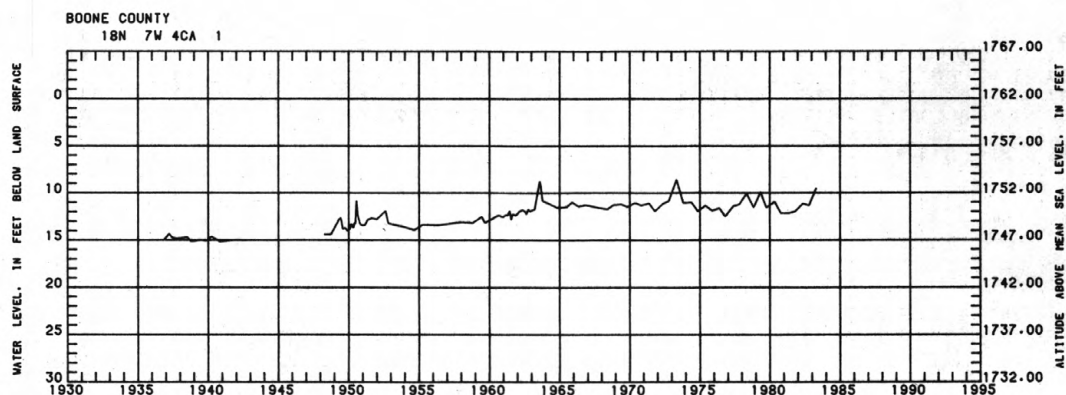
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 22 ft, screened 20 to 22 ft.

DATUM.--Altitude of land-surface datum is 1,762 ft. Measuring point: Top of casing 2.90 ft above land-surface datum.

PERIOD OF RECORD.--November 1936 to October 1942; April 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.57 ft below land-surface datum, May 4, 1973; lowest, 15.17 ft below land-surface datum, Oct. 26, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	11.35	APR 19	9.56						



GROUND-WATER LEVELS

341

BOX BUTTE COUNTY

420945102551501. Local number 25N-48W-4DDD.

LOCATION.--Lat 42°09'45", long 102°55'15", SE1/4SE1/4SE1/4 sec.4, T.25 N., R.48 W., Hydrologic Unit 10150003, approximately 3.6 mi south and 2.8 mi east of Berea. Owner: U.S. Geological Survey.

AQUIFER.--Marsland Formation of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 204 ft, screened 190 to 193 ft.

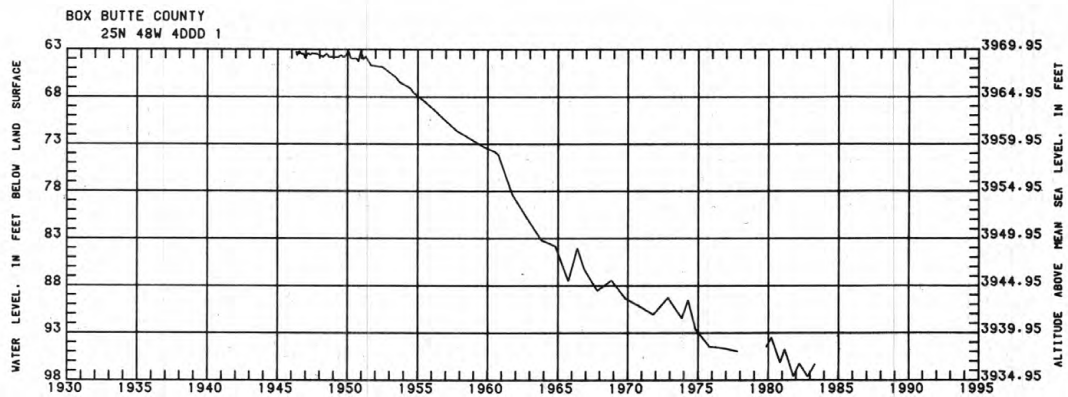
DATUM.--Altitude of land-surface datum is 4,032.95 ft. Measuring point: Top of pipe 2.00 ft above land-surface datum.

REMARKS.--Water levels in vicinity of well are affected by large withdrawals of ground water for irrigation use.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.14 ft below land-surface datum, Jan. 25, 1950; lowest, 97.63 ft below land-surface datum, Oct. 27, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983			
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	97.63	APR 26	96.35



GROUND-WATER LEVELS

BROWN COUNTY

423307099494501. Local number 30N-21W-19CC.

LOCATION.--Lat 42°33'07"N, long 99°49'45"W, SW1/4SW1/4 sec.19, T.30 N., R.21 W., Hydrologic Unit 10150004, 1.2 mi east of junction of U.S. Highway 20 and Route 7 in Ainsworth. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 52 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,511.44 ft. Measuring point: Top of casing 0.20 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumpage of ground water for irrigation and seepage losses from nearby irrigation project.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.97 ft below land-surface datum, Sept. 30, 1983; lowest, 40.96 ft below land-surface datum, Sept. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	35.63	35.28	35.04	.....	.....	34.89	34.92	34.88	34.74	34.41	33.63	32.25
10	35.52	35.25	35.03	.....	34.90	34.95	34.91	34.86	34.70	34.25	33.43	32.21
15	35.49	35.20	35.01	.....	34.90	34.93	34.92	34.86	34.64	34.17	33.21	32.10
20	35.42	35.17	.....	.....	34.93	34.92	34.90	34.84	34.56	34.06	32.94	32.13
25	35.38	35.17	.....	.....	34.91	34.90	34.90	34.83	34.54	33.93	32.70	32.00
EOM	35.30	35.09	.....	.....	34.90	34.91	34.90	34.79	34.47	33.75	32.44	31.97

WTR YEAR 1983 MAX 31.97 SEP 30, 1983 MIN 35.68 OCT 1, 1982

BUFFALO COUNTY

404618098504401. Local number 9N-14W-1DC.

LOCATION.--Lat 40°46'18"N, long 98°50'44"W, SW1/4SE1/4 sec.1, T.9 N., R.14 W., Hydrologic Unit 10200102, 1.3 mi north of the intersection of Route 30 and the North-South range-line road on the east side of Gibbon, then 0.5 mi west on section-line road. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 38 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,060.43 ft. Measuring point: Top of casing 0.80 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumpage from nearby irrigation wells.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.36 ft below land-surface datum, June 11, 1952; lowest, 29.22 ft below land-surface datum, Aug. 10, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	27.11	26.61	26.25	.....	25.82	.....	.....	24.80	24.43	23.83	26.07	26.73
10	27.02	26.53	26.20	25.95	25.77	.....	.....	24.76	24.35	23.82	26.10	26.65
15	26.93	26.48	26.17	25.99	25.78	.....	25.00	24.72	24.27	24.65	26.22	26.45
20	26.85	26.41	26.10	25.83	.....	.....	24.95	24.65	24.23	25.14	26.40	26.32
25	26.77	26.36	26.10	25.88	.....	.....	24.88	24.60	24.03	25.40	26.45	26.16
EOM	26.66	26.30	26.02	25.86	.....	.....	24.84	24.49	23.92	25.26	26.80	26.05

WTR YEAR 1983 MAX 23.78 JUL 8, 1983 MIN 27.20 OCT 1, 1982

BUFFALO COUNTY

404345098560001. Local number 9N-14W-19DD.

LOCATION.--Lat 40°43'45", long 98°56'00", SE1/4SE1/4 sec.19, T.9 N., R.14 W., Hydrologic Unit 10200102, 4.7 mi west-southwest of Gibbon on U.S. Highway 30. Owner: Robert D. Lewis.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 54 ft, casing perforated below water table.

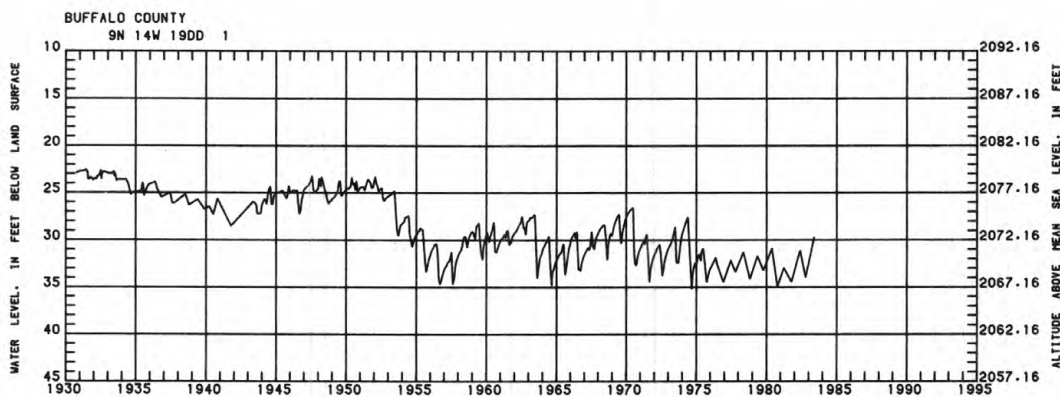
DATUM.--Altitude of land-surface datum is 2,102.16 ft. Measuring point: Hole in pump base 0.70 ft above land-surface datum.

REMARKS.--Water levels in well are affected by pumping of well and of nearby wells for irrigation supplies.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.55 ft below land-surface datum, June 9, 1931; lowest, 35.20 ft below land-surface datum, Aug. 30, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	33.98	MAY 17	29.76								



BUTLER COUNTY

411420097173002. Local number 15N-1E-27DD2.

LOCATION.--Lat 41°14'20", long 97°17'30", SE1/4SE1/4 sec.27, T.15 N., R.1 E., Hydrologic Unit 10270201, 2 mi north of the northeast corner of Rising City. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 210.0 ft, perforated 199 to 210 ft.

DATUM.--Altitude of land-surface datum is 1,618 ft. Measuring point: Top of platform, at land-surface datum.

REMARKS.--Replacement for 411420097173001, local number 15N-1E-27DD, period of record June 1958 to January 1977. Water levels in well affected by pumping from nearby wells during irrigation season.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 102.86 ft below land-surface datum, July 4, 1983; lowest, 174.50 ft below land-surface datum, Aug. 3, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	104.77	.....	103.94	.....	103.35	103.85	102.90	150.75	.....
10	104.77	104.35	103.80	103.70	103.35	103.85	.....	.....	.....
15	104.35	.....	103.57	103.52	103.34	.....	.....	.....
20	104.31	.....	103.58	103.54	103.20	.....	.....	118.95
25	104.31	.....	103.58	103.64	103.17	.....	.....	116.15
EOY	104.25	.....	103.51	103.75	102.96	.....	.....	113.85

WTR YEAR 1983 MAX 102.86 JUL 4, 1983 MIN 150.75 AUG 5, 1983

GROUND-WATER LEVELS

CHASE COUNTY

403220101384001. Local number 7N-38W-28CC.

LOCATION.--Lat 40°32'20", long 101°38'40", SW1/4SW1/4 sec.28, T.7 N., R.38 W., Hydrologic Unit 10250005, about 0.5 mi north of Imperial. Owner: Roy Hust.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled unused observation water-table well, diameter 18 in, depth 143 ft, casing perforated below water table.

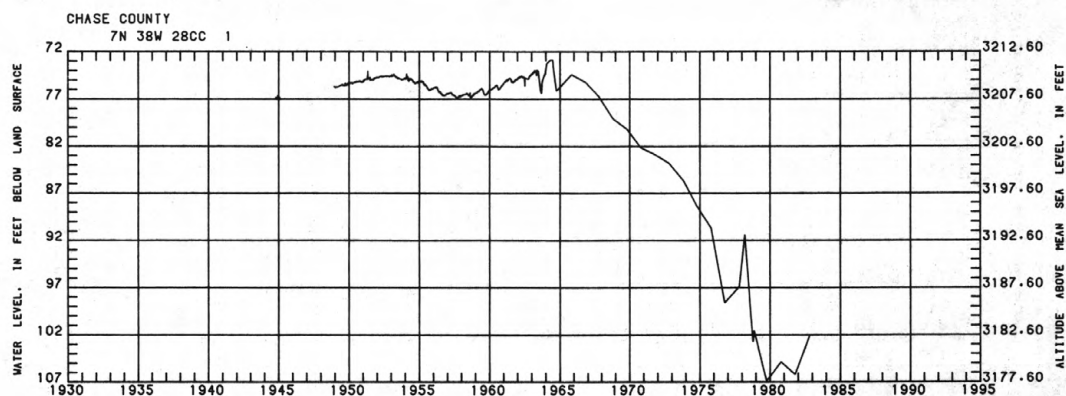
DATUM.--Altitude of land-surface datum is 3,284.6 ft. Measuring point: Top of casing 0.30 ft above land-surface datum.

REMARKS.--Recording gage was installed on this well from December 1948 to December 1963. Water levels in well are affected by irrigation pumpage in area.

PERIOD OF RECORD.--December 1944; December 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.82 ft below land-surface datum, June 29, 1964; lowest measured, 106.90 ft below land-surface datum, Oct. 6, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	102.14								



GROUND-WATER LEVELS

345

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 north and 1 mi west of Imperial on U.S. Highway 6, then 0.5 mi north on gravel road. Owner: U.S. Geological Survey.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 230 ft, perforated 190 to 230 ft.

DATUM.--Altitude of land-surface datum is 3,290.30 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well are affected by irrigation pumpage in area.

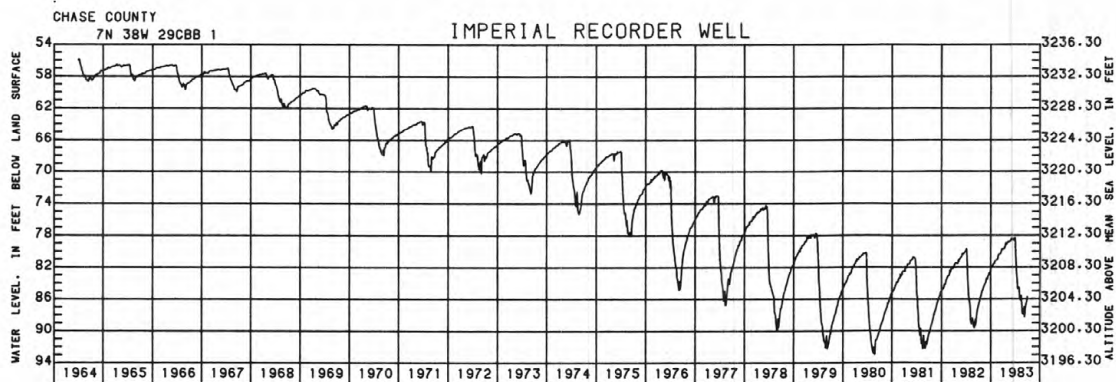
PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.87 ft below land-surface datum, July 4, 1964; lowest, 93.05 ft below land-surface datum, Aug. 25, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	86.49	84.66	83.39	82.06	81.25	80.39	79.85	78.97	78.60	80.24	85.96	87.87
10	86.26	84.43	83.18	82.00	81.15	80.45	79.65	78.85	78.50	82.28	86.20	88.31
15	85.92	84.23	83.11	82.02	81.07	80.32	79.64	78.90	78.54	83.44	85.52	87.15
20	85.68	84.09	82.76	81.64	81.10	80.13	79.30	78.85	78.42	84.81	86.58	86.72
25	85.23	83.86	82.85	81.61	80.61	79.74	78.96	78.77	78.70	84.64	87.85	86.40
EOM	84.90	83.41	82.43	81.46	80.52	79.70	79.07	78.63	78.30	84.48	87.97	85.75

WTR YEAR 1983 MAX 78.17 JUL 1, 1983 MIN 88.31 SEP 10, 1983



GROUND-WATER LEVELS

CHERRY COUNTY

423205100321501. Local number 30N-28W-36AAA.

LOCATION.--Lat 42°32'05", long 100°32'15", NE1/4NE1/4NE1/4 sec.36, T.30 N., R.28 W., Hydrologic Unit 10150004, 8 mi south of the intersection of U.S. Highway 93 and State Highway 483, south of Valentine. Owner: U.S. Geological Survey.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1.25 in, depth 12 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,897.26 ft. Measuring point: Top of casing 3.00 ft above land-surface datum.

REMARKS.--Water levels affected by evapotranspiration.

PERIOD OF RECORD.--October 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.20 ft above land-surface datum, Jan. 11, 1974 and Jan. 11, 1983; lowest, 1.99 ft below land-surface datum, Oct. 4, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR		OCTOBER 1982 TO		SEPTEMBER 1983		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 5	0.52	JAN 11+	0.20	AUG 12	0.60		

CLAY COUNTY

402940098154001. Local number 6N-8W-17BB.

LOCATION.--Lat 40°29'40", long 98°15'40", NW1/4NW1/4 sec.17, T.6 N., R.8 W., Hydrologic Unit 10270206, 0.7 mi south of Glenville. Owner: Willard W. Kissinger.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in, depth 151 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,846 ft. Measuring point: Hole in turbine base at land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--October 1952; June 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 95.53 ft below land-surface datum, June 24, 1954; lowest, 108.85 ft below land-surface datum, Oct. 18, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR		OCTOBER 1982 TO		SEPTEMBER 1983		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 21	107.78	MAR 23	105.60				

COLFAX COUNTY

412810097054501. Local number 17N-3E-4CC.

LOCATION.--Lat 41°28'10", long 97°05'45", SW1/4SW1/4 sec.4, T.17 N., R.3 E., Hydrologic Unit 10200201, 2 mi west and 1 mi north of intersection of U.S. Highway 30 and State Highway 15 in Schuyler. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 16 ft, screened 14 to 16 ft.

DATUM.--Altitude of land-surface datum is 1,370.58 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.15 ft below land-surface datum, Apr. 1, 1952; lowest, 10.68 ft below land-surface datum, Oct. 29, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR		OCTOBER 1982 TO		SEPTEMBER 1983		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
NOV 1	6.30						

DAWES COUNTY

424100103243501. Local number 31N-52W-3DC.

LOCATION.--Lat 42°41'00", long 103°24'35", SW1/4SE1/4 sec.3, T.31 N., R.52 W., Hydrologic Unit 10140201, behind house at 312 Annin Street in Crawford. Owner: T. P. Moody.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 39 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,685 ft. Measuring point: Edge of iron plate 1.07 ft above land-surface datum.

PERIOD OF RECORD.--August 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.87 ft below land-surface datum, May 30, 1948; lowest, 22.28 ft below land-surface datum, Oct. 31, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	20.62	APR 7	19.79								

DAWSON COUNTY

405250099445501. Local number 10N-21W-18DDD.

LOCATION.--Lat 40°52'50", long 99°44'55", SE1/4SE1/4 sec.18, T.10 N., R.21 W., Hydrologic Unit 10200101, 3.5 mi north of the intersection of Route 21 and U.S. Highway 30 in Lexington. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 120 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,420.58 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumpage from nearby irrigation wells and by seepage from irrigation canals.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.76 ft below land-surface datum, June 29, 1983; lowest, 21.50 ft below land-surface datum, July 16, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983												
LOWEST WATER LEVEL FOR THE DAY												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	12.52	12.76	12.96	13.12	13.26	12.81	12.48	11.87	11.13	9.06	16.17	12.57
10	12.61	12.79	12.98	13.15	13.26	12.83	12.36	11.75	10.95	9.62	11.57	11.94
15	12.64	12.82	13.02	13.22	13.22	12.77	12.31	11.70	10.83	14.58	16.12	11.76
20	12.68	12.88	13.03	13.17	13.05	12.72	12.14	11.60	10.50	15.29	16.74	11.89
25	12.67	12.91	13.10	13.21	12.98	12.67	12.04	11.47	10.37	15.67	11.63	11.86
EOM	12.72	12.84	13.11	13.25	12.90	12.57	12.01	11.28	8.81	10.68	16.56	11.88

WTR YEAR 1983 MAX 8.76 JUN 29, 1983 MIN 16.93 SEP 3, 1983

DAWSON COUNTY

404850099503501. Local number 10N-22W-29AA.

LOCATION.--Lat 40°48'50", long 99°50'35", NE1/4NE1/4 sec.29, T.10 N., R.22 W., Hydrologic Unit 10200101, 2 mi east of Dorr. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 12 ft, screened 10 to 12 ft.

DATUM.--Altitude of land-surface datum is 2,435.14 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumping from nearby wells during irrigation season. No well reading was made in 1983 water year.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.1 ft below land-surface datum, Oct. 13, 1965; lowest, 17.69 ft below land-surface datum, Feb. 8, 1946.

GROUND-WATER LEVELS

DUNDY COUNTY

400155101521302. Local number 1N-40W-29BB2.

LOCATION.--Lat 40°01'55", long 101°52'13", NW1/4NW1/4 sec.29, T.1 N., R.40 W., Hydrologic Unit 10250002, 3.5 mi east of Haigler on U.S. Highway 34 and 0.5 mi north. Well is within 0.5 mi of Republican River. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 48.8 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,205 ft. Measuring point: South side of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 400155101521301, local number 1N-40W-29BB1 with period of record from May 1946 to June 1975. Water levels in well are affected by pumping from nearby irrigation wells, evapotranspiration, and changes in stage of Republican River.

PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.58 ft below land-surface datum, June 20, 1983; lowest, 20.97 ft below land-surface datum, Sept. 12, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	17.07	16.67	16.46	.....	16.10	15.99	15.89	15.74	15.63	16.15	17.19	17.94
10	16.96	16.63	16.42	.....	16.09	15.99	15.86	15.72	15.60	16.30	17.33	17.94
15	16.88	16.60	16.40	16.24	16.08	15.97	15.84	15.70	15.60	16.48	17.45	17.79
20	16.83	16.55	16.36	16.19	16.07	15.94	15.81	15.68	15.58	16.66	17.68	17.70
25	16.77	16.52	16.36	16.15	16.04	15.91	15.78	15.66	15.82	16.73	17.71	17.57
EOM	16.71	16.48	.....	16.14	16.02	15.90	15.77	15.63	15.82	16.96	17.74	17.86

WTR YEAR 1983 MAX 15.58 JUN 20, 1983 MIN 18.02 SEP 12, 1983

FILLMORE COUNTY

402504097432201. Local number 5N-4W-12BDC.

LOCATION.--Lat 40°25'04", long 97°43'22", SW1/4SE1/4NW1/4 sec.12, T.5 N., R.4 W., Hydrologic Unit 10270206, one-half block south of fire station on principal north-south street in Shickley. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 260.0 ft, perforated 100 to 260 ft.

DATUM.--Altitude of land-surface datum is 1651 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Replacement for 402450097434001, local number 5N-4W-12BC, period of record October 1956 to September 1977. Water levels in well affected by pumping from nearby municipal and irrigation wells.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 90.92 ft below land-surface datum, Apr. 17, 1978; lowest, 96.91 ft below land-surface datum, Sept. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	96.07	95.88	95.76	95.24	95.13	94.76	94.46	94.05	93.93	93.81	95.44	96.35
10	96.24	95.87	95.60	95.35	95.09	94.61	94.40	94.07	93.70	93.96	95.65	96.64
15	95.96H	95.67	95.43H	95.16	94.97	94.67	94.45	94.02	93.77	94.39	95.91	96.30
20	96.15	95.92	95.52	95.17	95.07	94.63	94.29	94.06	93.67	94.72	96.20	96.57
25	95.97	95.72	95.70	95.19	94.86	94.48	94.01	94.05	93.69	94.96	96.12	96.32
EOM	95.92	95.59	95.35	95.13	94.80	94.43	94.19	93.89	93.62	95.24	96.19	96.27

WTR YEAR 1983 MAX 93.30 JUL 3, 1983 MIN 96.64 SEP 10, 1983

H TAPE MEASUREMENT

GROUND-WATER LEVELS

349

FILLMORE COUNTY

403800097300701. Local number 8N-2W-26AD.

LOCATION.--Lat 40°38'00", long 97°30'07", SE1/4NE1/4 sec.26, T.8 N., R.2 W., Hydrologic Unit 10270203, 2.5 mi west on Route 6 from the principal street of Exeter, then 0.4 mi south. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 40 ft, perforated 25 to 40 ft.

DATUM.--Altitude of land-surface datum is 1,610 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Perched aquifer, water levels affected by infiltration and deep percolation of applied irrigation water pumped from deeper aquifer.

PERIOD OF RECORD.--October 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.24 ft below land-surface datum, June 18, 1983; lowest, 24.16 ft below land-surface datum, July 10, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	7.10	7.46	7.69	7.98	7.93	6.58	3.70	3.16	3.90	3.58	5.47	6.54
10	7.13	7.48	7.75	7.86	7.92	6.35	3.75	3.11	4.15	3.95	5.69	6.95
15	7.25	7.60	7.85	8.00	7.26	6.24	3.41	3.04	2.14	4.26	5.86	7.00
20	7.34	7.60	7.86	7.92	6.79	5.66	3.40	2.00	1.75	4.63	6.20	7.17
25	7.33	7.70	7.96	7.97	6.74	5.70	3.77	2.86	2.76	4.85	6.09	7.25
EOM	7.34	7.55	7.95	7.94	6.68	2.71	4.13	3.52	2.43	5.17	6.36	4.28

WTR YEAR 1983 MAX 1.24 JUN 18, 1983 MIN 8.00 JAN 15, 1983

FURNAS COUNTY

401718099491001. Local number 4N-22W-29AD.

LOCATION.--Lat 40°17'18", long 99°49'10", SE1/4NE1/4 sec.29, T.4 N., R.22 W., Hydrologic Unit 10250009, 2 mi west and 0.5 mi north of Edison. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 23 ft, screened 21 to 23 ft.

DATUM.--Altitude of land-surface datum is 2,134 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.60 ft below land surface datum, Aug. 22, 1978; lowest, 17.69 ft below land-surface datum, Feb. 8, 1946.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	9.40	DEC 3	10.00								

GARDEN COUNTY

414124102230101. Local number 20N-44W-22CB.

LOCATION.--Lat 41°41'24", long 102°23'01", NW1/4SW1/4 sec.22, T.20 N., R.44 W., Hydrologic Unit 10180009, 5.8 mi southeast of refuge headquarters. Owner: Crescent Lake Migratory Bird Refuge.

AQUIFER.--Sand deposits of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.50 in, depth 22.1 ft below land-surface datum.

DATUM.--Altitude of land-surface datum is 3783.16 ft. Measuring point: Top of casing 1.61 ft above land-surface datum.

PERIOD OF RECORD.--August 1934-39; 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.57 ft below land-surface datum, Oct. 7, 1934; lowest, 20.92 ft below land-surface datum, Mar. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 5	19.61	AUG 19	19.25								

G MEASUREMENT MADE BY ANOTHER AGENCY

HALL COUNTY

405315098304302. Local number 11N-11W-25CC2.

LOCATION.--Lat 40°53'15", long 98°30'43", SW1/4SW1/4 sec.25, T.11 N., R.11 W., Hydrologic Unit 10200103, 1.0 mi north and 2.0 mi west of Alda. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 65 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,924.0 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Replacement for 405315098304301, local number 11N-11W-25CC, period of record October 1946 to November 1977. Water levels in wells affected by pumping from nearby wells during irrigation season.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.43 ft below land-surface datum, July 10, 1983; lowest, 25.98 ft below land-surface datum, Aug. 31, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	22.16	21.98	21.83	21.71	21.56	21.15	20.92	20.50	19.95	19.50	20.36	21.38
10	22.16	21.95	21.81	21.65	21.53	21.18	20.84	20.44	19.84	19.43	20.56	21.50
15	22.11	21.98	21.81	21.68	21.52	21.13	20.80	20.37	19.75	19.57	20.76	21.47
20	22.10	21.92	21.76	21.62	21.40	21.09	20.71	20.30	19.66	19.77	21.00	21.47
25	22.06	21.89	21.78	21.61	21.27	21.06	20.63	20.20	19.61	19.99	21.24	21.35
EOM	22.00	21.83	21.73	21.59	21.21	21.00	20.56	20.05	19.52	20.20	21.33	21.30

WTR YEAR 1983 MAX 19.43 JUL 10, 1983 MIN 22.21 OCT 1, 1982

HAMILTON COUNTY

404836097584101 Local number 10N-6W-27ACAA.

LOCATION.--Lat 40°48'36", long 97°58'41", SE1/4NE1/4 sec.27, T.10 N., R.6 W., Hydrologic Unit 10270203, 4.0 mi south of junction of Route 14 and U.S. Highway 34 in Aurora, then 1.0 mi east and 0.3 mi south. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of the Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 170 ft, casing perforated below water-table.

DATUM.--Altitude of land surface datum is 1791.3 ft. Measuring point: Top of casing 1.5 ft above land surface datum.

REMARKS.--Replacement for well 404825097583301. Local number 10N-6W-26BC with period of record March 1956 to March 1982 located across the county road to the east.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 99.45 ft below land-surface datum, July 7, 1983; lowest, 107.40 ft below land-surface datum, Aug. 24, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	104.11	103.40	.....	.....	101.66	101.18	.....	100.26	99.92	99.60	101.69	103.20
10	104.09	103.31	.....	.....	101.60	.....	100.65	100.25	99.85	99.90	102.21	103.20
15	103.94	103.17	.....	102.08	101.51	.....	100.62	100.19	99.77	100.36	102.22	102.97
20	103.83	103.16	.....	101.93	101.58	.....	100.50	100.16	99.69	100.77	102.83	102.99
25	103.65	103.04	.....	101.87	101.35	.....	100.35	100.05	99.63	100.95	102.87	102.68
EOM	103.51	.....	.....	101.75	101.26	.....	100.35	99.91	99.56	101.35	102.91	102.55

WTR YEAR 1983 MAX 99.45 JUL 7, 1983 MIN 104.16 OCT 7, 1982

GROUND-WATER LEVELS

HAMILTON COUNTY

405514097573901. Local number 11N-6W-13CB.

LOCATION.--Lat 40°55'14", long 97°57'39", NW1/4SW1/4 sec.13, T.11 N., R.6 W., Hydrologic Unit 10270201, 2 mi east and 3.5 mi north of Aurora. Owner: O. S. Swedberg.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 194 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,812.2 ft. Measuring point: Hole in south side turbine base at land-surface datum.

REMARKS.--Water levels affected by pumping during irrigation season.

PERIOD OF RECORD.--September 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 90.04 ft below land-surface datum, Sept. 29, 1934; lowest, 117.18 ft below land-surface datum, Nov. 15, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
WATER		WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
NOV 8	105.94	MAY 5	103.19								

HARLAN COUNTY

400920099215501. Local number 2N-18W-9BCC.

LOCATION.--Lat 40°09'20", long 99°21'55", SW1/4SW1/4NW1/4 sec.9, T.2 N., R.18 W., Hydrologic Unit 10250009, 3.5 mi north of the junction of Route 3 and U.S. Highway 183 in Alma. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5.50 in, depth 170 ft, perforated from 140 to 170 ft.

DATUM.--Altitude of land-surface datum is 2,120 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby wells during irrigation season.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 84.39 ft below land-surface datum, May 11, 1966; lowest, 109.96 ft below land-surface datum, Sept. 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	92.00	91.52	91.22	90.90	90.75	90.45	90.47	90.30	90.33	90.22	104.64	97.08
10	.....	91.43	91.14	90.90	90.73	90.67	90.42	90.27	90.17	99.20	105.22	93.65
15	91.78	91.49	91.16	91.01	90.72	90.55	90.49	90.27	90.16	103.68	103.54	93.17
20	91.81	91.39	91.07	90.81	90.77	90.51	90.38	90.25	90.04	104.40	106.08	93.23
25	91.61	91.29	91.21	90.84	90.70	90.45	90.29	90.26	90.08	104.57	97.52	92.88
EOM	91.53	91.12	90.97	90.83	90.58	90.36	90.32	90.18	90.00	96.63	102.96	92.70

WTR YEAR 1983 MAX 90.00 JUN 30, 1983 MIN 106.08 AUG 20, 1983

HARLAN COUNTY

400620099274001. Local number 2N-19W-28DD.

LOCATION.--Lat 40°06'20", long 99°27'40", SE1/4SE1/4 sec.28, T.2 N., R.19 W., Hydrologic Unit 10250009, 1.8 mi south of Orleans. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

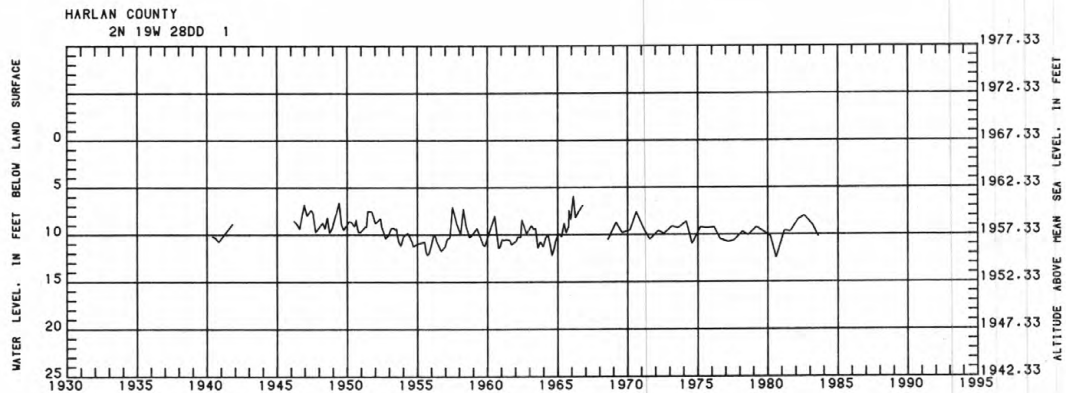
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 22 ft, screened 20 to 22 ft.

DATUM.--Altitude of land-surface datum is 1,960 ft. Measuring point: Top of casing 1.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1940 to October 1941; March 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.9 ft below land-surface datum, Feb. 15, 1966; lowest, 12.50 ft below land-surface datum, Aug. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983									
WATER		WATER		WATER		WATER		WATER	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
MAR 7	9.00	AUG 4	10.20						



GROUND-WATER LEVELS

HITCHCOCK COUNTY

401458100542201. Local number 3N-32W-11BB.

LOCATION.--Lat 40°14'58", long 100°54'22", NW1/4NW1/4 sec.11, T.3 N., R.32 W., Hydrologic Unit 10250005, 3 mi west and 1 mi north of Culbertson. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 18 ft, screened 16 to 18 ft.

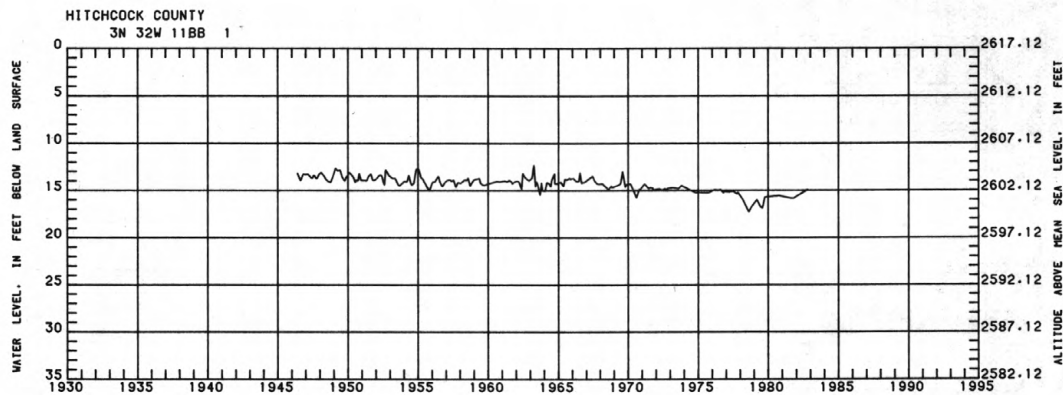
DATUM.--Altitude of land-surface datum is 2,615 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby irrigation wells and seepage from irrigation canals.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.65 ft below land-surface datum, Feb. 8, 1949; lowest, 17.30 ft below land-surface datum, Aug. 10, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	14.95										



GROUND-WATER LEVELS

355

HOLT COUNTY

421605098203001. Local number 27N-9W-34DA.

LOCATION.--Lat 42°16'05", long 98°20'30", NE1/4SE1/4 sec.34, T.27 N., R.9 W., Hydrologic Unit 10220001,
0.5 mi north of Ewing. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

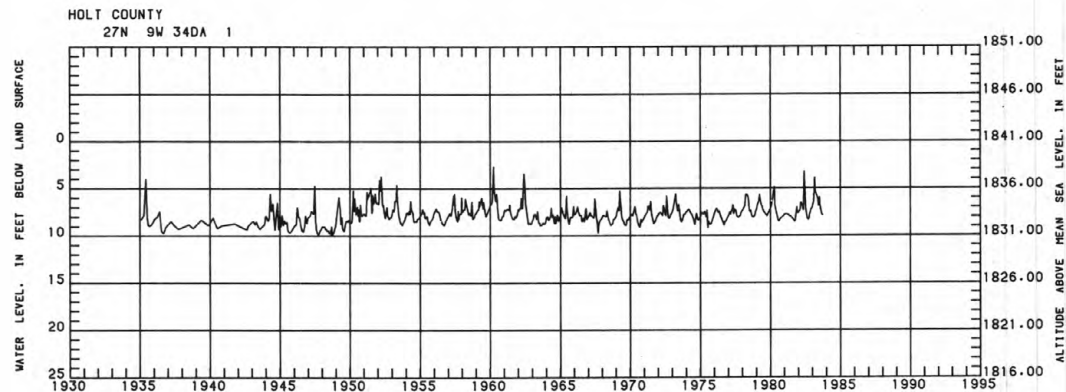
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 17 ft, screened 15 to 17 ft.

DATUM.--Altitude of land-surface datum is 1,841 ft. Measuring point: Top of casing 1.10 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.67 ft below land-surface datum, Apr. 5, 1960;
lowest, 9.90 ft below land-surface datum, Sept. 1, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	7.70	DEC 20	7.18	FEB 23	3.90	MAY 17	6.11	JUN 30	5.95	SEP 2	7.82
NOV 10	7.53	JAN 12	6.66	MAR 14	5.36	JUN 7	6.90	JUL 18	6.87	SEP 21	7.86
DEC 2	7.10	FEB 1	6.54								



GROUND-WATER LEVELS

HOLT COUNTY

422845098370701. Local number 29N-11W-21BBB.

LOCATION.--Lat 42°28'45", long 98°37'07", NW1/4NW1/4NW1/4 sec.21, T.29 N., R.11 W., Hydrologic Unit 10150007, 1 mi east and 1 mi north of O'Neill. Owner: Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled stock water-table well, diameter 5 in, depth 55 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 2,001.06 ft. Measuring point: Top of casing 1.20 ft above land-surface datum.

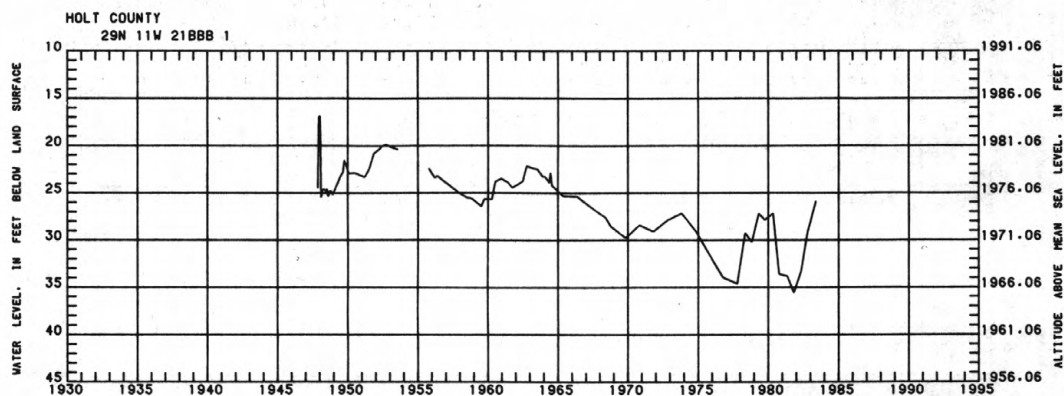
REMARKS.--water levels in well affected by pumping of nearby wells during irrigation season.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.87 ft below land-surface datum, Jan. 14, 1948; lowest, 35.59 ft below land-surface datum, Oct. 28, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 8	29.32	MAY 17	25.92								



HOLT COUNTY

423148098300601. Local number 30N-10W-32DAA.

LOCATION.--Lat 42°31'48", long 98°30'06", NE1/4NE1/4SE1/4 sec.32, T.30 N., R.10 W., Hydrologic Unit 10150007, 2 mi east on paved road from O'Neill, then 2 mi north, 4 mi east, 2 mi north, 2 mi east, and 0.5 mi north. Owner: William J. Murphy.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 85 ft, perforated 25.5 to 85 ft.

DATUM.--Altitude of land-surface datum is 1,952 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in this well affected by withdrawals by nearby irrigation wells completed in this aquifer and withdrawals from a deeper aquifer which has resulted in water movement from the upper aquifer to the deeper aquifer.

PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.41 ft below land-surface datum, Oct. 21, 1966; lowest, 53.73 ft below land-surface datum, Sept. 17, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	53.69	53.56	53.42	53.21	52.97	52.72	52.25	51.72	50.91	50.06	49.84	50.11
10	53.67	53.54	53.40	53.17	52.93	52.66	.....	51.61	50.76	49.92	49.85	50.16
15	53.66	53.52	53.37	53.14	52.90	52.57	.....	51.48	50.60	49.85	49.90	50.10
20	53.64	53.50	53.33	53.09	52.89	52.50	52.01	51.36	50.44	49.83	49.94	50.12
25	53.62	53.48	53.30	53.03	52.84	52.44	51.92	51.24	50.31	49.81	50.02	50.05
EOM	53.59	53.44	53.26	53.00	52.80	52.33	51.84	51.05	50.17	49.83	50.10	50.03

WTR YEAR 1983 MAX 49.79 JUL 28, 1983 MIN 53.69 OCT 5, 1982

GROUND-WATER LEVELS

HOLT COUNTY

423730098560001. Local number 31N-14W-27DDD.

LOCATION.--Lat 42°37'30", long 98°56'00", SE1/4SE1/4SE1/4 sec.27, T.31 N., R.14 W., Hydrologic Unit 10150007, 6 mi north from Atkinson on Route 11, then 2 mi east. Owner: Elmer Goldfuss.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 72 ft, perforated 32 to 72 ft.

DATUM.--Altitude of land-surface datum is 2,080 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

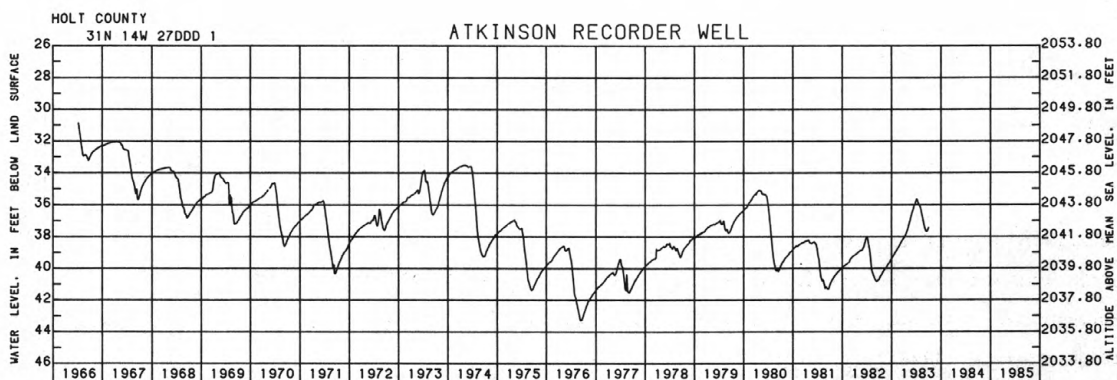
PERIOD OF RECORD.--July 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.91 ft below land-surface datum, July 7, 1966; lowest, 43.30 ft below land-surface datum, Sept. 10, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	40.61	40.14	39.77	39.33	38.91	38.46	38.05	37.37	36.39	35.66	36.27	37.54
10	40.51	40.08	39.71	39.25	38.82	38.42	37.96	37.20	36.23	35.68	36.52	37.68
15	40.45	40.03	39.66	39.20	38.76	38.32	37.87	37.06	36.09	35.92	36.72	37.67
20	40.37	39.95	39.58	39.11	38.69	38.26	37.77	36.89	35.99	35.95	36.92	37.68
25	40.30	39.91	39.50	39.04	38.61	38.19	37.66	36.70	35.90	36.06	37.14	37.57
EOM	40.21	39.83	39.41	38.97	38.56	38.09	37.53	36.47	35.75	36.15	37.40	37.44

WTR YEAR 1983 MAX 35.59 JUL 8, 1983 MIN 40.70 OCT 1, 1982



KEARNEY COUNTY

402625098594501. Local number 6N-15W-34DC.

LOCATION.--Lat 40°26'25", long 98°59'45", SW1/4SE1/4 sec.34, T.6 N., R.15 W., Hydrologic Unit 10270206, 4.5 mi south and 2.5 mi west of the junction of Route 10 and U.S. Highway 34 near Minden. Owner: Conservation and Survey Division, University of Nebraska-Lincoln.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 210 ft, cased with steel, perforated 190 to 210 ft.

DATUM.--Altitude of land-surface datum is 2,210 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Replacement for 402615099000001, local number 5N-15W-3BA1, period of record August 1947 to September 1967. Water levels in well affected by seepage losses from nearby canals and by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--October 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 77.66 ft below land-surface datum, July 2, 1983; lowest, 119.43 ft below land-surface datum, Aug. 27, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	82.43	81.85	80.96	80.30	79.87	79.02	79.12	78.63	78.30	93.25	106.83	95.04
10	82.74	81.53	80.90	80.13	79.69	79.67	78.89	78.51	78.24	108.68	107.20	88.41
15	82.66	81.65	80.82	80.52	79.73	79.16	79.05	78.60	78.17	99.68	103.11	84.99
20	82.58	81.26	80.65	80.04	79.78	79.26	78.75	78.50	77.90	110.02	107.77	84.46
25	82.27	81.32	80.84	80.02	79.64	79.06	78.72	78.59	78.02	102.49	94.48	83.40
EOM	82.04	80.70	80.49	80.02	79.41	78.91	78.66	78.27	77.77	101.06	110.46	83.29

WTR YEAR 1983 MAX 77.66 JUL 2, 1983 MIN 111.28 JUL 22, 1983

KEARNEY COUNTY

403358098553001. Local number 7N-14W-20BA.

LOCATION.--Lat 40°33'58", long 98°55'30", NE1/4NW1/4 sec.20, T.7 N., R.14 W., Hydrologic Unit 10270206, 1.4 mi east and 4.5 mi north of intersection of U.S. Highway 6 and State Highway 10 in Minden. Owner: George Burchell.

AQUIFER.--Sand deposits of Pleistocene age.

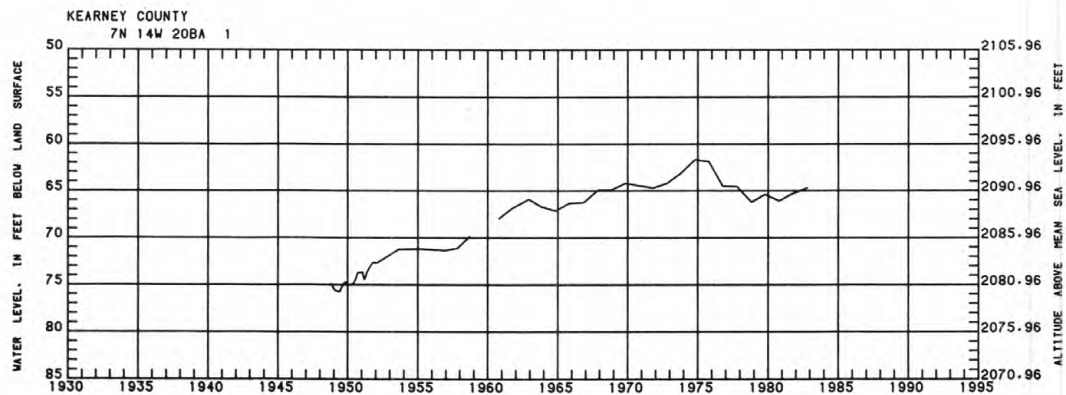
WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 18 in, depth 183 ft.

DATUM.--Altitude of land-surface datum is 2,155.96 ft. Measuring point: 0.30 ft above land-surface datum.

PERIOD OF RECORD.--October 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.70 ft below land-surface datum, Oct. 17, 1974; lowest, 75.75 ft below land surface datum, June 10, 1949.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	64.70										



GROUND-WATER LEVELS

KIMBALL COUNTY

411416103361101. Local number 15N-55W-26CC.

LOCATION.--Lat 41°14'16", long 103°36'11", SW1/4SW1/4 sec.26, T.15 N., R.55 W., Hydrologic Unit 10190016, east of intersection of U.S. Highway 30 and State Highway 71 in Kimball. Owner: Henry Meier.

AQUIFER.--Ogallala Formation of Pliocene age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 24 in, depth 124 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 4,652.3 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

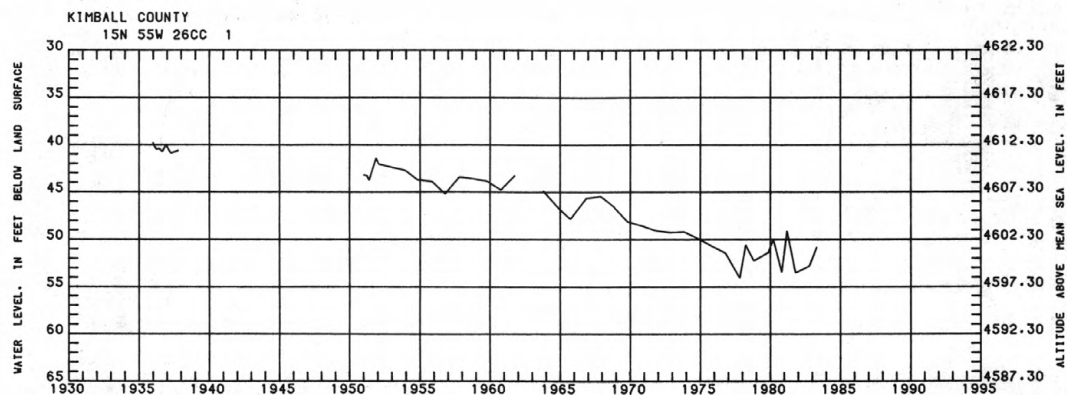
REMARKS.--Replacement for 411600103393501, local number 15N-55W-17CC1, period of record January 1935 to November 1942; June 1950 to October 1975.

PERIOD OF RECORD.--January 1936 to October 1937; January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.82 ft below land-surface datum, Jan. 2, 1936; lowest, 54.07 ft below land-surface datum, Oct. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	52.80	APR 27	50.85								



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 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, depth 36 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,149 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--December 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft below land-surface datum, Oct. 15, 1973; lowest, 18.53 ft below land-surface datum, Feb. 20, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 18	11.20										

LANCASTER COUNTY

404706096413001. Local number 10N-6E-36CDD.

LOCATION.--Lat 40°47'06", long 96°41'30", SE1/4SE1/4SW1/4 sec.36, T.10 N., R.6 E., Hydrologic Unit 10200203, in Irvingdale Park on the north side of Van Dorn Street between 19th and 20th Streets in Lincoln. Owner: City of Lincoln.

AQUIFER.--Dakota Formation of Lower Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in, depth 170 ft, casing perforated below water table.

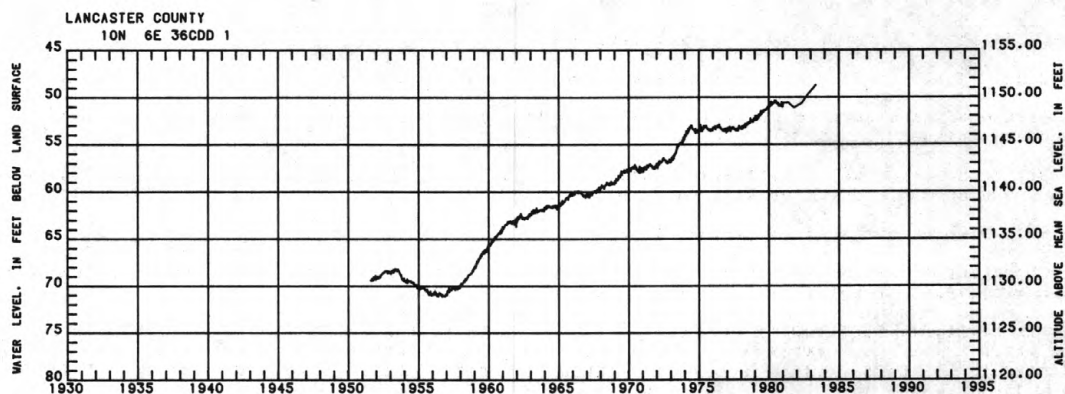
DATUM.--Altitude of land-surface datum is 1,200 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Recorder removed in January. Well measured in spring and fall thereafter.

PERIOD OF RECORD.--August 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.72 ft below land-surface datum, May 13, 1983; lowest 71.19 ft below land-surface datum, Sept. 5, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 18	49.68	MAY 13	48.72								



MERRICK 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 north and 0.5 mi 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, depth 13 ft, screened 11 to 13 ft.

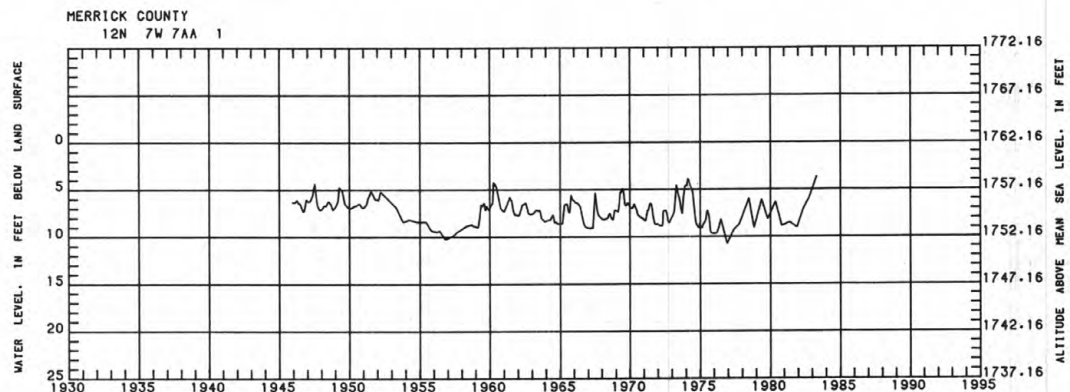
DATUM.--Altitude of land-surface datum is 1,762.16 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

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, 3.69 ft below land-surface datum, Apr. 18, 1983; lowest, 10.75 ft below land-surface datum, Dec. 3, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 4	5.95	APR 18	3.69								



MORRILL COUNTY

414058103054001. Local number 20N-50W-28BBC.

LOCATION.--Lat 41°40'58", long 103°05'40", SW1/4NW1/4NW1/4 sec.28, T.20 N., R.50 W., Hydrologic unit 10180009, 0.1 mi west of Northport. Owner: Fred Smith.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.25 in, depth 28 ft, screened 25 to 28 ft.

DATUM.--Altitude of land-surface datum is 3,675 ft. Measuring point: Top of casing 2.0 ft above land-surface datum.

REMARKS.--Replacement for well 414107103054501, local number 20N-50W-28BB with period of record September 1934 to November 1942; November 1944 to November 1980.

PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.06 ft below land-surface datum, Oct. 19, 1981; lowest, 15.68 ft below land-surface datum, Mar. 18, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983		WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983	
DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 21	15.32	MAR 16	15.52	MAY 10	13.88						

GROUND-WATER LEVELS

NUCKOLLS COUNTY

400240098111301. Local number 1N-8W-23AB.

LOCATION.--Lat 40°02'40", long 98°11'13", NW1/4NE1/4 sec.23, T.1 N., R.8 W., Hydrologic Unit 10250016, 0.5 mi south and 0.5 mi west of Bostwick. Owner: U.S. Geological Survey.

AQUIFER.--Loess of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 18 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,598.15 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

PERIOD OF RECORD.--April 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.02 ft below land-surface datum, July 29, 1951; lowest, 7.85 ft below land-surface datum, Apr. 30, 1950.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983			
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	4.95	MAY 30	4.42

PHELPS COUNTY

403123099261501. Local number 6N-19W-2AA.

LOCATION.--Lat 40°31'23", long 99°26'15", NE1/4NE1/4 sec.2, T.6 N., R.19 W., Hydrologic Unit 10200101, 10 mi east of Bertrand. Owner: Central Nebraska Public Power and Irrigation District.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1 in, depth 151 ft, screened 149 to 151 ft.

DATUM.--Altitude of land-surface datum is 2,360.81 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by seepage losses from nearby irrigation canal.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.05 ft below land-surface datum, Oct. 18, 1982; lowest, 123.70 ft below land-surface datum, Mar. 9, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983			
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	47.05	NOV 8	47.31
JAN 6	47.77		

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 south and 8.5 mi 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, depth 99 ft, screened 97 to 99 ft.

DATUM.--Altitude of land-surface datum is 1,511.8 ft. Measuring point: Top of casing 0.50 ft 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 below land-surface datum, Mar. 27, 1940; lowest, 72.81 ft below land-surface datum, Oct. 9, 1958.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983			
DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	69.15		

SALINE COUNTY

403855097072501. Local number 8N-3E-19ADA.

LOCATION.--Lat 40°38'55", long 97°07'25", NE1/4SE1/4NE1/4 sec.19, T.8 N., R.3 E., Hydrologic Unit 10270202, west edge of Dorchester, on west side of Route 15 between U.S. Highway and Route 33. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 151 ft, perforated 142 to 151 ft.

DATUM.--Altitude of land-surface datum is 1,496 ft. Measuring point: Top of casing at land-surface datum.

REMARKS.--Water levels in well affected by pumping of nearby wells during irrigation season.

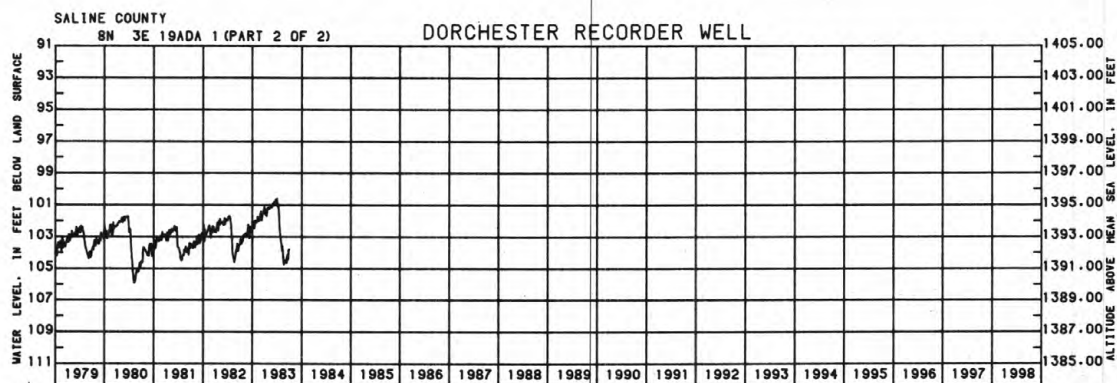
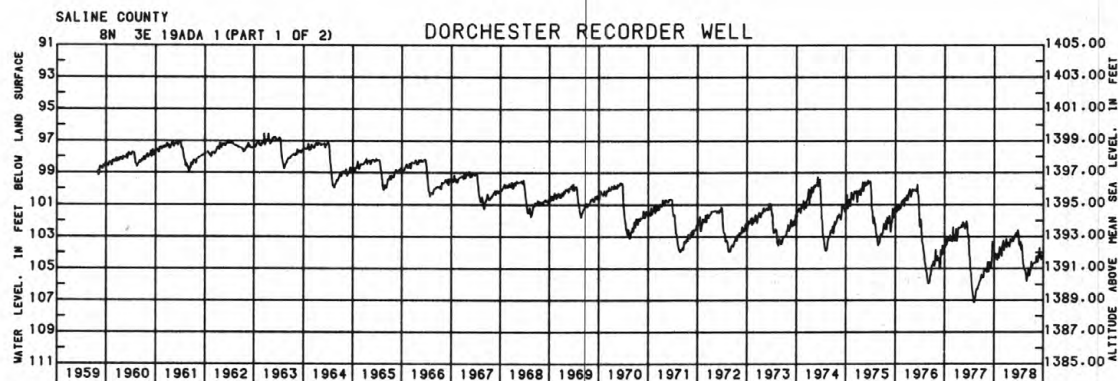
PERIOD OF RECORD.--October 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 96.56 ft below land-surface datum, Mar. 16, 1963; lowest, 107.15 ft below land-surface datum, Aug. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	103.12	103.02	102.57	102.08	102.00	101.40	101.63	101.28	101.07	101.12	103.91	104.50
10	103.46	102.77	102.35	102.07	101.80	102.00	101.29	101.11	100.91	101.04	103.55	104.66
15	103.25	103.06	102.58	102.51	101.80	101.60	101.70	101.20	100.95	101.47	104.15	104.12
20	103.35	102.81	102.41	101.96	102.06	101.57	101.25	101.19	100.68	102.36	104.79	104.48
25	102.93	102.75	102.84	102.08	101.87	101.35	101.15	101.16	100.71	102.84	104.46	103.78
EOM	102.86	102.23	102.29	102.14	101.57	101.11	101.20	100.90	100.59	103.42	104.48	103.81

WTR YEAR 1983 MAX 100.48 JUL 1, 1983 MIN 104.79 AUG 20, 1983



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 north of Ashland. Owner: City of Lincoln.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 12 ft, screened 10 to 12 ft.

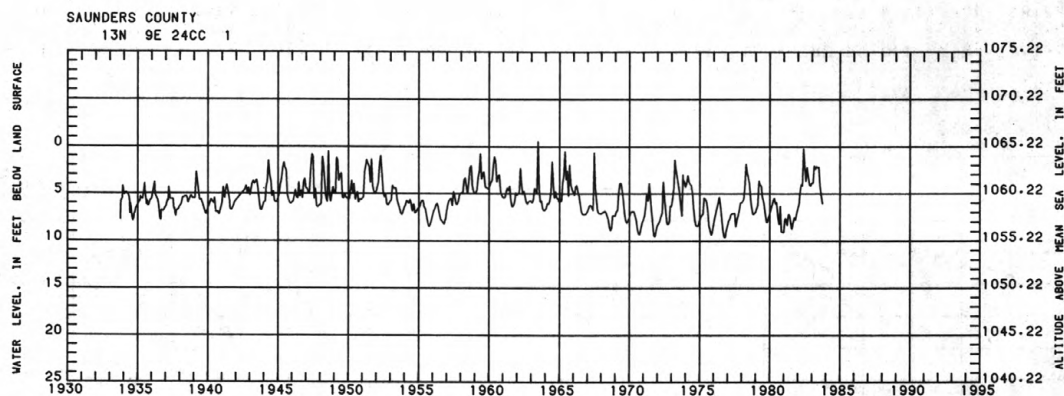
DATUM.--Altitude of land-surface datum is 1,065.22 ft. Measuring point: Top of casing 4.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping of nearby wells in City of Lincoln well field.

PERIOD OF RECORD.--October 1933 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.20 ft below land-surface datum, May 25, 1982; lowest, 9.65 ft below land-surface datum, Oct. 18, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.06	DEC 25	3.85	FEB 25	2.04	APR 25	2.09	JUN 25	2.16	AUG 25	5.09
NOV 25	4.20	JAN 25	3.90	MAR 25	2.39	MAY 25	2.27	JUL 25	4.15	SEP 25	6.02



SAUNDERS COUNTY

411005096281502. Local number 14N-8E-24ACD2.

LOCATION.--Lat 41°10'05", long 96°28'15", SE1/4SW1/4NE1/4 sec.24, T.14 N., R.8 E., Hydrologic Unit 10200203, 4 mi south from the intersection of Routes 92 and 692 near Mead, then 0.65 mi east and 0.4 mi south to the south end of load line 2 of the Mead Field Station. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 80 ft, screened 60 to 80 ft.

DATUM.--Altitude of land-surface datum is 1,171 ft. Measuring point: Top of casing 0.5 ft above land-surface datum.

REMARKS.--Replacement for well 411005096281501, local number 14N-8E-24ACD1, with period of record July 1964 to November 1970. Water levels in well affected by pumping of nearby wells during irrigation season.

PERIOD OF RECORD.--April 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 42.47 ft below land-surface datum, May 5, 1974; lowest, 46.98 ft below land-surface datum, Sept. 25, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	45.23	45.09	44.93	44.88	44.87	44.75	44.75	44.67	44.51	44.36	44.24	44.49
10	45.22	45.05	44.90	44.87	44.86	44.80	44.70	44.64	44.46	44.26	44.28	44.53
15	45.16	45.06	44.92	44.90	44.86	44.80	44.74	44.60	44.45	44.22	44.33	44.53
20	45.15	45.01	44.90	44.87	44.86	44.75	44.69	44.60	44.41	44.19	44.37	44.51
25	45.12	44.96	44.93	44.87	44.80	44.75	44.67	44.57	44.39	44.22	44.44	44.44
EOM	45.10	44.95	44.90	44.86	44.75	44.74	44.66	44.51	44.36	44.22	44.47	44.37

WTR YEAR 1983 MAX 44.15 JUL 27, 1983 MIN 45.30 OCT 1, 1982

GROUND-WATER LEVELS

SCOTTS BLUFF COUNTY

415325103392801. Local number 22N-55W-11DDC.

LOCATION.--Lat 41°53'25", long 103°39'28", SW1/4NE1/4NE1/4 sec.11, T.22 N., R.55 W., Hydrologic Unit 10180009, 0.5 mi north of the west intersection of Routes 71 and 26 in Scottsbluff, then 0.8 mi east.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 32 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,953 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

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

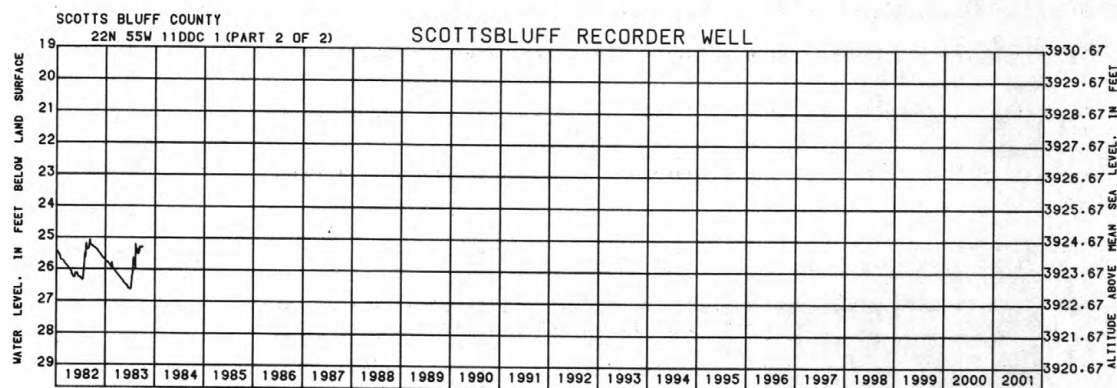
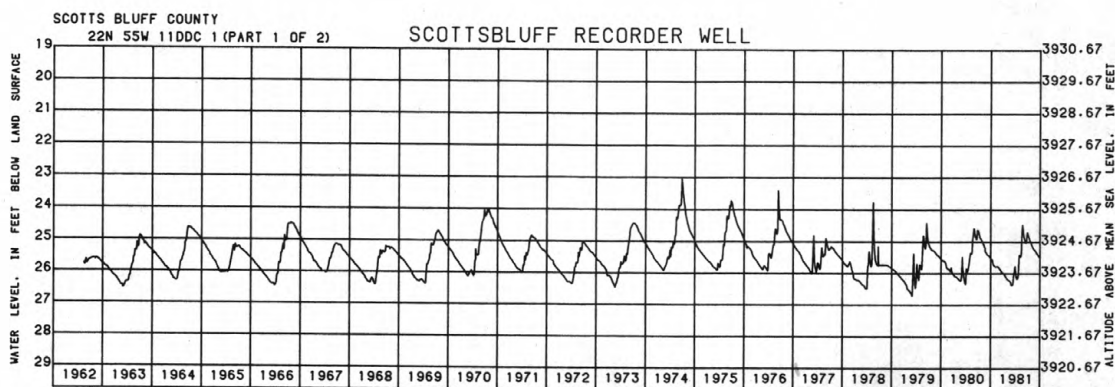
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.05 ft below land-surface datum, Sept. 25, 1974;
lowest, 26.72 ft below land-surface datum, May 31, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	25.30	25.43	25.61	25.76	25.90	26.03	26.20	26.35	26.51	26.63	25.70	25.48
10	25.32	25.45	25.65	25.78	25.93	26.06	26.23	26.40H	26.53	26.41	25.19	25.28
15	25.34	25.49	25.66	25.78	25.79H	26.09	26.25	26.43	26.60	26.21	25.41	.....
20	25.36	.....	25.68	25.81	25.96	26.12	26.28	26.45	.....	26.15	25.51	25.33
25	25.37	25.55	25.70	25.84	25.99	26.14	26.30	26.47	.....	25.64	25.36	25.30
END	25.40	25.58	25.73	25.87	26.00	26.17	26.33	26.50	.....	25.78	25.53	25.29

WTR YEAR 1983 MAX 25.19 AUG 10, 1983 MIN 26.63 JUL 5, 1983

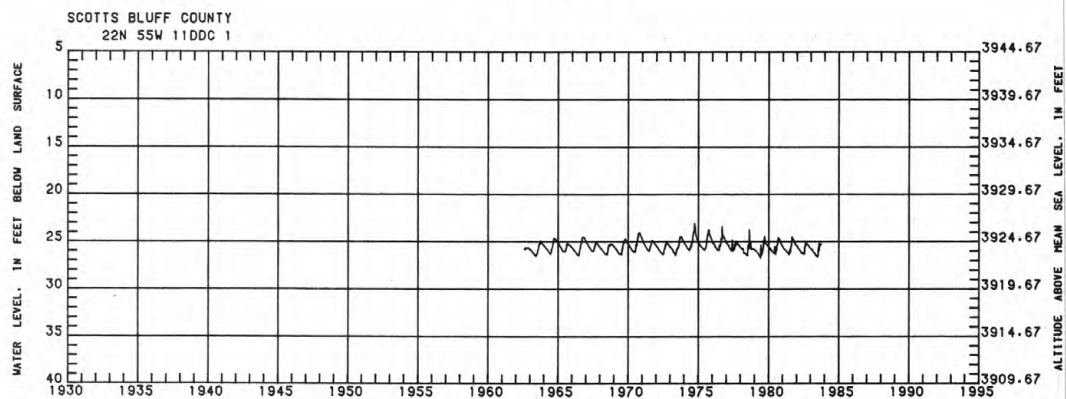
H TAPE MEASUREMENT



GROUND-WATER LEVELS

369

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 north and 2 mi west of intersection of U.S. Highway 26 and State Highway 29 in Mitchell. Owner: Carl Gompert.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

WELL CHARACTERISTICS.--Drilled irrigation water-table well, diameter 6 in, depth 118 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 4,087.7 ft. Measuring point: Hole in pump base 0.7 ft above land-surface datum.

REMARKS.--Water levels affected by withdrawals during irrigation season.

PERIOD OF RECORD.--November 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.24 ft below land-surface datum, Oct. 26, 1949; lowest, 41.72 ft below land-surface datum, Mar. 14, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	40.30	MAR 14	41.72								

SEWARD COUNTY

405406097115001. Local number 11N-2E-21DD.

LOCATION.--Lat 40°54'06", long 97°11'50", SE1/4SE1/4 sec.21, T.11 N., R.2 E., Hydrologic Unit 10270201, 4.5 mi west of Seward. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 123 ft, perforated 112 to 123 ft.

DATUM.--Altitude of land-surface datum is 1,550 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by withdrawals from nearby irrigation wells.

PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 76.37 ft below land-surface datum, Dec. 20, 1965; lowest, 90.17 ft below land-surface datum, Aug. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	86.49	86.38	85.86	85.46	85.19	84.48	84.78	84.46	84.09	83.75	87.36	87.45
10	86.70	86.10	85.87	85.29	84.90	85.33	84.57	84.15	84.07	83.85	87.55	.....
15	86.67	86.35	85.84	85.82	85.10	84.61	84.78	84.15	84.08	.....	87.85	87.67
20	86.70	85.66	85.63	85.35	85.30	85.20	84.51	84.11	83.87	.....	88.28	87.79
25	86.37	86.20	86.00	85.35	85.16	85.46	84.40	84.10	83.93	.....	88.23	87.23
EOM	86.10	85.46	85.65	85.36	84.79	84.30	84.41	84.10	83.72	.....	87.87	87.04

WTR YEAR 1983 MAX 83.56 JUL 3, 1983 MIN 88.28 AUG 20, 1983

GROUND-WATER LEVELS

SHERIDAN COUNTY

423034102415001. Local number 29N-46W-10AA.

LOCATION.--Lat 42°30'34", long 102°41'50", NE1/4NE1/4 sec.10, T.29 N., R.46 W., Hydrologic Unit 10150003, at Mirage Flats project headquarters, 11.5 mi south of Hay Springs. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 100 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 3,794.5 ft. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--Water levels affected by seepage losses from nearby irrigation canal and laterals and by withdrawals from nearby irrigation wells.

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

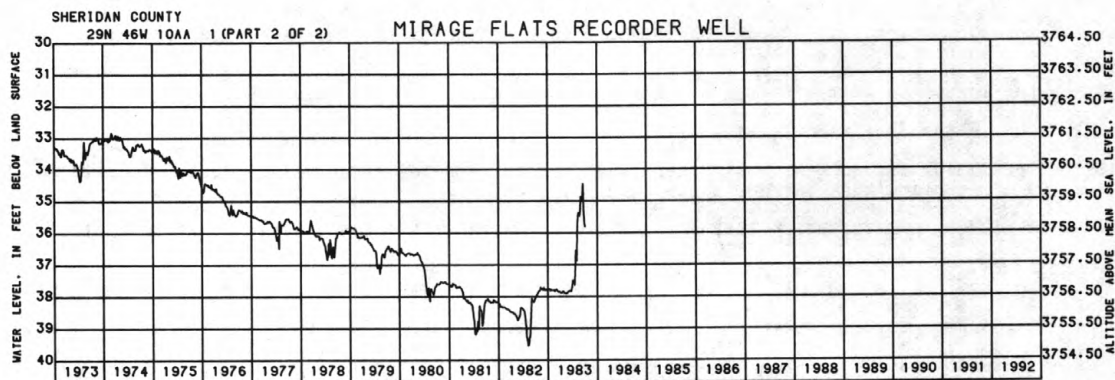
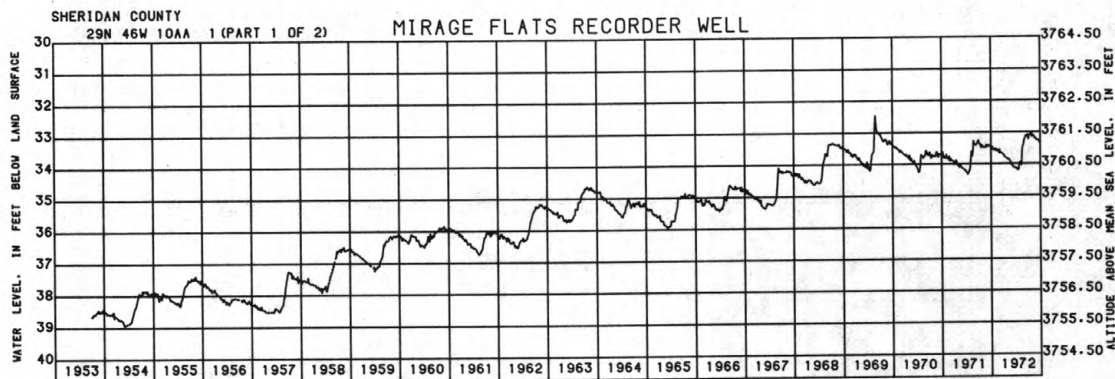
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.47 ft below land-surface datum, Aug. 25, 1969; lowest, 39.57 ft below land-surface datum, Aug. 7, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	37.96	37.75H	37.80	37.75	37.80	37.77	37.90	37.91	37.84	37.48	35.73	35.03
10	37.95	37.78	37.81	37.76	37.80	37.83	37.87	37.89	37.80	37.50	35.40	34.93
15	37.90	37.76	37.79	37.82	37.79	37.85	37.90	37.91	37.83	37.65	35.37	34.45
20	37.86	37.78	37.77	37.77	37.85	37.87	37.83	37.90	37.85	37.10	35.49	35.25
25	37.82	37.80	37.82	37.80	37.78	37.83	37.84	37.87	37.73	36.54	35.33	35.67
EOM	37.82	37.71	37.78	37.80	37.80	37.87	37.89	37.83	37.57	36.89	34.86	35.81

WTR YEAR 1983 MAX 34.45 SEP 15, 1983 MIN 38.00 OCT 6, 1982

H TAPE MEASUREMENT



THOMAS COUNTY

415845100334001. Local number 23N-28W-9DA.

LOCATION.--Lat 41°58'45", long 100°33'40", NE1/4SE1/4 sec.9, T.23 N., R.28 W., Hydrologic Unit 10210001, 1 mi east of courthouse in Thedford. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits, undifferentiated, of Quaternary age.

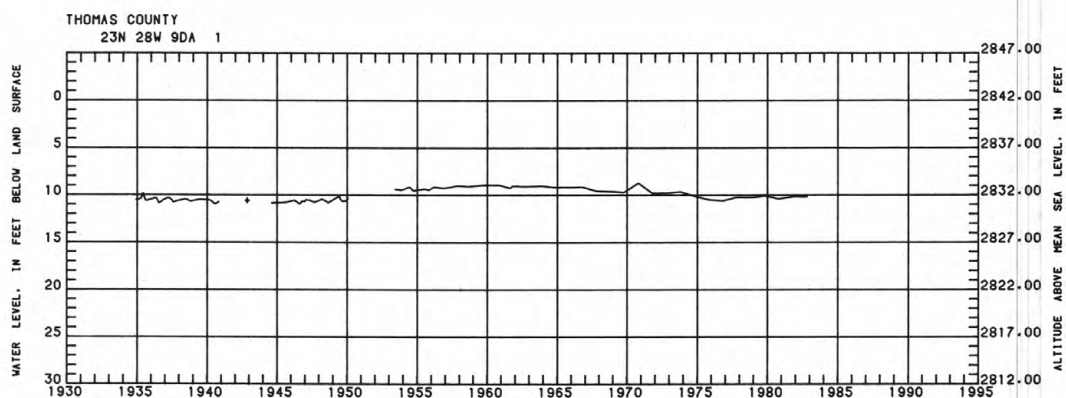
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 15 ft, screened from 13 to 15 ft.

DATUM.--Altitude of land-surface datum is 2,842 ft. Measuring point: Top of pipe 2.3 ft above land-surface datum.

PERIOD OF RECORD.--December 1934 to November 1942; August 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.73 ft below land-surface datum, Oct. 16, 1970; lowest, 10.98 ft below land-surface datum, July 23, 1940.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	10.19								



GROUND-WATER LEVELS

VALLEY COUNTY

412955099123201. Local number 18N-16W-30CC.

LOCATION.--Lat 41°29'55", long 99°12'32", SW1/4SW1/4 sec.30, T.18 N., R.16 W., Hydrologic Unit 10210003, 4 mi west and 5 mi north of Arcadia. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in, depth 15 ft, screened from 13 to 15 ft.

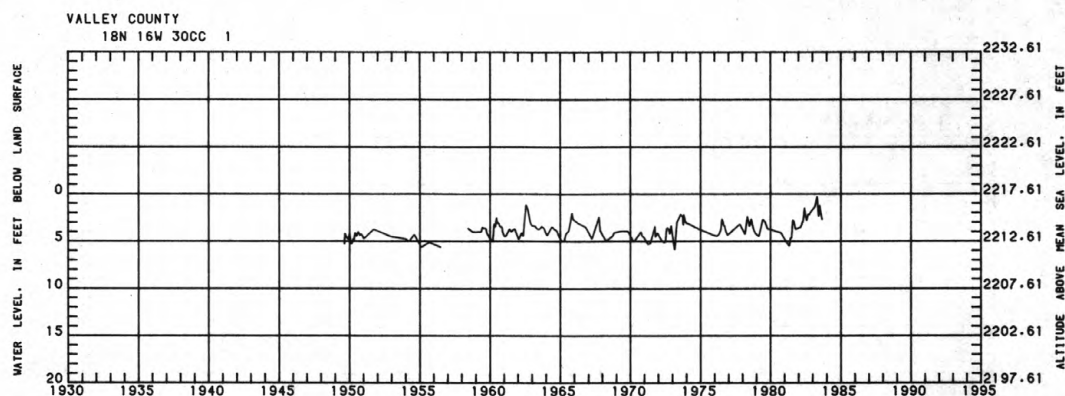
DATUM.--Altitude of land-surface datum is 2,217.61 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

REMARKS.--Water levels in well affected by evapotranspiration.

PERIOD OF RECORD.--August 1949 to June 1956; June 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft below land-surface datum, May 3, 1983; lowest, 5.90 ft below land-surface datum, Mar. 1, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983											
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	2.21	MAR 7	1.33	JUN 3	2.37	JUL 5	1.17	AUG 1	1.88	SEP 1	2.69
OCT 18	2.04	MAY 3	0.25								



WEBSTER COUNTY

400423098314001. Local number 1N-11W-11AB.

LOCATION.--Lat 40°04'23", long 98°31'40", NW1/4NE1/4 sec.11, T.1 N., R.11 W., Hydrologic Unit 10250016, 1 mi south and 0.25 mi west of intersection of U.S. Highways 136 and 281 in Red Cloud. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 16.9 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,686 ft. Measuring point: Top of casing 1.1 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.34 ft below land-surface datum, July 11, 1951; lowest, 10.56 ft below land-surface datum, Apr. 5, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983									
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	5.90	MAY 30	4.42						

YORK COUNTY

404618097482201. Local number 9N-4W-5CCC.

LOCATION.--Lat 40°46'18", long 97°48'22", SW1/4SW1/4SW1/4 sec.5, T.9 N., R.4 W., Hydrologic Unit 10270203, 0.5 mi south of Henderson. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 5 in, depth 170 ft, casing perforated below water table.

DATUM.--Altitude of land-surface datum is 1,708 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

REMARKS.--Replacement for well 404620097482501, local number 9N-4W-6DD with period of record May 1959 to September 1981 located on east side of highway across from old well.

PERIOD OF RECORD.--April 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 81.50 ft below land-surface datum, Apr. 28, 1982; lowest, 87.52 ft below land-surface datum, Aug. 20, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	86.17	.....	.....	.....	83.77	83.27	82.84	82.36	82.23	82.06	84.10	85.24
10	86.27	.....	.....	.....	83.71	83.28	82.77	82.42	82.16	82.20	84.32	85.37
15	86.14	.....	.....	84.30	83.66	83.25	82.80	82.33	82.00	82.53	84.63	85.06
20	86.02	.....	.....	84.00	83.75	83.07	82.64	82.34	81.91	83.00	85.09	84.93
25	85.73	.....	.....	83.99	83.47	82.90	82.38	82.35	81.89	83.31	85.20	84.98
EOM	85.64	.....	.....	83.90	83.34	82.82	82.59	82.21	81.79	83.77	85.09	84.80
WTR YEAR 1983	MAX	81.67	JUL 2, 1983	MIN	86.31	OCT 1, 1982						

GROUND-WATER LEVELS

YORK COUNTY

405305097351503. Local number 11N-2W-31BA3.

LOCATION.--Lat 40°53'05", long 97°35'15", NE1/4NW1/4 sec.31, T.11 N., R.2 W., Hydrologic Unit 10270203, south edge of York County Fairgrounds on the north side of York. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel deposits of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 165 ft, perforated below water table.

DATUM.--Altitude of land-surface datum is 1,659 ft. Measuring point: Top of casing 1.6 ft above land-surface datum.

REMARKS.--Replacement for well 405305097351501, local number 11N-2W-31BA1, with period of record October 1957 to January 1969. Water levels in well affected by withdrawals from nearby municipal well and by withdrawals from nearby irrigation wells.

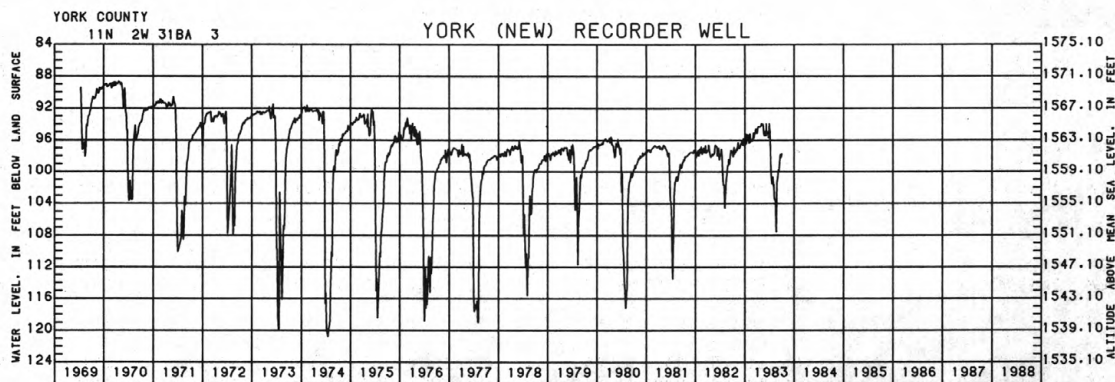
PERIOD OF RECORD.--May 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 88.65 ft below land-surface datum, Apr. 20, 1970; lowest, 120.81 ft below land-surface datum, July 15, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
05	98.12	97.33	96.50	96.35	95.16	95.07	94.45	94.13	95.52	94.93	103.15	99.76
10	97.10	96.30	96.41	96.50	96.32	95.22	94.29	94.21	95.12	98.57	103.63	99.98
15	97.82	97.02	96.72	95.32	95.99	95.34	94.29	93.97	95.12	100.73	103.59	98.76
20	97.52	97.07	95.81	95.36	95.99	94.62	94.40	95.10	94.96	101.62	107.60	97.80
25	97.50	96.92	96.65	95.40	96.20	94.62	94.36	95.51	95.78	100.67	101.44	98.24
END	97.07	96.41	96.77	96.46	95.70	95.20	94.16	94.90	93.92	101.91	100.63	97.75

WTR YEAR 1983 MAX 93.92 JUN 30, 1983 MIN 107.60 AUG 20, 1983



CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

375

(Local identifier: indicates location by township, range, and section. Geologic unit: 112 SDGV, sand and gravel deposits; 121 OGLL, Ogallala Formation; 211 DKOT, Dakota Sandstone; 211 NBRR, Niobrara Formation; 112 PLSC, Pleistocene series)

STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	GEOLOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (UMHOS) (00095)
ADAMS									
403503098181301	7N 9W11DC 1	40 35 03	098 18 13	01	112SDGV	83-07-07	1155	200	564
ARTHUR									
412834101251101	17N 36W 1BACC1	41 28 34	101 25 11	01	112SDGV	83-07-20	1730	300	158
412718101353501	17N 37W 9CDBA1	41 27 18	101 35 35	01	112SDGV	83-07-20	1730	351	210
412602101401801	17N 38W23RBCC1	41 26 02	101 40 18	01	121OGLL	83-07-20	1420	220	--
412820101573701	17N 40W 5CA 1	41 28 20	101 57 37	01	--	83-07-21	1530	208	--
413324101494101	18N 39W 4CCA 1	41 33 24	101 49 41	01	112SDGV	83-08-08	1400	210	148
413544101274101	19N 36W27BB 1	41 35 44	101 27 41	01	112SDGV	83-07-21	1030	360	188
413436101373301	19N 37W31ACDD1	41 34 36	101 37 33	01	112SDGV	83-07-21	1145	290	139
414008101334801	20N 37W34AAAB1	41 40 08	101 33 48	01	112SDGV	83-07-20	0900	318	188
414017101435501	20N 38W29CCC 1	41 40 17	101 43 55	01	112SDGV	83-07-21	1400	320	168
BROWN									
423107099423501	29N 20W 6BAC 1	42 31 07	099 42 35	01	112SDGV	82-11-16	1600	--	118
						83-06-08	1730	--	124
						83-07-27	1610	--	132
423252099510901	30N 22W26AAA 1	42 32 52	099 51 09	01	112SDGV	82-11-16	1330	55	228
						83-06-08	1300	55	224
423259099515701	30N 22W26BAB 1	42 32 59	099 51 57	01	121OGLL	83-07-29	0900	55	250
						82-11-16	1355	360	236
						83-06-08	1250	360	247
423415100032401	30N 23W18ACC 1	42 34 15	100 03 24	01	112SDGV	83-07-28	0920	360	248
						82-11-15	1610	--	117
423944099490901	31N 21W18AAC 1	42 39 44	099 49 09	01	121OGLL	83-06-08	0845	--	112
						83-07-27	1110	330	228
BUFFALO									
404446098503601	9N 14W13DB 1	40 44 46	098 50 36	01	112SDGV	83-08-17	1120	55	1410
405137098443501	10N 13W 2DD 1	40 51 37	098 44 35	01	112SDGV	83-08-18	1340	75	602
405506098465201	11N 13W16DD 1	40 55 06	098 46 52	01	112SDGV	83-08-18	1305	120	495
CLAY									
403634097504301	7N 5W 2AA 1	40 36 34	097 50 43	01	112SDGV	83-07-07	1450	215	573
403739098054801	8N 7W27DC 1	40 37 39	098 05 48	01	112SDGV	83-07-07	1345	204	706
FILLMORE									
403145097360901	7N 3W36DB 1	40 31 45	097 36 09	01	112SDGV	83-07-08	0720	196	486
403843097270602	8N 1W20DB 2	40 38 43	097 27 06	02	112SDGV	83-07-08	0915	306	2290
HALL									
404557098352501	9N 11W 7AD 1	40 45 57	098 35 25	01	112SDGV	83-08-17	0955	--	998
404643098435201	9N 13W 1X 1	40 46 43	098 43 52	01	112SDGV	83-08-17	1340	61	1420
404321098441801	9N 13W25BC 1	40 43 21	098 44 18	01	112SDGV	83-08-17	1040	--	1030
405201098281501	10N 10W 5BC 1	40 52 01	098 28 15	01	112SDGV	83-08-17	1540	--	558
404832098283301	10N 10W30AD 1	40 48 32	098 28 33	01	112SDGV	83-08-17	1640	65	1130
404925098355901	10N 11W19BD 1	40 49 25	098 35 59	01	112SDGV	83-08-17	1420	212	502
405530098255702	11N 10W15BC 2	40 55 30	098 25 57	02	112SDGV	83-08-18	1640	100	477
405254098314202	11N 11W35BC 2	40 52 54	098 31 42	02	112SDGV	83-08-18	1500	61	806
405452098363401	11N 12W24AA 1	40 54 52	098 36 34	01	112SDGV	83-08-18	1125	150	585
405255098394301	11N 12W34BC 1	40 52 55	098 39 43	01	112SDGV	83-08-19	0905	140	658
405820098325001	12N 11W34BB 1	40 58 20	098 32 50	01	112SDGV	83-08-18	1045	50	1430

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CaCO3) (00900)	HARDNESS, NONCARBONATE (MG/L AS CaCO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CaCO3) (90410)
ADAMS											
403503098181301	83-07-07	6.8	15.5	208	12	67	9.8	29	.9	6.9	196
ARTHUR											
412834101251101	83-07-20	6.9	14.0	55	0	17	3.0	6.6	.4	3.9	73
412718101353501	83-07-20	7.3	14.0	72	0	23	3.5	7.7	.4	7.0	91
412602101401801	83-07-20	7.8	--	60	0	19	3.0	6.8	.4	6.1	80
412820101573701	83-07-21	7.8	--	56	0	18	2.6	6.4	.4	6.4	80
413324101494101	83-08-08	7.1	13.0	51	0	16	2.7	5.7	.4	7.3	71
413544101274101	83-07-21	7.1	13.0	69	0	21	4.0	7.9	.4	4.4	89
413436101373301	83-07-21	7.1	13.5	46	0	14	2.6	5.6	.4	3.7	63
414008101334801	83-07-20	7.8	13.5	59	0	18	3.5	9.0	.5	4.2	82
414017101435501	83-07-21	6.9	13.5	60	0	19	3.1	6.3	.4	5.2	78
BROWN											
423107099423501	82-11-16	7.1	12.0	39	0	13	1.7	4.5	.3	3.7	49
	83-06-08	7.0	13.0	39	0	13	1.6	4.6	.3	3.7	47
	83-07-27	7.3	--	44	0	14	2.1	5.2	.4	4.2	54
423252099510901	82-11-16	6.7	11.5	81	0	25	4.6	11	.6	6.4	84
	83-06-08	6.6	13.0	74	0	23	4.0	9.3	.5	5.7	74
	83-07-29	7.4	12.5	81	5	25	4.4	9.8	.5	6.1	76
423259099515701	82-11-16	7.1	10.0	78	0	24	4.5	10	.5	5.9	85
	83-06-08	6.9	12.0	86	0	27	4.5	10	.5	6.4	91
	83-07-28	7.6	13.0	82	0	26	4.1	7.0	.4	5.4	98
423415100032401	82-11-15	6.4	11.0	34	0	11	1.7	4.7	.4	2.7	37
	83-06-08	6.7	13.5	31	0	10	1.5	4.8	.4	2.6	37
423944099490901	83-07-27	8.0	15.0	82	0	27	3.5	6.3	.3	5.9	97
BUFFALO											
404446098503601	83-08-17	7.3	13.5	511	260	160	27	86	1.7	16	252
405137098443501	83-08-18	7.7	13.5	275	7	92	11	9.7	.3	4.8	268
405506098465201	83-08-18	7.7	14.0	222	0	75	8.5	6.7	.2	3.5	229
CLAY											
403634097504301	83-07-07	6.9	14.5	230	0	74	11	28	.8	5.8	243
403739098054801	83-07-07	7.1	15.5	289	95	91	15	27	.7	6.7	194
FILLMORE											
403145097360901	83-07-08	7.0	14.0	198	4	61	11	27	.9	4.5	194
403843097270602	83-07-08	6.8	15.0	1176	787	390	49	96	1.3	9.8	391
HALL											
404557098352501	83-08-17	7.0	20.0	313	99	84	25	88	2.2	7.8	214
404643098435201	83-08-17	8.1	13.5	552	223	170	31	56	1.1	23	330
404321098441801	83-08-17	7.3	17.0	361	137	110	21	74	1.8	6.4	225
405201098281501	83-08-17	8.0	14.0	239	32	76	12	16	.5	15	208
404832098283301	83-08-17	7.6	20.0	374	135	110	24	100	2.3	6.8	239
404925098355901	83-08-17	7.8	15.0	227	0	66	15	22	.7	9.3	251
405530098255702	83-08-18	7.1	15.5	169	25	53	8.9	14	.5	10	144
405254098314202	83-08-18	7.4	15.5	320	91	100	17	22	.6	14	229
405452098363401	83-08-18	7.2	13.5	252	0	76	15	11	.3	6.6	264
405255098394301	83-08-19	7.0	14.0	306	43	96	16	12	.3	8.5	263
405820098325001	83-08-18	7.4	13.0	677	266	220	31	51	.9	14	412

STATION	NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)
ADAMS												
403503098181301	83-07-07	44	18	.40	27	320	.43	4.2	--	--		40
ARTHUR												
412834101251101	83-07-20	3.5	.8	.40	44	123	.17	<.10	--	--		--
412718101353501	83-07-20	5.8	1.0	.40	48	151	.21	<.10	--	--		--
412602101401801	83-07-20	4.6	1.0	.40	38	127	.17	.20	--	--		--
412820101573701	83-07-21	--	1.6	.30	47	--	--	1.5	--	--		--
413324101494101	83-08-08	2.7	.8	.40	35	113	.15	.30	--	--		--
413544101274101	83-07-21	4.2	1.0	.40	52	148	.20	<.10	--	--		--
413436101373301	83-07-21	2.7	.8	.50	43	111	.15	<.10	9	51		20
414008101334801	83-07-20	4.5	1.2	.40	50	140	.19	<.10	--	--		--
414017101435501	83-07-21	3.2	1.0	.50	43	128	.17	<.10	--	--		--
BROWN												
423107099423501	82-11-16	<5.0	.9	.20	54	--	--	1.4	--	--		--
	83-06-08	3.8	1.0	.20	52	108	.15	1.4	--	--		--
	83-07-27	3.4	1.2	.20	52	115	.16	.94	--	--		--
423252099510901	82-11-16	9.0	3.3	.20	52	162	.22	5.4	--	--		--
	83-06-08	6.8	2.7	.20	52	148	.20	5.1	--	--		--
423259099515701	83-07-29	6.0	2.6	.20	50	150	.20	4.7	--	--		--
	82-11-16	8.0	2.9	.20	49	155	.21	5.1	--	--		--
	83-06-08	6.9	2.6	.20	54	166	.23	5.5	--	--		--
	83-07-28	3.0	1.4	.40	59	165	.22	1.4	--	--		--
423415100032401	82-11-15	<5.0	2.2	.10	38	99	--	1.6	--	--		--
	83-06-08	7.1	1.7	.10	38	88	.12	1.5	--	--		--
423944099490901	83-07-27	2.8	1.6	.30	61	167	.23	1.2	--	--		--
BUFFALO												
404446098503601	83-08-17	310	59	.30	37	847	1.2	23	--	--		210
405137098443501	83-08-18	22	15	.20	51	366	.50	.94	--	--		40
405506098465201	83-08-18	8.3	6.1	.20	52	298	.40	.69	--	--		40
CLAY												
403634097504301	83-07-07	25	15	.30	32	337	.46	3.0	--	--		40
403739098054801	83-07-07	150	15	.30	33	454	.62	.64	--	--		40
FILLMORE												
403145097360901	83-07-08	48	14	.30	29	311	.42	1.1	--	--		40
403843097270602	83-07-08	830	59	.30	28	1697	2.3	22	--	--		80
HALL												
404557098352501	83-08-17	250	35	.50	23	643	.87	<.10	--	--		90
404643098435201	83-08-17	300	54	.30	32	865	1.2	4.8	--	--		260
404321098441801	83-08-17	250	29	.30	27	653	.89	2.2	--	--		100
405201098281501	83-08-17	51	16	.30	19	330	.45	5.0	--	--		170
404832098283301	83-08-17	290	45	.60	20	740	1.0	4.8	--	--		100
404925098355901	83-08-17	32	9.2	.40	58	363	.49	.59	--	--		70
405530098255702	83-08-18	41	11	.20	30	255	.35	5.8	--	--		180
405254098314202	83-08-18	140	12	.30	23	466	.63	4.6	--	--		40
405452098363401	83-08-18	28	4.4	.30	50	350	.48	<.10	--	--		50
405255098394301	83-08-19	62	9.1	.30	55	417	.57	2.5	--	--		50
405820098325001	83-08-18	350	37	.30	34	985	1.3	<.10	--	--		70

STATION NUMBER	DATE OF SAMPLE	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)
ADAMS											
403503098181301	83-07-07	--	--	--	10	--	5	--	--	--	--
ARTHUR											
412834101251101	83-07-20	--	--	--	--	--	--	--	--	--	--
412718101353501	83-07-20	--	--	--	--	--	--	--	--	--	--
412602101401801	83-07-20	--	--	--	--	--	--	--	--	--	--
412820101573701	83-07-21	--	--	--	--	--	--	--	--	--	--
413324101494101	83-08-08	--	--	--	--	--	--	--	--	--	--
413544101274101	83-07-21	--	--	--	--	--	--	--	--	--	--
413436101373301	83-07-21	<1	<10	3	16	<1	140	<.1	<1	<1	4
414008101334801	83-07-20	--	--	--	--	--	--	--	--	--	--
414017101435501	83-07-21	--	--	--	--	--	--	--	--	--	--
BROWN											
423107099423501	82-11-16	--	--	--	--	--	--	--	--	--	--
	83-06-08	--	--	--	--	--	--	--	--	--	--
	83-07-27	--	--	--	--	--	--	--	--	--	--
423252099510901	82-11-16	--	--	--	--	--	--	--	--	--	--
	83-06-08	--	--	--	--	--	--	--	--	--	--
	83-07-29	--	--	--	--	--	--	--	--	--	--
423259099515701	82-11-16	--	--	--	--	--	--	--	--	--	--
	83-06-08	--	--	--	--	--	--	--	--	--	--
	83-07-28	--	--	--	--	--	--	--	--	--	--
423415100032401	82-11-15	--	--	--	--	--	--	--	--	--	--
	83-06-08	--	--	--	--	--	--	--	--	--	--
423944099490901	83-07-27	--	--	--	--	--	--	--	--	--	--
BUFFALO											
404446098503601	83-08-17	--	--	--	7	--	6	--	--	--	--
405137098443501	83-08-18	--	--	--	16	--	4	--	--	--	--
405506098465201	83-08-18	--	--	--	5	--	7	--	--	--	--
CLAY											
403634097504301	83-07-07	--	--	--	4	--	1	--	--	--	--
403739098054801	83-07-07	--	--	--	11	--	2	--	--	--	--
FILLMORE											
403145097360901	83-07-08	--	--	--	10	--	45	--	--	--	--
403843097270602	83-07-08	--	--	--	20	--	20	--	--	--	--
HALL											
404557098352501	83-08-17	--	--	--	44	--	1100	--	--	--	--
404643098435201	83-08-17	--	--	--	14	--	90	--	--	--	--
404321098441801	83-08-17	--	--	--	4	--	17	--	--	--	--
405201098281501	83-08-17	--	--	--	3	--	110	--	--	--	--
404832098283301	83-08-17	--	--	--	5	--	6	--	--	--	--
404925098355901	83-08-17	--	--	--	11	--	160	--	--	--	--
405530098255702	83-08-18	--	--	--	28	--	3	--	--	--	--
405254098314202	83-08-18	--	--	--	4	--	2	--	--	--	--
405452098363401	83-08-18	--	--	--	15	--	450	--	--	--	--
405255098394301	83-08-19	--	--	--	6	--	2	--	--	--	--
405820098325001	83-08-18	--	--	--	870	--	110	--	--	--	--

STATION NUMBER	LOCAL IDENT- I- FIER	LAT- I- TUDE	LONG- I- TUDE	SEQ. NO.	GEO- LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (UMHOS) (00095)
HALL									
410005098365102	12N 12W24AB 2	41 00 05	098 36 51	02	112SDGV	83-08-18	0930	125	675
405821098390801	12N 12W34AB 1	40 58 21	098 39 08	01	112SDGV	83-08-18	1005	204	608
HAMILTON									
404633098091202	9N 7W 6DAD 2	40 46 33	098 09 12	02	112SDGV	83-07-07	1020	190	725
405147098004501	10N 6W 4CB 1	40 51 47	098 00 45	01	112SDGV	83-07-07	0925	248	448
HOOKER									
414510101014801	21N 32W33BBD 1	41 45 10	101 01 48	01	121OGLL	83-07-13	1730	500	141
HOWARD									
410711098330701	13N 11W11BA 1	41 07 11	098 33 07	01	121OGLL	82-10-29	1105	144	588
						83-06-02	1125	144	618
						83-08-04	1135	144	647
						83-09-29	1000	144	608
410443098425501	13N 12W20DC 1	41 04 43	098 42 55	01	121OGLL	82-10-27	1120	268	495
						83-05-31	1040	268	497
						83-08-02	1025	268	538
						83-09-27	1045	268	498
411259098374001	14N 11W 6BC 1	41 12 59	098 37 40	01	121OGLL	82-10-29	1030	255	538
						83-06-02	0945	255	561
						83-08-03	0950	255	586
						83-09-29	1200	255	536
411705098341701	15N 11W10CBA 1	41 17 05	098 34 17	01	121OGLL	82-10-29	0950	150	557
						83-06-01	0830	150	603
						83-08-03	0840	150	568
						83-09-28	0830	150	602
KEITH									
410618101513801	13N 40W13BABB1	41 06 18	101 51 38	01	121OGLL	83-07-15	1130	97	1280
411159101312401	14N 37W11DACD1	41 11 59	101 31 24	01	112SDGV	83-07-14	1530	100	1500
411100101430201	14N 38W18DBAC1	41 11 00	101 43 02	01	121OGLL	83-07-15	1000	351	665
410836102010901	14N 41W33AD 1	41 08 36	102 01 09	01	112SDGV	83-07-20	0755	362	338
411714101204501	15N 35W 9BC 1	41 17 14	101 20 45	01	112SDGV	83-08-03	1830	240	242
411431101374701	15N 38W25CCDA1	41 14 31	101 37 47	01	112SDGV	83-07-21	1310	73	530
411817101450901	15N 39W 2AAC 1	41 18 17	101 45 09	01	112SDGV	83-07-20	1235	210	--
411349101590901	15N 41W35AC 1	41 13 49	101 59 09	01	121OGLL	83-08-18	1930	505	386
412235101230601	16N 36W12AADD1	41 22 35	101 23 06	01	121OGLL	83-07-20	1630	452	--
412030101342601	16N 37W21CB 1	41 20 30	101 34 26	01	112SDGV	83-07-21	1700	260	215
412212101462001	16N 39W10DD 1	41 22 12	101 46 20	01	112SDGV	83-07-22	0915	248	192
412140101524501	16N 40W14BDB 1	41 21 40	101 52 45	01	112SDGV	83-08-04	0900	221	179
412006102003501	16N 41W27BA 1	41 20 06	102 00 35	01	112SDGV	83-07-22	0815	141	188
LINCOLN									
405742100151601	12N 26W35CD 1	40 57 42	100 15 16	01	112SDGV	83-07-15	1130	90	520
410517100144901	13N 26W24BAC 1	41 05 17	100 14 49	01	112SDGV	83-07-15	1030	221	310
410532100350801	13N 29W13DCAD1	41 05 32	100 35 08	01	121OGLL	83-08-14	1345	339	280
411047100185701	14N 26W16BB 1	41 10 47	100 18 57	01	112SDGV	83-07-13	1440	260	215
411042100293802	14N 28W14CDD 2	41 10 42	100 29 38	02	--	83-08-03	0930	--	157
410942101131101	14N 34W28ABAB1	41 09 42	101 13 11	01	121OGLL	83-07-25	1030	130	1330

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION	NUMBER	DATE OF SAMPLE	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS (MG/L AS CACO3) (00900)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3) (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)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY LAB (MG/L AS CACO3) (90410)
HALL												
410005098365102	83-08-18	6.9	13.5	268	5	86	13	21	.6	11	264	
405821098390801	83-08-18	7.0	14.5	289	19	96	12	12	.3	5.0	271	
HAMILTON												
404633098091202	83-07-07	7.1	14.0	284	66	89	15	34	.9	6.6	218	
405147098004501	83-07-07	7.3	14.5	171	0	54	8.7	22	.8	4.9	174	
HOOKER												
414510101014801	83-07-13	7.3	13.0	52	0	17	2.4	5.7	.4	4.4	63	
HOWARD												
410711098330701	82-10-29	--	13.0	279	0	87	15	14	.4	7.4	293	
	83-06-02	7.3	13.0	283	0	87	16	15	.4	7.6	287	
	83-08-04	7.3	14.0	293	0	91	16	15	.4	7.2	295	
	83-09-29	7.1	13.0	290	0	88	17	16	.4	7.8	292	
410443098425501	82-10-27	7.1	13.0	231	0	77	9.3	8.2	.2	5.5	235	
	83-05-31	7.5	14.0	234	3	78	9.6	8.4	.2	5.1	232	
	83-08-02	7.3	14.0	233	0	77	10	9.7	.3	5.5	241	
	83-09-27	7.4	15.0	236	5	78	10	10	.3	6.1	231	
411259098374001	82-10-29	--	13.0	270	0	90	11	8.3	.2	5.7	287	
	83-06-02	7.3	13.0	277	0	91	12	8.4	.2	5.7	281	
	83-08-03	7.4	16.0	277	0	91	12	8.7	.2	5.6	290	
	83-09-29	7.2	15.0	282	0	93	12	8.7	.2	5.3	286	
411705098341701	82-10-29	--	11.5	254	0	82	12	11	.3	8.3	268	
	83-06-01	7.3	13.0	282	4	90	14	13	.4	7.5	279	
	83-08-03	7.0	14.0	239	0	76	12	9.5	.3	6.9	259	
	83-09-28	7.2	14.0	287	3	92	14	13	.3	7.1	285	
KEITH												
410618101513801	83-07-15	7.0	12.5	590	286	180	34	57	1.1	18	304	
411159101312401	83-07-14	7.9	14.0	652	322	200	37	93	1.6	7.9	331	
411100101430201	83-07-15	7.4	14.0	242	40	72	15	45	1.3	12	202	
410836102010901	83-07-20	7.6	--	123	0	37	7.3	17	.7	8.8	147	
411714101204501	83-08-03	7.4	13.5	95	0	30	4.9	7.8	.4	6.3	112	
411431101374701	83-07-21	7.4	--	209	54	71	7.7	17	.5	11	155	
411817101450901	83-07-20	7.4	--	68	0	22	3.2	6.9	.4	7.4	84	
411349101590901	83-08-18	7.7	18.0	144	0	43	8.9	21	.8	9.1	157	
412235101230601	83-07-20	7.4	13.5	63	0	20	3.1	7.3	.4	6.3	87	
412030101342601	83-07-21	7.5	14.5	78	0	25	3.7	7.4	.4	6.3	96	
412212101462001	83-07-22	7.7	--	63	0	21	2.6	5.9	.3	7.8	81	
412140101524501	83-08-04	7.6	14.0	69	0	23	2.8	5.9	.3	5.7	86	
412006102003501	83-07-22	7.2	--	71	0	24	2.7	5.9	.3	5.7	81	
LINCOLN												
405742100151601	83-07-15	7.6	13.0	185	10	58	9.8	33	1.1	8.0	175	
410517100144901	83-07-15	7.5	12.5	117	0	39	4.8	9.2	.4	7.7	118	
410532100350801	83-08-14	7.5	14.5	109	0	36	4.6	9.7	.4	6.2	120	
411047100185701	83-07-13	7.6	14.8	81	0	26	4.0	6.9	.3	6.5	87	
411042100293802	83-08-03	7.2	12.5	52	0	17	2.3	5.9	.4	6.0	59	
410942101131101	83-07-25	7.7	13.0	552	371	170	31	79	1.5	7.5	182	

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	DATE OF SAMPLE	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, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, DIS-SOLVED (UG/L AS B) (01020)
HALL											
410005098365102	83-08-18	52	11	.30	47	400	.54	.10	--	--	60
405821098390801	83-08-18	15	15	.20	53	371	.50	4.5	--	--	50
HAMILTON											
404633098091202	83-07-07	98	24	.30	30	428	.58	8.2	--	--	40
405147098004501	83-07-07	35	9.1	.40	27	265	.36	1.7	--	--	30
HOOKER											
414510101014801	83-07-13	2.2	.6	.30	57	127	.17	1.5	8	38	20
HOWARD											
410711098330701	82-10-29	26	11	.30	57	393	.54	.60	--	--	--
	83-06-02	22	11	.30	57	388	.53	.32	--	--	--
	83-08-04	25	13	.30	58	402	.55	.56	--	--	--
	83-09-29	21	16	.30	59	400	.54	.44	--	--	--
410443098425501	82-10-27	19	6.3	.30	56	323	.44	1.7	--	--	--
	83-05-31	16	5.6	.20	56	318	.43	1.4	--	--	--
	83-08-02	17	5.1	.30	58	327	.44	1.3	--	--	--
	83-09-27	18	5.2	.20	58	324	.44	1.4	--	--	--
411259098374001	82-10-29	18	2.6	.20	62	370	.50	.39	--	--	--
	83-06-02	18	2.2	.20	63	369	.50	.35	--	--	--
	83-08-03	17	2.4	.20	63	374	.51	.38	--	--	--
	83-09-29	17	2.4	.20	63	373	.51	.38	--	--	--
411705098341701	82-10-29	19	4.3	.30	61	359	.49	3.4	--	--	--
	83-06-01	24	5.8	.20	58	380	.52	2.1	--	--	--
	83-08-03	14	3.3	.30	62	339	.46	.93	--	--	--
	83-09-28	23	5.2	.20	58	383	.52	2.4	--	--	--
KEITH											
410618101513801	83-07-15	350	30	.40	55	907	1.2	11	--	--	--
411159101312401	83-07-14	500	18	.20	28	1083	1.5	.78	--	--	--
411100101430201	83-07-15	130	16	.60	55	467	.63	1.4	--	--	--
410836102010901	83-07-20	19	4.3	.60	59	241	.33	1.9	9	95	70
411714101204501	83-08-03	6.3	1.1	.50	43	167	.23	.46	--	--	--
411431101374701	83-07-21	77	5.7	.50	42	325	.44	1.2	--	--	--
411817101450901	83-07-20	6.6	1.1	.40	40	138	.19	.26	--	--	--
411349101590901	83-08-18	22	5.5	.80	62	266	.36	3.2	--	--	--
412235101230601	83-07-20	4.3	1.1	.40	43	138	.19	<.10	9	86	30
412030101342601	83-07-21	7.6	1.1	.40	40	149	.20	<.10	--	--	--
412212101462001	83-07-22	4.9	1.1	.30	44	136	.19	1.2	--	--	--
412140101524501	83-08-04	5.3	.8	.30	49	144	.20	.30	--	--	--
412006102003501	83-07-22	4.9	1.3	.30	50	143	.20	2.0	--	--	--
LINCOLN											
405742100151601	83-07-15	78	10	.50	52	354	.48	1.6	--	--	--
410517100144901	83-07-15	6.8	2.8	.30	47	189	.26	3.7	11	220	30
410532100350801	83-08-14	11	.8	.30	60	201	.27	2.2	--	--	--
411047100185701	83-07-13	5.4	1.3	.30	45	148	.20	3.8	--	--	--
411042100293802	83-08-03	3.1	1.0	.20	52	123	.17	2.5	--	--	--
410942101131101	83-07-25	480	43	.30	35	955	1.3	2.8	--	--	--

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

[illegible]

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	GEO-LOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (UMHOS) (00095)
LINCOLN									
411743100270101	15N 27W 6DCAA1	41 17 43	100 27 01	01	112SDGV	83-08-03	1100	312	154
411346100415801	15N 30W36ACCA1	41 13 46	100 41 58	01	112SDGV	83-08-13	1745	232	168
411446101032401	15N 33W25B80D1	41 14 46	101 03 24	01	112SDGV	83-07-12	1315	280	181
411328101044601	15N 33W35CBCC1	41 13 28	101 04 46	01	1210GLL	83-07-14	1100	155	391
411931100184001	16N 26W29DAD 1	41 19 31	100 18 40	01	112SDGV	83-07-13	1310	270	190
411932100390701	16N 29W28DBDD1	41 19 32	100 38 33	01	112SDGV	83-07-12	2000	360	137
412032100504301	16N 31W23CBA 1	41 20 32	100 50 43	01	--	83-08-09	1400	--	175
LOGAN									
412605100184301	17N 26W21DAC 1	41 26 05	100 18 43	01	112SDGV	83-08-27	1415	306	--
412506100225001	17N 27W25B 1	41 25 06	100 22 50	01	112SDGV	83-07-13	1800	277	290
412734100350401	17N 28W 7ACDD1	41 27 34	100 35 04	01	112SDGV	83-07-12	1900	207	192
413132100304901	18N 28W14CDB 1	41 31 32	100 30 49	01	112SDGV	83-08-03	1235	260	128
413641100210201	19N 26W18DDC 1	41 36 41	100 21 02	01	112SDGV	83-07-12	0845	262	120
413751100253801	19N 27W 9DAB 1	41 37 51	100 25 38	01	1210GLL	83-08-23	0915	328	110
413705100332501	19N 28W16BC 1	41 37 05	100 33 25	01	112SDGV	83-08-03	1400	230	124
414231100241201	20N 27W14B8C 1	41 42 31	100 24 12	01	1210GLL	83-07-12	1220	301	160
413550100422501	20N 29W31BCAA1	41 35 50	100 42 25	01	112SDGV	83-07-12	1230	206	110
MCPHERSON									
412645100460301	17N 30W15BCB 1	41 26 45	100 46 03	01	112SDGV	83-07-13	1700	352	144
412444100544301	17N 31W29DBC 1	41 24 44	100 54 43	01	112SDGV	83-07-14	1300	265	137
412509101095001	17N 33W30ACB81	41 25 09	101 09 50	01	1210GLL	83-07-22	1100	257	190
412810101190001	17N 35W 2DC 1	41 28 10	101 19 00	01	112SDGV	83-07-22	1000	400	150
413200100473501	18N 30W17ACAA1	41 32 00	100 47 35	01	112SDGV	83-07-13	1300	360	137
412907100545601	18N 31W32CAD 1	41 29 07	100 54 56	01	112SDGV	83-07-14	1200	398	123
413253100565401	18N 32W12ACA 1	41 32 53	100 56 54	01	112SDGV	83-08-08	1230	306	128
413234101071201	18N 33W 9DACC1	41 32 34	101 07 12	01	--	83-07-14	1600	--	--
413158101223901	18N 35W17BDAD1	41 31 58	101 22 39	01	112SDGV	83-08-03	1630	286	112
413746100502701	19N 31W12CAB 1	41 37 46	100 50 27	01	112SDGV	83-07-13	1530	260	162
414253100462201	20N 30W 9DDB 1	41 42 53	100 46 22	01	112SDGV	83-07-13	1430	455	133
413921101055401	20N 33W34DDDB1	41 39 21	101 05 54	01	112SDGV	83-07-20	1400	400	110
414355101131001	20N 34W 3DBD 1	41 43 55	101 13 10	01	112SDGV	83-07-20	1130	340	220
413935101151601	20N 34W32DA 1	41 39 35	101 15 16	01	112SDGV	83-07-13	1545	355	208
414328101222801	20N 35W 8ACCC1	41 43 28	101 22 28	01	112SDGV	83-07-21	0930	299	288
POLK									
410434097471102	13N 4W21CCD 2	41 04 34	097 47 11	02	112SDGV	83-07-06	1420	150	548
411145097254601	14N 1W 9DAC 1	41 11 45	097 25 46	01	112SDGV	83-07-06	1320	270	612
SALINE									
403902097064901	8N 3E20BAD 1	40 39 02	097 06 49	01	112SDGV	83-07-08	1005	190	587
SEWARD									
405330097204801	11N 1E29BC 1	40 53 30	097 20 48	01	112SDGV	83-07-06	1100	254	628
405343097093906	11N 2E26AD 6	40 53 43	097 09 39	06	112SDGV	83-07-06	0915	117	717
SHERMAN									
411447098474601	15N 13W27BDA 1	41 14 47	098 47 46	01	1210GLL	82-10-27	1605	--	538
						83-05-31	1630	--	529
						83-08-02	1545	--	563
						83-09-27	1555	--	538

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CaCO3) (00900)	HARDNESS, NONCARBONATE (MG/L CaCO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CaCO3) (90410)
LINCOLN											
411743100270101	83-08-03	7.4	14.0	58	0	19	2.6	6.5	.4	4.2	73
411346100415801	83-08-13	7.2	14.0	64	0	21	2.9	6.3	.4	5.4	76
411446101032401	83-07-12	7.4	14.5	66	0	22	2.8	5.5	.3	4.6	80
411328101044601	83-07-14	7.7	13.0	153	9	50	6.9	12	.4	7.6	145
411931100184001	83-07-13	7.5	14.3	70	0	23	3.0	7.3	.4	4.9	84
411932100390701	83-07-12	7.4	12.5	49	0	16	2.3	5.9	.4	5.3	63
412032100504301	83-08-09	7.3	13.5	67	0	22	2.9	5.9	.3	6.8	81
LOGAN											
412605100184301	83-08-27	7.5	14.0	134	0	44	5.9	10	.4	6.7	150
412506100225001	83-07-13	7.6	15.0	103	0	34	4.4	9.3	.4	5.4	116
412734100350401	83-07-12	7.1	13.0	76	0	25	3.2	7.4	.4	4.9	88
413132100304901	83-08-03	7.7	13.5	47	0	15	2.2	5.4	.4	5.0	62
413641100210201	83-07-12	7.4	14.0	45	0	14	2.4	5.2	.4	3.8	56
413751100253801	83-08-23	7.3	13.0	39	0	12	2.2	5.2	.4	4.4	48
413705100332501	83-08-03	7.5	13.5	43	0	14	2.0	5.2	.4	4.4	59
414231100241201	83-07-12	7.5	13.5	55	0	18	2.4	5.7	.3	4.7	69
413550100422501	83-07-12	7.8	13.0	52	0	17	2.2	5.4	.3	4.1	65
MCPHERSON											
412645100460301	83-07-13	7.7	14.0	52	0	17	2.4	5.9	.4	1.1	65
412444100544301	83-07-14	7.8	13.5	53	0	17	2.6	5.7	.4	4.7	69
412509101095001	83-07-22	7.4	13.5	73	0	23	3.8	6.7	.4	6.1	94
412810101190001	83-07-22	7.5	13.0	60	0	19	3.0	6.8	.4	4.8	77
413200100473501	83-07-13	7.5	14.0	51	0	16	2.7	6.4	.4	4.9	68
412907100545601	83-07-14	7.5	14.5	41	0	13	2.0	5.8	.4	5.4	58
413253100565401	83-08-08	7.9	13.0	47	0	15	2.2	5.3	.4	5.0	61
413234101071201	83-07-14	7.7	12.5	79	0	25	3.9	7.0	.4	3.9	93
413158101223901	83-08-03	7.1	12.5	35	0	11	1.8	6.4	.5	4.5	43
413746100502701	83-07-13	7.6	13.0	64	0	21	2.9	6.9	.4	3.8	83
414253100462201	83-07-13	7.2	14.0	48	0	15	2.6	6.0	.4	4.9	64
413921101055401	83-07-20	7.0	14.0	31	0	9.6	1.8	4.9	.4	3.9	44
414355101131001	83-07-20	7.6	13.0	71	28	23	3.3	8.4	.5	3.8	43
413935101151601	83-07-13	7.2	13.0	91	0	28	5.2	10	.5	4.2	115
414328101222801	83-07-21	7.2	13.5	109	0	34	5.8	9.7	.4	6.1	134
POLK											
410434097471102	83-07-06	--	15.0	233	0	75	11	21	.6	6.6	240
411145097254601	83-07-06	--	15.0	272	0	86	14	14	.4	7.8	291
SALINE											
403902097064901	83-07-08	7.1	15.0	223	0	71	11	27	.8	4.7	234
SEWARD											
405330097204801	83-07-06	--	14.5	248	0	78	13	34	1.0	5.5	249
405343097093906	83-07-06	6.8	14.0	270	74	85	14	41	1.1	7.1	196
SHERMAN											
411447098474601	82-10-27	--	13.5	256	0	81	13	11	.3	8.1	270
	83-05-31	7.3	13.0	244	0	78	12	9.8	.3	7.4	257
	83-08-02	6.9	14.0	244	0	78	12	9.2	.3	6.8	260
	83-09-27	7.3	13.5	253	0	80	13	11	.3	7.9	267

STATION	NUMBER	DATE OF SAMPLE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO ₂) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)
LINCOLN												
411743100270101	83-08-03	3.6	1.0	.30	46	127	.17	1.4	--	--	--	--
411346100415801	83-08-13	3.9	.9	.30	49	135	.18	1.5	8	90	20	--
411446101032401	83-07-12	4.0	1.0	.40	52	140	.19	1.3	--	--	--	--
411328101044601	83-07-14	35	2.4	.30	58	259	.35	3.4	12	180	40	--
411931100184001	83-07-13	2.4	1.2	.30	46	138	.19	1.5	--	--	--	--
411932100390701	83-07-12	2.2	.8	.30	49	120	.16	1.3	--	--	--	--
412032100504301	83-08-09	7.6	.9	.30	47	142	.19	1.5	--	--	--	--
LOGAN												
412605100184301	83-08-27	7.9	2.3	.30	49	216	.29	2.7	--	--	--	--
412506100225001	83-07-13	4.0	1.4	.30	50	178	.24	2.0	--	--	--	--
412734100350401	83-07-12	4.4	2.4	.40	55	156	.21	1.5	7	92	20	--
413132100304901	83-08-03	2.0	.6	.30	50	118	.16	.49	--	--	--	--
413641100210201	83-07-12	1.6	.6	.30	53	115	.16	.72	7	56	20	--
413751100253801	83-08-23	3.3	.6	.40	52	109	.15	.96	--	--	--	--
413705100332501	83-08-03	1.9	.7	.20	50	114	.15	.66	--	--	--	--
414231100241201	83-07-12	3.2	1.0	.30	53	130	.18	1.3	--	--	--	--
413550100422501	83-07-12	2.1	.6	.30	47	118	.16	.38	--	--	--	--
MCPHERSON												
412645100460301	83-07-13	3.1	1.1	.30	50	120	.16	.78	--	--	--	--
412444100544301	83-07-14	3.1	.7	.30	47	122	.17	.62	--	--	--	--
412509101095001	83-07-22	5.5	.9	.40	51	154	.21	<.10	--	--	--	--
412810101190001	83-07-22	4.6	1.0	.40	50	136	.18	.18	--	--	--	--
413200100473501	83-07-13	1.8	1.0	.40	51	125	.17	.98	--	--	--	--
412907100545601	83-07-14	1.7	.7	.30	49	113	.15	.92	--	--	--	--
413253100565401	83-08-08	2.1	.7	.40	50	117	.16	.66	--	--	--	--
413234101071201	83-07-14	5.9	.7	.40	54	157	.21	<.10	10	63	20	--
413158101223901	83-08-03	6.3	.7	.20	53	110	.15	1.7	--	--	--	--
413746100502701	83-07-13	2.8	.7	.30	55	143	.19	.41	--	--	--	--
414253100462201	83-07-13	2.0	.5	.30	52	122	.17	.80	--	--	--	--
413921101055401	83-07-20	2.6	.6	.30	51	101	.14	.36	--	--	--	--
414355101131001	83-07-20	10	12	.20	33	119	.16	7.4	--	--	--	--
413935101151601	83-07-13	4.1	1.1	.30	58	180	.24	<.10	--	--	--	--
414328101222801	83-07-21	5.4	2.3	.30	57	201	.27	.96	--	--	--	--
POLK												
410434097471102	83-07-06	35	8.8	.30	51	353	.48	.43	--	--	--	50
411145097254601	83-07-06	26	4.9	.20	49	376	.51	.40	--	--	--	50
SALINE												
403902097064901	83-07-08	47	11	.30	31	343	.47	.16	--	--	--	60
SEWARD												
405330097204801	83-07-06	42	12	.30	37	371	.50	8.8	--	--	--	40
405343097093906	83-07-06	140	6.3	.20	35	446	.61	8.3	--	--	--	70
SHERMAN												
411447098474601	82-10-27	17	3.5	.30	63	359	.49	1.6	--	--	--	--
	83-05-31	15	3.7	.20	60	340	.46	1.9	--	--	--	--
	83-08-02	15	3.1	.30	62	342	.47	1.4	--	--	--	--
	83-09-27	17	3.2	.30	64	356	.48	1.3	--	--	--	--

STATION	NUMBER	DATE OF SAMPLE	CADMIUM	CHRO-	COPPER,	IRON,	LEAD,	MANGA-	MERCURY	SELE-	SILVER,	ZINC,
			DIS- SOLVED (UG/L AS CD) (01025)	MIUM, DIS- SOLVED (UG/L AS CR) (01030)	DIS- SOLVED (UG/L AS CU) (01040)	DIS- SOLVED (UG/L AS FE) (01046)	DIS- SOLVED (UG/L AS PB) (01049)	NESE, DIS- SOLVED (UG/L AS MN) (01056)	DIS- SOLVED (UG/L AS HG) (71890)	NIUM, DIS- SOLVED (UG/L AS SE) (01145)	DIS- SOLVED (UG/L AS AG) (01075)	DIS- SOLVED (UG/L AS ZN) (01090)
LINCOLN												
411743100270101	83-08-03	--	--	--	--	--	--	--	--	--	--	--
411346100415801	83-08-13	1	10	2	4	1	1	.1	1	1	9	
411446101032401	83-07-12	--	--	--	--	--	--	--	--	--	--	
411328101044601	83-07-14	1	<10	6	5	4	5	<.1	3	<1	9	
411931100184001	83-07-13	--	--	--	--	--	--	--	--	--	--	
411932100390701	83-07-12	--	--	--	--	--	--	--	--	--	--	
412032100504301	83-08-09	--	--	--	--	--	--	--	--	--	--	
LOGAN												
412605100184301	83-08-27	--	--	--	--	--	--	--	--	--	--	
412506100225001	83-07-13	--	--	--	--	--	--	--	--	--	--	
412734100350401	83-07-12	<1	<10	2	20	<1	2	<.1	2	<1	11	
413132100304901	83-08-03	--	--	--	--	--	--	--	--	--	--	
413641100210201	83-07-12	<1	<10	1	11	<1	14	<.1	1	<1	9	
413751100253801	83-08-23	--	--	--	--	--	--	--	--	--	--	
413705100332501	83-08-03	--	--	--	--	--	--	--	--	--	--	
414231100241201	83-07-12	--	--	--	--	--	--	--	--	--	--	
413550100422501	83-07-12	--	--	--	--	--	--	--	--	--	--	
MCPHERSON												
412645100460301	83-07-13	--	--	--	--	--	--	--	--	--	--	
412444100544301	83-07-14	--	--	--	--	--	--	--	--	--	--	
412509101095001	83-07-22	--	--	--	--	--	--	--	--	--	--	
412810101190001	83-07-22	--	--	--	--	--	--	--	--	--	--	
413200100473501	83-07-13	--	--	--	--	--	--	--	--	--	--	
412907100545601	83-07-14	--	--	--	--	--	--	--	--	--	--	
413253100565401	83-08-08	--	--	--	--	--	--	--	--	--	--	
413234101071201	83-07-14	<1	<10	2	51	2	67	<.1	<1	<1	13	
413158101223901	83-08-03	--	--	--	--	--	--	--	--	--	--	
413746100502701	83-07-13	--	--	--	--	--	--	--	--	--	--	
414253100462201	83-07-13	--	--	--	--	--	--	--	--	--	--	
413921101055401	83-07-20	--	--	--	--	--	--	--	--	--	--	
414355101131001	83-07-20	--	--	--	--	--	--	--	--	--	--	
413935101151601	83-07-13	--	--	--	--	--	--	--	--	--	--	
414328101222801	83-07-21	--	--	--	--	--	--	--	--	--	10	
POLK												
410434097471102	83-07-06	--	--	--	8	--	3	--	--	--	--	
411145097254601	83-07-06	--	--	--	6	--	24	--	--	--	--	
SALINE												
403902097064901	83-07-08	--	--	--	10	--	--	--	--	--	--	
SEWARD												
405330097204801	83-07-06	--	--	--	7	--	5	--	--	--	--	
405343097093906	83-07-06	--	--	--	22	--	3	--	--	--	--	
SHERMAN												
411447098474601	82-10-27	--	--	--	--	--	--	--	--	--	--	
	83-05-31	--	--	--	--	--	--	--	--	--	--	
	83-08-02	--	--	--	--	--	--	--	--	--	--	
	83-09-27	--	--	--	--	--	--	--	--	--	--	

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

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STATION NUMBER	LOCAL IDENTIFIER	LATITUDE	LONGITUDE	SEQ. NO.	GEOLOGIC UNIT	DATE OF SAMPLE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (UMHOS) (00095)
SHERMAN									
411706098581001	15N 14W 7CA 1	41 17 06	098 58 10	01	1210GLL	82-10-27	1320	150	549
						83-05-31	1315	150	566
						83-08-02	1155	150	608
						83-09-27	1210	150	617
THOMAS									
414613100173901	21N 26W23DC 1	41 46 13	100 17 39	01	112SDGV	83-08-02	1500	102	124
414642100495801	21N 30W19AC 1	41 46 42	100 49 58	01	112SDGV	83-08-04	1300	400	151
YORK									
404646097485101	9N 4W 6AC 1	40 46 46	097 48 51	01	112SDGV	83-07-07	0820	171	568
405242097352402	11N 2W31CA 2	40 52 42	097 35 24	02	112SDGV	83-07-06	1600	348	636
410137097241302	12N 1W11BC 2	41 01 37	097 24 13	02	112SDGV	83-07-06	1130	156	648

STATION NUMBER	DATE OF SAMPLE	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	HARDNESS (MG/L AS CACO3) (00900)	HARDNESS, NONCARBONATE (MG/L CACO3) (00902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)
SHERMAN											
411706098581001	82-10-27	7.1	14.0	268	0	89	11	10	.3	6.8	269
	83-05-31	7.4	14.0	260	0	86	11	11	.3	6.5	263
	83-08-02	7.3	14.5	274	0	90	12	11	.3	7.1	282
	83-09-27	7.1	15.0	307	9	100	14	9.4	.2	6.5	299
THOMAS											
414613100173901	83-08-02	7.4	12.5	43	0	14	1.9	4.9	.3	4.7	57
414642100495801	83-08-04	7.0	13.0	53	0	17	2.6	6.6	.4	4.9	66
YORK											
404646097485101	83-07-07	7.2	13.0	224	7	70	12	23	.7	5.6	218
405242097352402	83-07-06	--	15.0	232	0	73	12	37	1.1	7.0	267
410137097241302	83-07-06	6.5	--	288	0	94	13	19	.5	5.5	298

STATION NUMBER	DATE OF SAMPLE	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, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, DIS-SOLVED (UG/L AS B) (01020)
SHERMAN											
411706098581001	82-10-27	19	4.8	.20	60	362	.49	2.0	--	--	--
	83-05-31	14	4.4	.20	59	350	.48	2.4	--	--	--
	83-08-02	18	4.7	.20	61	373	.51	1.8	--	--	--
	83-09-27	31	4.7	.20	64	409	.56	1.4	--	--	--
THOMAS											
414613100173901	83-08-02	2.4	.8	.30	53	116	.16	.77	--	--	--
414642100495801	83-08-04	2.7	1.0	.20	64	139	.19	1.6	--	--	--
YORK											
404646097485101	83-07-07	32	20	.40	32	326	.44	4.4	--	--	30
405242097352402	83-07-06	26	11	.30	39	366	.50	5.2	--	--	40
410137097241302	83-07-06	32	9.4	.20	40	392	.53	1.0	--	--	40

CHEMICAL ANALYSES OF GROUND WATER IN NEBRASKA

STATION NUMBER	DATE OF SAMPLE	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)
SHERMAN											
411706098581001	82-10-27	--	--	--	--	--	--	--	--	--	--
	83-05-31	--	--	--	--	--	--	--	--	--	--
	83-08-02	--	--	--	--	--	--	--	--	--	--
	83-09-27	--	--	--	--	--	--	--	--	--	--
THOMAS											
414613100173901	83-08-02	--	--	--	--	--	--	--	--	--	--
414642100495801	83-08-04	--	--	--	--	--	--	--	--	--	--
YORK											
404646097485101	83-07-07	--	--	--	5	--	2	--	--	--	--
405242097352402	83-07-06	--	--	--	22	--	57	--	--	--	--
410137097241302	83-07-06	--	--	--	6	--	<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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